BURSA NATURAL GAS CYCLE POWER PLANT BIODIVERSITY ACTION PLAN

1.1 Entrance

Bursa Province, Nilüfer District, Bursa Organized Industrial Zone Pembe Cad. No: 13, registered in title deed sheet H21C05A1D, island 1477/1479, parcel number 2/15, on an area of 25,503.91 m2, in a closed area of 8,074 m2. The business operates in the field of Electrical Energy Production.

Business electrical energy production is done using natural gas. The project operates as a Combined Cycle Power Plant. The power obtained by burning natural gas in the Gas Turbine feeds the generator and the kinetic energy obtained from there is converted into electrical energy. Additionally, to benefit from the waste heat generated as a result of combustion in the turbine, the steam boiler is fed with this heat and the resulting steam is then supplied to the steam turbine, which operates the turbine. The movement of the steam turbine also feeds the same generator, contributing to electricity production.

A bird's eye view of the project area is approximately 3 km away from Doğanköy, 5.2 km from Alaaddinbey, 7.3 km from Ürünlü, 6.6 km from Yalçata, 6.3 km from Gümüştepe, 8.8 km from Mürsel, 10.5 km from Ülkü, 6.3 km from Bademli, 5.3 km from Nilüfer, 6.8 km from Çağrışan, 8.6 km from Görükle Sakarya, 11.4 km from İrfaniye, 12 km from Görükle Zafer, 13.1 km from Gökçeköy, 4 km from Yenikent, 8.3 km from Çağlayan, 6.2 km from Dereçavuşköy, 13.7 km from Karabalçık, 10.1 km from Alaşarköy, 7.4 km from Yeniceabat, 11.2 km from Demirtaş, 13.2 km from İsmetiye, 6.2 km from Çeltikköy, 8 km from İnkaya, 9.1 km from Yiğitali, and 10.5 km from Bursa. (Figure 2-5).

There are important wetlands around the project site. As the crow flies, Demirtaş Dam is approximately 14.6 km away from the project site, Akaycık Pond is 10 km away, Marmara Sea is 13.3 km away, Doğanca Dam is 13.7 km away, Değyenice Pond is 11.4 km away, Çalı Pond is 11 km away, Kayapa Pond is 10.8 km away, Hasanağa Dam is 16.1 km away, and Ulubat Lake is 20.7 km away. (Figure 6-7).



Figure 1 Satellite Image of the Project Site



Figure 2 Villages (Neighborhoods) Near the Project Site



Figure 3: Villages (Neighborhoods) Near the Project Site



Figure 4: Village (Neighborhood) Settlements Close to the Project Area



Figure 5: Village (Neighborhood) Settlements Close to the Project Area



Figure 6: Important Water Bodies Around the Project



Figure 7: Important Water Bodies Around the Project

1.2 Relationship of the Area with Protected and Special Status Areas

Considering the location of the Bursa Natural Gas Power Plant site and the surrounding protected areas and important natural areas; Ulubat Lake is 16.3 km away as the crow flies, and Uludağ MP is 13.5 km away. However, as the crow flies, the project site is approximately 18.6 km from Ulubat Lake KBA and 5.9 km from Uludağ KBA (Figure 8-11).



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



Figure 9: Satellite Image Showing the Relationship Between the Project Site and Protected Areas



Figure 10: Satellite Image Showing the Relationship Between the Project Site and Protected Areas



Figure 11: Satellite Image Showing the Relationship Between the Project Site and Protected Areas

1.3 Classification of Habitats in the Impact Area of Bursa Natural Gas Combined Cycle Power Plant

Bursa Province, Nilüfer District, Bursa Organized Industrial Zone, Pembe Cad. No: 13, registered in title deed sheet H21C05A1D, island 1477/1479, parcel number 2/15, on an area of 25,503.91 m², in a closed area of 8,074 m². The business operates in the field of Electrical Energy Production.

There are 5 different habitat types in the project area. One of these habitats is natural and 4 of them are modified habitats, classified as 1st, 2nd, and 3rd level according to the EUNIS Habitat Classification. The codes and vegetation types are given below (Figure 12).



Shape 12 Bursa Natural gas cycle power plant EUNIS habitat Map one

Bursa Termik Santrali EUNIS Habitat Haritası

Ölçek: 1:4,000

Tesis binaları

- E2.64 : Çimlik alanlar, park çimlikleri
- G5 : Antropojenik ormanlar, baltalıklar, ağaç sıraları
- J1.4 : Şehirlerdeki aktif kullanılan endüstriyel yapılar
- J4.2 : Yol ağları
- J4.6 : Kaldırımlar, beton yüzeyler, rekreasyon alanları



1.4 Defining Floristic Biodiversity in the Impact Area of Bursa Natural Gas Cycle Power Plant

Since the project site is located within the Organized Industrial Zone, it is not appropriate to create floristic diversity as the ground texture of the facility does not allow the growth of a floristic composition. Considering IFC PS-6 and Guidance Note 6 criteria in terms of floristics within the project area, there are no plant taxa with CR and EN status within the scope of the IUCN agreement, and no plant taxa within the scope of the Bern and CITES conventions and their annexes. Therefore, there is no critical habitat for species conservation.

1.5 Defining Faunistic Biodiversity in the Impact Area of Bursa Natural Gas Cycle Power Plant

1.5.1 Amphibians

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The project area is not a suitable environment for amphibians due to intense anthropogenic pressure and structuring.

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. There are no aquatic habitats in the project area.

1.5.2 Reptiles

There are no endemic and/or endangered reptile species in the project area.

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

Criterion 2: Refers to Endemic and/or Narrowly Ranged Species. There is no endemic or narrow-ranging reptile species in the project area.

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

Criterion 4: Refers to Highly Threatened and/or Uniquely Rare Ecosystems. The project area is a completely built-up area under anthropogenic influence. There are no Highly Threatened and/or Uniquely Rare Ecosystems in the area.

1.5.3 Mammals

Due to the built-up state of the region and the intense anthropogenic impact, it is unlikely that there will be any mammal species in the area, except for house mice and sewer rats, which can be seen in built-up areas close to humans. The region does not show any significant structure for mammals.

Criterion 1: Refers to Critically Endangered (CR) and/or Endangered (EN) Species. **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: Refers to Migratory and/or Community Concentrated Species. **There is no** mammal species in the project area that meets this criterion.

Criterion 4: Refers to Highly Threatened and/or Uniquely Rare Ecosystems. The project area is a completely built-up area under anthropogenic influence. There are no Highly Threatened and/or Uniquely Rare Ecosystems in the Area.

Criterion 5: Important Evolutionary Processes

Structural features of a region, such as topography, geology, soil, temperature, vegetation, and combinations of these factors, can influence the evolutionary processes that lead to regional patterning of species and ecological traits. In some cases, distinctive spatial features have been associated with populations or subpopulations of plant and animal species that are genetically unique. 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 protecting species diversity in an area, the genetic diversity within species as well as the processes that drive speciation provide evolutionary flexibility 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.

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

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

The connection between habitats (e.g., biological corridors), especially in fragmented habitats and in the maintenance of metapopulations, is important for ensuring species migration and gene flow. This connectivity also includes biological corridors across elevational and climate gradients, as well as "crest to coast" 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 to areas that have been previously investigated and are known or suspected to be associated with unique evolutionary processes. Although 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 Bursa Power Plant is located does not show a special evolutionary process in terms of fauna. The region does not have a special geological structure or a special history and therefore does not contain a large number of critical and/or endemic species. The area has been densely built as an OIZ and has completely lost its natural structure. In this regard, the area **does not meet** Criterion 5.

1.5.4 Ornithology

As a result of the studies, a total of 154 bird species were identified in the project area and its immediate surroundings. However, the vast majority of these bird species were detected far from the industrial zone where the facility is located. 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.

Two of the species identified, the common pochard (Aythya ferina) and the European turtle dove (Streptopelia turtur), are globally endangered species, and in the most recent assessments, their Red List status was evaluated as "VU," meaning vulnerable.

Of the identified species, 109 are listed in the BERN Agreement Annex-2, 34 are listed in the BERN Agreement Annex-3, 1 is listed in CITES Annex-1, and 16 are listed in CITES Annex-2.

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

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

No "CR" or "EN" category bird species have been detected around the Bursa thermal power plant. Therefore, this criterion is not triggered.

Criterion 2: Habitats Important to Endemic and Narrowly Distributed Species

The bird species around the facility do not trigger this criterion.

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: Highly Threatened 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 is not triggered.

Criterion 5: Habitats Identified with Important Evolutionary Processes

The Bursa Natural Gas Cycle Power Plant is not significantly different from the surrounding region in terms of elevation, moisture gradients, or any other geological, ecological, or

evolutionary factor that indicates the region is vital to sustaining unique or distinctive evolutionary processes. Therefore, none of the habitats around the facility trigger Criterion 5.

Table 1 Bird S	becies Found ar	nd Likely to Be	Found in the	Project Area
Table I Ditu b	pecies round ai	iu Linciy to De	round in the	I I Ujece Al ca

Type Scientific First Name Type English Name e		endemism	IUCN (Spherical)	BERN	MAKK	CITES
Accipiter brevipes Levant Sparrowhawk N		Not endemic	LC	Annex 2	KD	Annex 2
Accipiter gentilis	Northern Goshawk	Not endemic	LC	Annex 2	KD	Annex 2
Accipiter nisus	Eurasian Sparrowhawk	Not endemic	LC	Annex 2	KD	Annex 2
Acridotheres tristis	Common Myna	Not endemic	LC	KD	Annex 1	KD
Acrocephalus scirpaceus	Reed Warbler	Not endemic	LC	Annex 2	KD	KD
Actitis hypoleucos	Common Sandpiper	Not endemic	LC	Annex 2	KD	KD
Aegithalos caudatus	Long-tailed Tit	Not endemic	LC	Annex 3	KD	KD
Alauda arvensis Skylark N		Not endemic	LC	Annex 3	Annex 1	KD
Alcedo atthisCommon KingfisherAnas creccaEurasian TealAnas platyrhynchosMallard		Not endemic	LC	Annex 2	KD	KD
		Not endemic	LC	Annex 3	Annex 2	KD
		Not endemic	LC	Annex 2	Annex 2	KD
Anser anser	Greylag Goose	Not endemic	LC	Annex 3	Annex 1	KD
Anthus pratensis	Meadow Pipit	Not endemic	NT	Annex 2	KD	KD
Anthus trivialis	Tree Pipit	Not endemic	LC	Annex 2	KD	KD
Apus apus	Common Swift	Not endemic	LC	Annex 3	KD	KD
Apus melba	Alpine Swift	Not endemic	LC	Annex 2	KD	KD
Apus pallidus	Pallid Swift	Not endemic	LC	Annex 2	KD	KD
Ardea alba	Great Egret	Not endemic	LC	Annex 2	KD	KD
Ardea cinerea	Grey Heron	Not endemic	LC	Annex 3	Annex 1	KD
Athene noctua	Little Owl	Not endemic	LC	Annex 2	KD	Annex 2
Aythya ferina	Common Pochard	Not endemic	VU	Annex 3	Annex 2	KD
Buteo buteo	Common Buzzard	Not endemic	LC	Annex 2	KD	Annex 2
Buteo rufinus	Long-legged Buzzard	Not endemic	LC	Annex 2	KD	Annex 2
Caprimulgus europaeus	European Nightjar	Not endemic	LC	Annex 2	KD	KD

Type Scientific First Name	Type English Name	endemism	IUCN (Spherical)	BERN	MAKK	CITES
Carduelis carduelis	European Goldfinch	Not endemic	LC	Annex 2	KD	KD
Cecropis daurica	Red-rumped Swallow	Not endemic	LC	Annex 2	KD	KD
Certhia brachydactyla	Short-toed Treecreeper	Not endemic	LC	Annex 2	KD	KD
Cettia had	Cetti's Warbler	Not endemic	LC	Annex 2	KD	KD
Charadrius dubius	Little Ringed Plover	Not endemic	LC	Annex 2	KD	KD
Chloris chloris	European Greenfinch	Not endemic	LC	Annex 2	KD	KD
Chroicocephalus ridibundus	Black-headed Gull	Not endemic	LC	Annex 3	Annex 1	KD
Ciconia ciconia	White Stork	Not endemic	LC	Annex 2	KD	KD
Ciconia nigra	Black Stork		LC	Annex 2	KD	Annex 2
Circaetus gallicus	Circaetus gallicus Short-toed Snake Eagle		LC	Annex 2	KD	Annex 2
Circus cyaneus	us cyaneus Northern Harrier		LC	Annex 2	KD	Annex 2
Clanga pomarina	Lesser Spotted Eagle	Not endemic	LC	Annex 2	KD	Annex 2
Coccothraustes coccothraustes	Hawfinch	Not endemic	LC	Annex 2	KD	KD
Columba livia	Rock Pigeon	Not endemic	LC	Annex 3	Annex 2	KD
Columba palumbus	Common Wood Pigeon	Not endemic	LC	KD	KD	KD
Corvus corax	Common Raven	Not endemic	LC	Annex 3	Annex 1	KD
Corvus cornix	Hooded Crow	Not endemic	LC	KD	Annex 2	KD
Corvus frugilegus	Rook	Not endemic	LC	KD	Annex 2	KD
Corvus monedula	Jackdaw	Not endemic	LC	KD	Annex 2	KD
Coturnix coturnix	Common Quail	Not endemic	LC	Annex 3	Annex 2	KD
Cuculus canorus	Common Cuckoo	Not endemic	LC	Annex 3	KD	KD
Curruca communis	Greater Whitethroat	Not endemic	LC	Annex 2	KD	KD
Curruca crassirostris	Eastern Orphean Warbler	Not endemic	LC	Annex 2	KD	KD
Curruca curruca	Lesser Whitethroat	Not endemic	LC	Annex 2	KD	KD
Curruca melanocephala	Sardinian Warbler	Not endemic	LC	Annex 2	KD	KD

Type Scientific First Name	Type English Name	endemism	IUCN (Spherical)	BERN	MAKK	CITES
Cyanistes caeruleus	Blue Tit	Not endemic	LC	Annex 2	KD	KD
Delichon urbicum	House Martin	Not endemic	LC	Annex 2	KD	KD
Dendrocopos leucotos	White-backed Woodpecker	Not endemic	LC	Annex 2	KD	KD
Dendrocopos major	Great Spotted Woodpecker	Not endemic	LC	Annex 2	KD	KD
Dendrocopos syriacus	Syrian Woodpecker	Not endemic	LC	Annex 2	KD	KD
Dendrocoptes medius	Middle Spotted Woodpecker	Not endemic	LC	Annex 2	KD	KD
Dryobates minor	Lesser Spotted Woodpecker	Not endemic	LC	Annex 2	KD	KD
Egretta garzetta	Little Egret	Not endemic	LC	Annex 2	KD	KD
Emberiza calandra	Corn Bunting	Not endemic	LC	Annex 3	Annex 1	KD
Emberiza cirlus	Cirl Bunting	Not endemic	LC	Annex 2	KD	KD
Emberiza hortulana	Ortolan Bunting	Not endemic	LC	Annex 3	Annex 1	KD
Emberiza melanocephala	Black-headed Bunting	Not endemic	LC	Annex 2	KD	KD
Erithacus rubecula	European Robin	Not endemic	LC	Annex 2	KD	KD
Falco peregrinus	Peregrine Falcon	Not endemic	LC	Annex 2	KD	Annex 1
Falco tinnunculus	Common Kestrel	Not endemic	LC	Annex 2	KD	Annex 2
Ficedula albicollis	Collared Flycatcher	Not endemic	LC	Annex 2	KD	KD
Ficedula hypoleuca	European Pied Flycatcher	Not endemic	LC	Annex 2	KD	KD
Ficedula semitorquata	Semi-collared Flycatcher	Not endemic	LC	Annex 2	KD	KD
Fringilla coelebs	Chaffinch	Not endemic	LC	Annex 3	Annex 1	KD
Fringilla montifringilla	Brambling	Not endemic	LC	Annex 2	KD	KD
Fulica atra	Common Coot	Not endemic	LC	Annex 3	Annex 2	KD
Galerida cristata	Crested Lark	Not endemic	LC	Annex 3	Annex 1	KD
Gallinula chloropus	Common Moorhen	Not endemic	LC	Annex 3	Annex 1	KD
Garrulus glandarius	Eurasian Jay	Not endemic	LC	KD	Annex 2	KD
Gelochelidon nilotica	Gull-billed Tern	Not endemic	LC	Annex 2	KD	KD

Type Scientific First Name	Type English Name	endemism	IUCN (Spherical)	BERN	MAKK	CITES
Grus grus	Common Crane	Not endemic	LC	Annex 2	KD	Annex 2
Gulosus aristotelis	European Shag	Not endemic	LC	Annex 2	KD	KD
Hieraaetus pennatus	Booted Eagle	Not endemic	LC	Annex 2	KD	Annex 2
Himantopus himantopus	Black-winged Stilt	Not endemic	LC	Annex 2	KD	KD
Hippolais olivetorum	Olive-tree Warbler	Not endemic	LC	Annex 2	KD	KD
Hirundo rustica	Barn Swallow	Not endemic	LC	Annex 2	KD	KD
Hydrocoloeus minutus	Little Gull	Not endemic	LC	Annex 2	KD	KD
Ichthyaetus melanocephalus	anocephalus Mediterranean Gull		LC	Annex 2	KD	KD
Iduna pallida	una pallida Eastern Olivaceous Warbler		LC	Annex 2	KD	KD
<i>Ixobrychus minutus</i> Little Bittern		Not endemic	LC	Annex 2	KD	KD
Lanius collurio	Illurio Red-backed Shrike		LC	Annex 2	Annex 1	KD
Lanius minor	Lesser Grey Shrike	Not endemic	LC	Annex 2	KD	KD
Lanius nubicus	Masked Shrike	Not endemic	LC	Annex 2	KD	KD
Lanius senator	Woodchat Shrike	Not endemic	LC	Annex 2	KD	KD
Larus michahellis	Yellow-legged Gull	Not endemic	LC	Annex 3	Annex 1	KD
Lullula arborea	Woodlark	Not endemic	LC	Annex 3	Annex 1	KD
Luscinia megarhynchos	Common Nightingale	Not endemic	LC	Annex 2	KD	KD
Mareca penelope	Eurasian Wigeon	Not endemic	LC	Annex 3	Annex 2	KD
Merops apiaster	European Bee-eater	Not endemic	LC	Annex 2	KD	KD
Microcarbo pygmaeus	Pygmy Cormorant	Not endemic	LC	Annex 2	KD	KD
Milvus migrans	Black Kite	Not endemic	LC	Annex 2	KD	KD
Monticola solitarius	Blue Rock Thrush	Not endemic	LC	Annex 2	KD	KD
Motacilla alba	White Wagtail	Not endemic	LC	Annex 2	KD	KD
Motacilla cinerea	Grey Wagtail	Not endemic	LC	Annex 2	KD	KD
Muscicapa striata	Spotted Flycatcher	Not endemic	LC	Annex 2	KD	KD

Type Scientific First Name	Type English Name	endemism	IUCN (Spherical)	BERN	MAKK	CITES
Nycticorax nycticorax	Black-crowned Night Heron	Not endemic	LC	Annex 2	KD	KD
Oenanthe isabellina	Isabelline Wheatear	Not endemic	LC	Annex 2	Annex 1	KD
Oenanthe melanoleuca	Black-eared Wheatear	Not endemic	LC	Annex 2	KD	KD
Oenanthe oenanthe	Northern Wheatear	Not endemic	LC	Annex 2	Annex 1	KD
Oriolus oriolus	Eurasian Golden Oriole	Not endemic	LC	Annex 2	KD	KD
Parus major	Great Tit	Not endemic	LC	Annex 2	KD	KD
Passer domesticus	House Sparrow	Not endemic	LC	KD	Annex 2	KD
Passer montanus	Eurasian Tree Sparrow	Not endemic	LC	Annex 3	Annex 1	KD
Pelecanus onocrotalus	s onocrotalus Great White Pelican		LC	Annex 2	KD	KD
Periparus ater	Periparus ater Coal Tit		LC	Annex 2	KD	KD
Pernis apivorus	s European Honey Buzzard		LC	Annex 2	KD	Annex 2
Phalacrocorax carbo	Great Cormorant	Not endemic	LC	Annex 3	Annex 1	KD
Phoenicurus ochruros	Black Redstart	Not endemic	LC	Annex 2	KD	KD
Phoenicurus phoenicurus	Common Redstart	Not endemic	LC	Annex 2	KD	KD
Phylloscopus collybita	Common Chiffchaff	Not endemic	LC	Annex 2	KD	KD
Phylloscopus orientalis	Eastern Bonelli's Warbler	Not endemic	LC	KD	KD	KD
Phylloscopus sibilatrix	Wood Warbler	Not endemic	LC	KD	KD	KD
Phylloscopus trochilus	Willow Warbler	Not endemic	LC	Annex 2	KD	KD
Pica pica	Eurasian Magpie	Not endemic	LC	KD	Annex 2	KD
Picus viridis European Green Woodpecker		Not endemic	LC	Annex 2	KD	KD
Platalea leucorodia	Eurasian Spoonbill	Not endemic	LC	Annex 2	KD	KD
Podiceps cristatus	Great Crested Grebe	Not endemic	LC	Annex 3	KD	KD
Podiceps grisegena	Red-necked Grebe	Not endemic	LC	Annex 2	KD	KD
Podiceps nigricollis	Black-necked Grebe	Not endemic	LC	Annex 2	KD	KD
Prunella modularis	Dunnock	Not endemic	LC	Annex 2	KD	KD

Type Scientific First Name	Type English Name	endemism	IUCN (Spherical)	BERN	MAKK	CITES
Psittacula krameri	Rose-ringed Parakeet	Not endemic	LC	Annex 3	KD	KD
Rallus aquaticus	Water Rail	Not endemic	LC	Annex 3	Annex 1	KD
Regulus ignicapilla	Common Firecrest	Not endemic	LC	Annex 2	KD	KD
Regulus regulus	Goldcrest	Not endemic	LC	Annex 2	KD	KD
Riparia riparia	Sand Martin	Not endemic	LC	Annex 2	KD	KD
Saxicola rubetra	Whinchat	Not endemic	LC	Annex 2	KD	KD
Saxicola rubicola	European Stonechat	Not endemic	LC	Annex 2	KD	KD
Scolopax rusticola	Eurasian Woodcock	Not endemic	LC	Annex 3	Annex 2	KD
Serinus serinus	European Serin		LC	Annex 2	KD	KD
Sitta europaea Eurasian Nuthatch		Not endemic	LC	Annex 2	KD	KD
Sitta neumayer	Sitta neumayer Western Rock Nuthatch		LC	Annex 2	KD	KD
Spinus spinus	Eurasian Siskin	Not endemic	LC	Annex 2	KD	KD
Streptopelia decaocto	Eurasian Collared Dove	Not endemic	LC	Annex 3	Annex 1	KD
Streptopelia senegalensis	Laughing Dove	Not endemic	LC	Annex 3	Annex 1	KD
Streptopelia turtur	European Turtle Dove	Not endemic	VU	Annex 3	Annex 2	KD
Strix aluco	Tawny Owl	Not endemic	LC	Annex 2	KD	Annex 2
Sturnus vulgaris	Common Starling	Not endemic	LC	KD	Annex 1	KD
Sylvia atricapilla	Eurasian Blackcap	Not endemic	LC	Annex 2	KD	KD
Tachybaptus ruficollis	Little Grebe	Not endemic	LC	Annex 2	KD	KD
Tadorna tadorna	Common Shelduck	Not endemic	LC	Annex 2	KD	KD
Thalasseus sandvicensis	Sandwich Tern	Not endemic	LC	Annex 2	KD	KD
Tringa ochropus	Green Sandpiper	Not endemic	LC	Annex 2	KD	KD
Troglodytes troglodytes	Eurasian Wren	Not endemic	LC	Annex 2	KD	KD
Turdus iliacus	Redwing	Not endemic	NT	Annex 2	KD	KD
Turdus merula	Common Blackbird	Not endemic	LC	Annex 3	Annex 2	KD

Type Scientific First Name	Type English Name	endemism	IUCN (Spherical)	BERN	MAKK	CITES
Turdus philomelos	Song Thrush	Not endemic	LC	Annex 3	Annex 2	KD
Turdus pilaris	Fieldfare	Not endemic	LC	Annex 3	Annex 1	KD
Turdus viscivorus Mistle Thrush		Not endemic	LC	Annex 3	Annex 1	KD
Tyto alba	Barn Owl	Not endemic	LC	Annex 2	KD	Annex 2
Upupa epops	Eurasian Hoopoe	Not endemic	LC	Annex 2	KD	KD

1.6 Biodiversity Risk Evaluation

1.6.1 Flora

Taking into account IFC PS-6 and Guidance Note 6 criteria in terms of floristics within the facility area, there are no plant taxa with CR and EN status within the scope of the IUCN agreement and no plant taxa within the scope of the BERN and CITES agreements and their annexes. Therefore, there is no critical habitat in terms of species conservation.

1.6.2 Fauna

Considering IFC PS-6 and Guidance Note 6 criteria, the "critical species" evaluation and "critical habitat" evaluation were made in Chapter 5, and there are no critical species in terms of fauna (Amphibians, Reptiles, Mammals) in the region. Accordingly, there is no critical habitat.

1.6.3 Ornithology

Taking into account the IFC PS-6 and Guidance Note 6 criteria, the "critical species" evaluation and "critical habitat" evaluation were made in Section 5. There is no ornithologically critical species in the region, and accordingly, there is no critical habitat.

However, thermal power plants are harmful to many living groups, including birds. Past studies have shown that they can negatively affect diversity and populations (e.g., Bajpai et al., 2010; Salgado et al., 1996). Due to the very limited ornithological studies and observations around the Lüleburgaz thermal power plant, it is not possible to make a comprehensive biodiversity risk analysis. However, past studies have found that birds living around thermal power plants experience issues such as heavy metal poisoning. Due to the location of the project site, it is anticipated that it will not cause major damage to critical bird species.

1.6.4 Environmental Risk Analysis

Environmental Risk refers to the potential of a project to adversely affect human health or the environment, either directly or indirectly. Estimating the magnitude of risk in all activities and deciding whether the risk can be tolerated is called Risk Assessment.

Environmental Risk Assessment involves identifying environmental hazards present in the working environment, revealing risks, and controlling those risks through appropriate qualitative and/or quantitative methods using systematic approaches.

To determine the environmental impacts likely to occur within the periods specified in the environmental management and monitoring plan, and to minimize the impacts of the project by collecting relevant data and comparing the compliance of the activities carried out with the legislation:

- Management of the business,
- Wastes,
- Air emissions,
- Noise,
- Wastewater,

such 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. 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 2.

Table 2 Implementation Required Waste Manageme
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	STAGE	SUBJEC	CT	PRECAUTION
		Noisy And Vibration		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	Domestic qualified solid wastes generated within the scope of the project must be collected in sealed containers to prevent smell, insects, and negative effects. For the
	Waste Management	Packaging waste	management of domestic qualified solid wastes, it is necessary to comply with the provisions of the "Waste Management Regulation," published and entered into force in the Official Gazette dated 02.04.2015 and numbered 29314. Non-recyclable organic domestic qualified solid wastes 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. The provisions of the "Packaging Waste Control Regulation," published and entered into force in the Official Gazette dated 26.06.2021 and numbered 31523, must be complied with. Waste containers must be kept closed at all times to prevent rodents and pests.	
	BU		Domestic Qualified Waste water	During the operation phase, wastewater management must comply with the provisions of the "Water Pollution Control Regulation," published and entered into force in the Official Gazette dated 31.12.2004 and numbered 25687. Throughout the operation, the provisions of the "Water Pollution Control Regulation" and the "Regulation on the Protection of Drinking-Use Water Basins" must be adhered to. At all stages of the project, compliance with the provisions of the "Law on Groundwater No. 167," published in the Official Gazette dated 23.12.1960 and numbered 10688, and the "Regulation on the Protection of Groundwater Against Pollution and Deterioration," published in the Official Gazette dated 07.04.2012 and numbered 28257, is required.

STAGE	SUBJEC	Т	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 wastes 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 21.12.2019 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 respects 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. license given by companies back gain and/or disposal ensuring is required
	Waste Vegetabl	Waste Vegetable Waste oils Waste Vegetable Waste oils Waste Vegetable Waste oils Official It is necessary to comply with the relevant provisions of of Waste Vegetable Oils", which came into force after being put	
	of your life Co Tires	ompleted	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 license 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. Packaging waste generated in the facility must be separated on-site in accordance with its codes and must be stored regularly in the Temporary Waste Storage Area. Stored waste must be recycled through licensed companies.

At the facility, care should be taken to store waste scrap materials on a concrete floor rather than on a dirt floor.

It has been determined that the domestic wastewater generated within the scope of the project is sent to the treatment facility of the OIZ General Directorate through the OIZ Channel. In this context, within the scope of domestic wastewater generated during the operation phase, it was published in the Official Gazette dated 31.12.2004 and numbered 25687. Compliance with the provisions of the "Water Pollution Control Regulation" that came into force after being published is required. With this together Business during This pollution Control The provisions of the Regulation on the Protection of Drinking and Domestic Water Basins must be complied with.

It has been observed that the business is subject to an Environmental Permit on Air Emission within the Scope of the Environmental Permit and License Regulation, and an Environmental Permit has been obtained.

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.

1.7 Biodiversity Action Plan

Bursa Natural gas cycle power plant biodiversity Action plan							
Action	Habitat	Action Subject	Action	Action Rationale	Action/Application Details	Action	Action
Code	Class		Zone			Period	Duration
BT1	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	Every six months
BT2	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	1 per year
BT3	Business	Prevention of Environmental Pollution	Project Area	The Business Appears to be Subject to an Environmental Permit Regarding Air Emissions, and Emissions Confirmation Measurements Regularly in the figure Getting it done It is necessary.	Company By	During Operation	2 Years
BT4	Business	Prevention of Environmental Pollution	Project Area	The Business Appears to be Subject to an Environmental Permit Regarding Air Emission, and the Seas Devices their maintenance Organized It needs to be done properly.	Company By	During Operation	1 per year
BT5	Business	Prevention of Environmental Pollution	Project Area	on site Found in the Regulation on the Control of Industrial Air Pollution from Chimneys Stated	Company By/Environmental Officer/Environmental Consultancy Firm	During Operation	2 per year one

Bursa Natural gas cycle power plant biodiversity Action plan							
Action	Habitat	Action Subject	Action	Action Rationale	Action/Application Details	Action	Action
Code	Class	Action Subject	Zone			Period	Duration
				Within the Scope of Terms and			
				Principles Environment,			
				Companies Accredited by			
				Application from the Ministry			
				of Urbanization and Climate			
				Change, Melbes System by			
				Emission of measurements			
				Organised It must be done as			
				follows.			

PROJECT TEAM

Name- Surname/Title	In Report/Study Department He is Assigned to	Sign ature
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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	