ALAŞEHİR JES FACILITY BIODIVERSITY ACTION PLAN

1.1 Entrance

Zorlu Jeotermal Enerji Elektrik Üretim A.S has developed an electricity production plant utilizing geothermal energy with an installed capacity of 45 MWe in the agricultural area located in Manisa Province, Alasehir District, at the Erenköy, Osmaniye, and Çesneli Villages' location, covering a total of 39,975 m² across parcels no. 27, 28, 30, and 31 on the 1/25,000 scale topographic map, İzmir L20-b2 sheet. The Alasehir-1 Geothermal Power Plant (GPP) project includes 20 geothermal wells, with 10 used for production, 9 for reinjection, and 1 for condensation reinjection. The plant operates with an annual production amount of 300,000,000 kWh, achieving a capacity factor of 96%.

The production technology in geothermal energy involves extracting ground heat to the surface through fluids and drilling, converting this energy into electrical energy, and using it directly as heat energy or in various applications within the industrial and tourism sectors.

From a bird's-eye view, the project area is approximately 0.50 km away from Çağlayan village, 1.5 km from Piyadeler village, and 1.5 km from Ürsu village. Additionally, key centers such as Salihli, Kula, and Alaşehir are approximately 23 km, 20 km, and 1.5 km away, respectively. The Alaşehir GPP facility is situated within the borders of Alhan, Çeşneli, and Akkeçili villages (Figures 3-4).

Significant water bodies surround the project site. From a bird's-eye view, Demirköprü Dam is approximately 25 km away, Afşar Dam is 11 km away, and Gölcük Lake is 32 km away (Figure 5).



Figure 1: Satellite Image of the Alaşehir GPP Site



Figure 2: Satellite Image of the Alaşehir GPP Site



Figure 3: Village (Neighborhood) Settlements in the Vicinity of the Project Site



Figure 4: Settlements in the Vicinity of the Project Site



Figure 5: Important Water Bodies Around the Project Site

1.2 Relationship of the Field with Protected and Special Status Areas

When evaluating the location of the Alaşehir GPP site in relation to the surrounding protected areas and important natural areas, the Project Site is within the boundaries of Bozdağlar Key Biodiversity Area (KBA). From a bird's eye view, Marmara Lake is approximately 33 km away from the project site, and the Kula Fairy Chimneys protected areas are also 33 km away (Figures 6-8).



Figure 6: Satellite Image Showing the Relationship Between the Project Site and Protected Areas



Figure 7: Satellite Image Showing the Relationship Between the Project Site and Protected Areas



Figure 8: Satellite Image Showing the Relationship Between the Project Site and Protected Areas

1.3 Identification and Classification of Habitats in the Alaşehir GPP Facility Area

Zorlu Jeotermal Enerji Elektrik Üretim A.S operates a geothermal energy power plant with an installed capacity of 45 MWe in the agricultural area covering a total of 39,975 m², located in Manisa Province, Alaşehir District, Erenköy, Osmaniye, and Çeşneli Villages. The project site is detailed on the 1/25,000 scale topographic map, İzmir L20-b2 sheet, in parcels numbered 27, 28, 30, and 31. Within the scope of the Alaşehir-1 Geothermal Power Plant (GPP) project, there are 20 geothermal wells, with 10 used for production, 9 for reinjection, and 1 for condensation reinjection. The plant operates with an annual production amount of 300,000,000 kWh and a capacity factor of 96%.

The project area contains 12 different habitat types. Of these habitats, 4 are natural, and 8 are classified as modified habitats. The 1st, 2nd, and 3rd level codes and the vegetation types in natural areas, according to the EUNIS Habitat Classification, are provided below (Figure 9).



Alaşehir JES EUNIS Habitat Haritası Ölçek: 1:8,000

- Tesis binaları
- * C2.3 : Mevsimsel olmayan yavaş akan akarsular
- * E2: Mezik çayırlar/bozkırlar
- ** E2.64 : Çimlik alanlar, park çimlikleri
- * G5: Antropojenik ormanlar, baltalıklar, ağaç sıraları
- * H5: Bitki örtüsü seyrek açıklık alanlar
- ** III.3 : Yoğun olayan tarımsal yöntemlerle yetiştirilen ürünlerin ekili olduğu tarım alanları
- ** J2.3 : Kırsaldaki aktif kullanılan endüstriyel yapılar
- ** J4.2 : Yol ağları
- ** **IIII** J4.6 : Kaldırımlar, beton yüzeyler, rekreasyon alanları
- ** **IIII** J5.3 : Yapay ve durağan su gövdeleri
- ** ____ J5.42: Endüstriyel kazı sahalarından çıkan sıradışı kimyalı su
 - J6.1 : Bina yıkım ve inşaat atıklarının depolandığı alanlar



Shape 9 Alasehir JES EUNIS habitat Map one

Natural habitats

C2.3 seasonal Non Slow Flowing streams

At an altitude of 160 m in the field; *consolida ambigua*, *Silene anatolica*, *Datisca cannabina*, *Echinops rithro*, *Cynanchum acutum subsp*. *acutum*, *Cionura erecta*, *Lycium depressum*, *Hordeum spontaneum*, *Foeniculum vulgare*, *Apera intermedia* plant taxa were identified.

E2 Mezik Meadows/Steppes

In this habitat observed at an altitude of 160 m within the facility area; *ranunculus marginatus* var. tetrachycarpus, Dianthus anatolicus, Hypericum perfoliatum, Trifolium hybridum var. anatolicum, Medicago sativa subsp. sativa, potentilla astracanica, Sanguisorba minor subsp. lasiocarpa, Daucus carota, Achillea nobili subsp. sipylea plant taxa were identified.

G5 anthropogenic Forests, coppices, Tree rows

In this habitat, which starts 200 m within the facility area; *ranunculus sprunerianus*, *Cardamine graeca*, *Dianthus calocephalus*, *Vicia grandiflora var. grandiflora*, *Lathyrus laxiflorus subsp*. *laxiflorus*, *Anthyllis vulneraria subsp*. *praepropera*, *Prunus spinosa subsp*. *dasyphylla*, *prunus divarica subsp*. *divaricata*, *Potentilla micrantha*, *Pyrus amygdaliformis var. amygdaliformis*, *Bupleurum asperuloides*, *Foeniculum vulgare*, *Helichrysum graveolens*, *Centaurea triumfettii There are* plant taxa.

H5 Herb Cover Rare Clearance Areas

On site 230 m at altitude; *dianthus calocephalus*, *gypsophila tubulosa*, *Silene otitis*, *eryngium campestre var. campestre*, *Scandix australis* subsp. grandiflora, *scabiosa argentea*, *Anthemis pauciloba var. pauciloba*, *achillea coarctata* plant taxa were identified.

Modified habitats

Areas with habitat codes I1.3, J2.3, J4.2, J5.3, J5.42, J6.1 are in the nature of concrete, chemical water and asphalt and do not have a floral content. However, cleaning the seeds that germinate in the cracks in these structures is important for the integrity of the system.

Invasive species of plants used for landscaping and food purposes in habitat coded E2.64 and J4.6 Care should be taken to ensure that there is no

1.4 Alaşehir JES facility Effect in the field floristic Defining Biodiversity

When we look at the vegetation of the project site and its surroundings; Most of them are agricultural areas where products grown using non-intensive agricultural methods are planted. While mesic meadows are spreading next to non-seasonal, slow-flowing streams, anthropogenic coppice forests and steppe character plants are spreading in groups towards the hilly slopes.

IFC PS-6 and Guidance in terms of floristics at the Alaşehir GPP facility site Considering the Note 6 criteria, since there are no plant taxa with CR and EN status, critical species and habitat assessments were not made within the scope of IFC.

1.5 Alasehir JES facility Effect in the field faunistic Defining Biodiversity

1.5.1 Amphibian

There is no endangered and/or endemic amphibian species in the project area. located in the area amphibian types widespread species. Project in the field amphibians in terms of One immortality and the precautions to be taken are not foreseen. During the transportation of process water to some areas, water leaking into the ground creates suitable spots for amphibians.

Criterion 1: Refers to Critically Endangered (CR) and /or Endangered (EN) Species. There are no amphibian species in the CR and/or EN category in the project area.

Criterion 2: Refers to Endemic and/or Narrowly Ranged Species. There are no endemic and/or narrow-range amphibian species in the project area.

Criterion 3: Refers to Migratory and/or Community Concentrated Species. There is no amphibian species in the project area that meets this criterion.

Criterion 4: Refers to Highly Threatened and /or Uniquely Rare Ecosystems. Important habitats for amphibian species in the project area are aquatic habitats. The project has been operating in the area for many years. Life water is released into the stream bed. The river environment is largely composed of natural habitats. is formed. In the current situation, it is not possible to say that the river habitat and its immediate surroundings are under high threat.

1.5.2 Reptiles

The only reptile species in the project area that is vulnerable to extinction according to IUCN lists **is the Tortoise** (*Testudo graeca*) and is listed in the VU category. Tortoise is also included in the BERN Convention ANNEX-II and CITES ANNEX-II lists. Also in the region **is the Anatolian lizard** (*Anatololacerta*), a largely endemic lizard. *anatolicus*) is distributed. This species has a wide distribution from the Büyük Menderes River northward to the Marmara Region. The IUCN category is LC.

There are no reptile species that are likely to be directly affected by the project. The facilities have been operating in the region for many years. Although there may be species affected by the project during the construction phase, the facilities do not emit any emissions such as noise, dust, or polluted air into the environment during the current operation phase.

In this context, if we make a critical habitat assessment of the project area in line with faunistic data;

Criterion one: Critical In danger (CR) And /Or Danger under (MOST) Types expression It does. <u>There are no reptile species</u> in the CR and/or EN category in the project area.

Criterion 2: Refers to Endemic and/or Narrowly Ranged Species. Anatolian lizard (*Anatololacerta*), which is endemic to the project site anatolicus) is distributed. The distribution area of this endemic species is more than 50,000 square kilometers (km2⁾. is too much. It is not possible to say that the project site is an area that regularly hosts $\geq 10\%$ of the global population size of this species and ≥ 10 of the reproductive units of a species. In this regard, according to available information, the project site <u>does not meet the threshold value for Criterion 2.</u>

Criterion 3: Immigrant and/or Community In case of condensing Types expression It does. <u>There is no</u> reptile species in the project area that meets this criterion <u>.</u>

Criterion 4: Refers to Highly Threatened and /or Uniquely Rare Ecosystems. The important habitat types for reptile species in the project area are the natural habitats in the region. The project has been operating in the area for many years. Natural habitats in the project area have not been negatively affected by the project. Since the project has been in operation for many years, the negative effects that occurred during the construction phase seem to have largely returned to normal. Currently, no adverse effects have been observed on the reptile species widespread in the region.

1.5.3 Mammals

in the region generation in danger and/or endemic One mammal There is no type .

Criterion one: Critical In danger (CR) And /Or Danger under (MOST) Types expression It does. **There are no** mammal species in the CR and/or EN category in the project area .

Criterion 2: Refers to Endemic and/or Narrowly Ranged Species. There are no endemic and/or **narrow-range mammal species in the project area.**

Criterion 3: Immigrant and/or Community In case of condensing Types expression It does. **There is no** mammal species in the project area that meets this criterion .

Criterion 4: Refers to Highly Threatened and /or Uniquely Rare Ecosystems. Since the project has been in operation for many years, the negative effects that occurred during the construction phase seem to have largely returned to normal. Currently, no adverse effects **have been observed on mammal species distributed in the region** .

Criterion 5: Topography, geology, soil, temperature, vegetation, and combinations of these factors One of the region structural features species local to take shape And ecological features It can affect the evolutionary processes that lead to In some cases, distinctive spatial features form populations or subpopulations of genetically unique plant and animal species. associated with their populations. Physical or spatial features have been identified as spatial catalysts for evolutionary and ecological processes, and such features are often associated with species diversity. Species (or subpopulations of species) that emerge due to the maintenance of basic evolutionary processes inherent in an area have become the main focus in recent years, along with the conservation of biodiversity , especially the process of preserving genetic diversity. By maintaining species diversity in an area, the genetic diversity within species as well as the processes that drive speciation ensure evolutionary resilience in a system, which is especially important in rapidly changing climate conditions.

For illustrative purposes, here are some potential examples of areal features associated with evolutionary processes,

Regions with high spatial heterogeneity are a positive force for speciation, as species are naturally selected for their ability to adapt and diversify.

gradients, also known as ecotones, produce transitional habitat that is associated with the process of speciation and high species and genetic diversity.

edaphic interfaces are areas of soil types (e.g. serpentine outcrops, limestone) that lead to the formation of unique plant communities characterized by both rarity and endemism . and gypsum sediments) are special sequences.

Connection between habitats (e.g. biological corridors), especially fragmented It is important in the maintenance of habitats and metapopulations and ensures species migration and gene flow. This connection also extends across elevation and climate gradients and across crest-to- coast to coast)" also includes biological corridors.

Areas with proven importance for adaptation to climate change for both species and ecosystems are also included in this criterion.

The importance of structural features in an area that can influence evolutionary processes will be determined on a case-by-case basis, and the determination of critical habitat will be largely based on scientific knowledge. In many cases, this criterion will apply in areas that have been previously investigated and are known or suspected to be associated with unique evolutionary processes. Even if systematic methods exist to measure and prioritize evolutionary processes in a field , these methods are beyond the reasonable conditions of evaluations typically conducted by the private sector.

Criterion 5 was evaluated together for Amphibians, Reptiles and Mammals. Criterion 5 involves evaluating whether the region generally contains significant evolutionary processes. The area where Alaşehir GPP is located does not show a special evolutionary process. The region does not have a special geological structure or a special history and therefore does not contain a large number of critical species. In this regard, the area **does not meet** Criterion 5.

1.5.4 Ornithology

As a result of the studies, a total of 12 bird species were identified in the project area and its immediate surroundings. The list of these species, their global Red List status, and the status of the species in BERN, CITES and MAK decisions of 2022 are given in Table 1 below.

It has been observed that none of the bird species around the facility are threatened on a global scale. (IUCN, 2022). 10 of the identified species are in BERN Agreement Annex-2, 2 are in BERN Agreement Annex-3 and 2 are in CITES Annex-2.

In this context, if we make a critical habitat assessment of the project area in line with ornithological data;

Criterion 1: Habitats Important to Critically Endangered (CR) or Endangered (EN) Species

No "CR" or "EN" category bird species were detected around the facilities. Therefore, this criterion is not triggered.

Criterion 2: endemic And Narrow widespread Species For Important Habitats

Facility birds around This criterion It does not trigger.

Criterion 3: Habitats Hosting Globally Significant Numbers of Migratory and Foraging Species

It has been determined that there are migratory birds among the listed species in and around the facility area. Considering the topographic location of the facility, the project is not expected to cause a serious problem for migratory bird populations.

Criterion 4: High at level Threatening under And /Or Unique Rare Ecosystems

None of the habitats around the site are listed as high level or unique ecosystems on the IUCN Red List of Ecosystems and therefore this criterion will not be triggered.

Criterion 5: Important Evolutionary Processes With identified habitats

The Alaşehir GPP site does not differ significantly from the surrounding region in terms of elevation, moisture gradients, or any other geological, ecological, or evolutionary factor that indicates that the region is vital for sustaining unique or distinctive evolutionary processes. Therefore, none of the habitats around the facility trigger Criterion 5.

Type Scientific First Name English Name		endemism	IUCN (Spherical)	BERN	MAKK	CITES
Butea rans	Red Hawk	Not Endemic	LC	Annex 2	KD	Annex 2
Circaetus gallicus	Snake Eagle	Not Endemic	LC	Annex 2	KD	Annex 2
Coracias garrulus	European Roller	Not Endemic	LC	Annex 2	KD	KD
Dendrocoptes medius	Middle Spotted Woodpecker	Not Endemic	LC	Annex 2	KD	KD
Dendrocopos syriacus	Syrian Woodpecker	Not Endemic	LC	Annex 2	KD	KD
Emberiza hortulana	Ortolan Bunting	Not Endemic	LC	Annex 3	Annex 1	KD
Hippolais olivetorum	Olive-tree Warbler	Not Endemic	LC	Annex 2	KD	KD
Lanius collurio	Red-backed Shrike	Not Endemic	LC	Annex 2	Annex 1	KD
Lanius nubicus	Masked Shrike	Not Endemic	LC	Annex 2	KD	KD
Lullula arborea	Woodlark	Not Endemic	LC	Annex 3	Annex 1	KD
Pyrrhocorax pyrrhocorax	Red-billed Chough	Not Endemic	LC	Annex 2	KD	KD
Oenanthe isabellina	Isabelline Wheatear	Not Endemic	NT	Annex 2	KD	KD

Table one Project in the field Found and Finding Likely Bird Types

1.6 Alaşehir JES facility Effect in the field hydrobiological Defining Biodiversity

In the study conducted at Alaşehir GPP facilities, no algae, zooplankton, benthic aquatic organisms or fish were found.

1.7 Biodiversity Risk Evaluation

1.7.1 Flora

IFC PS-6 and Guidance in terms of floristics at the Alaşehir GPP facility site Considering the Note 6 criteria, since there are no plant taxa with CR and EN status, no critical species and habitat assessment was made within the scope of IFC.

Care should be taken to ensure that the plants used for landscaping and food purposes in the habitat coded E2.64 and J4.6 are not invasive species.

1.7.1.1 Invasive Species

Alien invasive species, either accidentally or intentionally, move beyond their natural geographic range and become problematic. They often arise due to the globalization of the economy through the movement of people and goods, such as ship transportation, shipments of wood products, consignments carrying insects, or transportation of ornamental plants to new regions. The EU developed *Regulation (EU)* 1143/2014 to actively deal with alien invasive species .

Alien invasive species (IAS) can cause serious ecological impacts on invaded environments. They may lack natural predators in their new environment, allowing them to increase their abundance and spread rapidly. They can carry diseases, compete with or prey on native species, alter food chains, and even alter ecosystems, for example by altering soil composition or creating habitats that encourage wildfires. These impacts can lead to local or global extinction of native species and ultimately ecological destruction.

IAS can also have significant socio -economic impacts. The European Union (EU) faces losses worth EUR 12 billion annually due to the effects of IAS on human health, infrastructure damage and agricultural damage.

There are more than 000 alien species in Europe, 15% of which are invasive. IAS, European threat It is the third most serious threat to the species below. According to a report published in 2015, 354 endangered species (229 animals, 124 plants and 1 fungus) are among all threatened species in Europe. It is clearly affected by IAS, accounting for 19% of the species under it. The newly adopted EU Biodiversity Strategy highlights the importance of tackling this threat by proposing to manage established alien invasive species and reduce the number of Red List species they threaten by 50% by 2030.

In 2013, the European Commission (EC) put forward a proposed law within the framework of an EU Directive on IAS, providing for prevention of their introduction, early warning/rapid response and effective and coordinated management. topics forward It lasted. IUCN, WHITE with made One soap opera service contract And In collaboration with the IUCN Invasive Species Expert Group (ITUG), it has been providing technical and scientific support to the implementation of the EU IAS Regulation since 2016.

Invasive flora species have been identified within the project's impact area (Table 2). The Biodiversity Action Plan must be followed.

Energy investment areas are areas shaped by human influence. Construction activities arising from the nature of the investment in these areas have been tried to be rehabilitated through landscape planning around the roads and buildings. The ability of some plant species used here to survive and spread in the area causes them to be called invasive species. Apart from rehabilitation studies, species carried by floods or faunistic sources may also have the same nature. For these reasons, in order to preserve the existence of the natural areas within the energy investment area, the individuals and diaspores (reproductive units) of these plants must be cleared from the area.

Timing: Controlling invasive plant species should be done before the plant goes to seed. If the plant is known for its above-ground parts before flowering, the removal is done in the spring; otherwise, it is removed immediately after flowering.

Table 2 Project in the field Found And Finding Likely Invader Species







Senecio vernalis (Canary herb) Path edge And person Fields shaped by the influence	
Sicyos angulatus (Itdolanbacı) Damp fields	
<i>Solanum americanum</i> (Push grape) This edge And damp shady places	
portulaca oleracea (Purslane) Field, open area	
<i>phytolacca americana</i> (Candymaker's paint) Stream beds and moist habitats	

Viscum album (Lime herb) to the trees interference

1.7.2 Fauna

IFC PS-6 and Guidance Considering the Note 6 criteria, the "critical species" evaluation and "critical habitat" evaluation were made in section 5, and there is no Critical species in terms of fauna (Amphibia, Reptile, Mammal) in the region, and accordingly, there is no critical habitat.

Tortoise (*Testudo graeca*): This species has been seen around the area. Its presence in the region has been assessed sparsely. It would be useful to raise awareness about the species and take some precautions to prevent harm to the species, especially in human-tortoise encounters. These issues are detailed in the Biodiversity Action Plan.

1.7.3 Ornithology

IFC PS-6 and Guidance Considering the Note 6 criteria, "critical type" evaluation and "critical habitat" assessment in chapter 5 made is, birds in the area in terms of There are no critical species.

It has been observed that none of the bird species around the facility are threatened on a global scale.

1.7.4 Hydrobiology

The underground water temperature used in the environment is around 100 °C. There are no species that can be considered important in terms of biodiversity in underground geothermal water. However, in case of any possible negativity This hot water, which will mix with nature (necessary precautions have been taken against all kinds of negativities in the facility), may harm other living things around it.

1.7.5 Environmental Risk Analysis

The project is not likely to adversely affect human health or the environment, directly or indirectly. Environmental Risk It is called. Estimating the magnitude of risk in all its activities and Deciding whether the risk can be tolerated is called **Risk Assessment**.

Environmental Risk Assessment, Appropriate methods are used to identify environmental hazards in the working environment, reveal risks and control risks through systematic methods. qualitative and/or It is a set of studies conducted using quantitative methods.

In order to determine the environmental impacts that are likely to occur in the periods determined within the scope of the environmental management and monitoring plan and to minimize the impacts of the project by collecting the relevant data and comparing the compliance of the studies carried out with the legislation ;

- of the business management,
- wastes,
- weather emissions,
- noisy,
- wastewater,

like effects will be monitored.

A Waste Management Plan must be prepared for the wastes generated and likely to be generated within the scope of the project, and it is necessary to continue to act in accordance with the issues specified in the waste plan and the applicable legislation at all stages of the project. Waste Management that should be implemented within the scope of the project is given in Table 3.

T	able	3	Im	ple	mentation	Req	uired	Waste	Management	
										-

STAGE	SUBJECT		PRECAUTION
	Noisy And Vibra	ation	During the operation phase of the project, noise generation will arise from vehicles. However, still operating owner by activity any One negative of the effect absence for the purpose of All necessary security measures must be taken and any complaints or suggestions from nearby settlements must be taken into consideration and necessary action must be taken by the activity owner.
	Weather emissions	Vehicle Welding	The vehicles used in the project area were published in the Official Gazette dated 11.03.2017 and numbered 30004. into force entering "Exhaust gas emission Control Regulation with Gasoline And Diesel quality "Regulation" to the provisions to be complied with is required.
BUILDING AND BUSINESS PHASE		domestic Qualified Thick Wastes	Project in the scope of formed domestic qualified thick wastes smell, insect And negative to the effects It must be collected in sealed containers.
	Waste Management	PACKAGING waste	 domestic qualified thick of waste management for 02.04.2015 history And 29314 numbered Official Newspaper' It is necessary to comply with the provisions of the "Waste Management Regulation", which was published and entered into force . Back gain possible non- organic origin domestic qualified thick wastes whereas mouth It should be collected in closed domestic waste bins and delivered to the relevant Municipality. Recyclable wastes (glass, paper/cardboard, metal, etc.) must be collected separately from other wastes, deposited in containers, and recycled by companies licensed by the Ministry of Environment, Urbanization and Climate Change. Regarding the issue dated 26.06.2021 and 31523 numbered Official Newspaper' also by publishing into force entering PACKAGING of waste The provisions of the Control Regulation must be complied with. of waste is accumulated containers continually aspect closed by keeping rodent animal And Pest prevention must be ensured .
		domestic Qualified Waste water	 Business in the phase formed wastewater in the scope of 31.2004 History And 25687 Numbered In the Official Gazette by publishing into force entering "This pollution Control "Regulation" provisions must be complied with. Business during This pollution Control Regulation, Drinking-Use juice The provisions of the Regulation on the Protection of Basins must be complied with. of the project all in stages 23.1960 date and 10688 numbered Official Newspaper' also published "Law on Groundwater No. 167" and "On the Protection of Groundwater Against Pollution and Deterioration" published in the Official Gazette No. 28257 dated 07.04.2012 Regulation" to the provisions respect to be is required.

STAGE	SUBJECT		PRECAUTION
		Waste Battery And Accumulators	process in the scope of formed waste battery And accumulators in the scope of, Waste Battery And In accordance with Article 13 of the Accumulator Control Regulation; By collecting waste batteries separately from household waste, businesses that distribute and sell battery products or by municipalities will be created collection to the points waste batteries delivery After becoming waste, the resulting cells, accumulators and/or accumulators used in transformers should not be kept on a sealed surface within the site for more than ninety days until they are delivered to the manufacturer. 31.08.2004 history and 25569 numbered Official in the newspaper by publishing into force entering "Waste Battery It is necessary to ensure that waste is disposed of in accordance with the provisions of the "Regulation on the Control of Batteries and Accumulators".
		Medical Wastes	For medical waste generated within the scope of the activity; waste at the source -most member will download system establishment of waste separate collection, moving And temporary storage with One accident instantly Preparing and complying with an in-unit industrial waste management plan that includes the measures to be taken. Collecting medical, hazardous and domestic wastes and packaging waste separately at the source without mixing with each other, Medical wastes with cutting-piercing waste while collecting technical features In the regulation using specified bags and containers, Separate collected medical And domestic qualified waste Only This work for allocation has been Vehicles with separate transported separately waste temporary to store for the purpose of temporary waste warehouse construction will be or It is required to have a container, Legislation to the provisions to be complied with is required.
		Waste Electronic Things	It is possible that electronic waste will be generated during the process. The electronic waste generated is temporary waste storage on the forehead by accumulating licensed disposal/return earnings to the company must be given. Compliance with the provisions of the Regulation on the Control of Waste Electrical and Electronic Equipment, which came into force after being published in the Official Gazette dated 22.05.2012 and numbered 28300. to be is required.
		Waste oils	Within the scope of waste oils generated at all stages of the project, the "Waste Oils Management Regulation", which came into force after being published in the Official Gazette dated 21.2019 and numbered 30985, and the "Waste Management Regulation", which came into force after being published in the Official Gazette dated 02.04.2015 and numbered 29314. "Regulation" to the provisions respect to be is required. Formed waste oils Temporary

STAGE	SUBJECT		PRECAUTION		
			It is stored in the Waste Storage Area and collected by the Ministry of Environment, Urbanization and Climate Change. licence given by companies back gain and/or disposal ensuring is required		
		Waste Vegetable Waste oils	of the project vegetable waste oil formation in case 06.06.2015 history And 29378 numbered Official It is necessary to comply with the relevant provisions of the "Regulation on the Control of Waste Vegetable Oils", which came into force after being published in the Gazette .		
		Tires that completed its life	Any One for this reason promise subject of waste welding in case your life expired tires, dated 25.11.2006 and numbered 26357 "Control of End-of-Life Tires" Regulation") to the provisions respect to be is required.		
		Dangerous Wastes	In case of fluorescent lamps used in lighting, printing toners from printers used in the administrative building, contaminated waste and other hazardous wastes at any stage of the process, they will be stored in the Temporary Waste Storage Area in accordance with waste codes. Environment urbanism And Climate change ministry by licence given by companies back gain and/or disposal ensuring is required		
		Oily Mud mud	of the process any One in the phase or equipment care from his work caused Oily sludges must be sent to licensed companies and disposed of.		

The relevant applications within the scope of the Regulation on Amendments to the Zero Waste Regulation of the facility have been completed and it has a zero waste certificate. Waste Management Regulation of the Facility in the scope of prepared Industrial Waste Management plan is available is, It has been determined that it has been approved by the Provincial Directorate of Environment, Urbanization and Climate Change. It has been determined that the packaging waste generated in the facility is separated on site in accordance with its codes and is regularly stored in the Temporary Waste Storage Area. The stored waste is recycled through licensed companies.

At the facility, care should be taken to store waste scrap materials on concrete floors rather than soil.

the business is subject to Environmental Permits on Air Emission, Noise Control, and Wastewater Discharge within the scope of the Environmental Permit and License Regulation, and within this scope, it has been determined that the Provincial Directorate's Certificate of Conformity has been approved.

Domestic wastewater generated within the scope of the project is subjected to package treatment and discharged to the receiving environment. In this context, within the scope of domestic wastewater generated during the operation phase , the provisions of the "Water Pollution Control Regulation", which came into force after being published in the Official Gazette No. 25687 dated 31.2004, must be complied with. An analysis must be made by accredited companies by applying to the MELBES system of the Ministry of Environment, Urbanization and Climate Change at the package treatment outlet. In addition, the provisions of the Water Pollution Control Regulation and the Regulation on the Protection of Drinking and Domestic Water Basins must be complied with during the operation.

Emission measurements of the chimneys in the facility must be made regularly by accredited companies by applying to the MELBES system of the Ministry of Environment, Urbanization and Climate Change, within the scope of the provisions and principles specified in the Regulation on Control of Industrial Air Pollution.

of the facility Environmental of noise Evaluation And Management In the regulation stated Within the scope of the provisions and principles, the Ministry of Environment, Urbanization and Climate Change, MELBES Acoustic Reports can be prepared by accredited companies by applying through the system. needs to be prepared.

1.8 Biodiversity Action plan

Alasehir JES facility biodiversity Action plan							
Action	Habitat	Action Subject	Action	Action Rationale	Action/Application Details	Action	Action
Code	Class		Zone			Period	Duration
AL1	Business	Fauna Conservation of Species	Project Area And surroundings	Tortoise (<i>Testudo Graeca</i>) and Anatolian Lizard (<i>Anatololacerta</i> Training for Facility Employees About <i>Anatolicus</i>) Species should be given	Biologists who are experts on the subject Training Should Be Provided by	During Operation	April-May 2024 1 Time
AL2	Business	Fauna Conservation of Species	Project Area And surroundings	Pet Cats Should Never Be Keeped in the Facility. Although it is recommended not to have a pet dog, Even Especially at Night Free to their wanderings Permission should not be given	Company By	During Operation	2023 May
AL3	All Habitats	Invader Blocking Species	Project Area And surroundings	Investigation of Invasive Species Found in the Project Area and Surroundings Project Area And Around by watching Dismantling Plan Must Be Prepared	Population by Expert Biologists Level Monitoring	During Operation	one Year Duration in July and August
AL4	Business	Prevention of Environmental Pollution	Project Area	All Occurrences Within the Business of waste Waste Storage in Temporary Waste Storage Areas in accordance with Waste Codes within the Scope of Management Regulation It should be done.	Company By	During Operation	During Operation

Alasehir JES facility biodiversity Action plan							
Action Code	Habitat Class	Action Subject	Action Zone	Action Rationale	Action/Application Details	Action Period	Action Duration
AL5	Business	Prevention of Environmental Pollution	Project Area	Licensed in accordance with the Waste Codes for Hazardous Wastes Generated within the Business Companies Delivery to Recycling / Disposal Facilities by It should be done.	Company By	During Operation	Maximum 6 on the moon one
AL6	Business	Prevention of Environmental Pollution	Project Area	Licensed in accordance with the Waste Codes for Non- Hazardous Wastes Generated within the Business Companies Delivery to Recycling / Disposal Facilities by It should be done.	Company By	During Operation	Maximum 1 per year
AL7	Business	Prevention of Environmental Pollution	Project Area	and Principles Specified in the Regulation on the Control of Industrial Air Pollution from the Chimneys in the Facility Environment, Companies Accredited by Application from the Ministry of Urbanization and Climate Change, Melbes System By Emission Measurements Organised in the figure to be done It is necessary.	Company By/Environmental Officer/Environmental Consultancy Firm	During Operation	2 per year one

	Alasehir JES facility biodiversity Action plan						
Action Code	Habitat Class	Action Subject	Action Zone	Action Rationale	Action/Application Details	Action Period	Action Duration
AL8	Business	Prevention of Environmental Pollution	Project Area	Environment, Urbanization and Climate Change from Package Treatment Output within the Scope of Domestic Wastewater ministry, Accredited by Application through the Melbes System Analysis by Companies It is necessary	Company By/Environmental Officer/Environmental Consultancy Firm	During Operation	4 on the moon one

PROJECT TEAM

Name- Surname /Title	In Report/Study Department He is Assigned to	Sign ature
Specialist Biologist Tariq BATUHAN	Project And Report Coordination Ecological Assessment	
Prof. Dr. Mustafa SÖZEN	Fauna Evaluation	
Prof. Dr. Tahir SHOOTER	Hydrobiological Evaluation	
Dr. Lecturer . Member of Karim SOUTH	Flora And Vegetation Evaluation	
Kaan ÖZGENCİL	Ornithological Evaluation And GIS Studies	
Biologist Mehmet Ali YUKSEL	Ecological Studies And Land Coordination	
Experienced Bird Observer Ayhan BATUHAN	Bird observation	