


**SEMI-ANNUAL REPORT FOR THE IMPLEMENTATION
OF THE ENVIRONMENTAL TERMS DURING OPERATION AND MAINTENANCE OF PATHE
MOTORWAY, SECTION “SKARFEIA – RACHES” AND
CENTRAL GREECE MOTORWAY (E65), SECTION “XYNIADA – TRIKALA”**

**PROJECT: “DESIGN - CONSTRUCTION - FINANCING - OPERATION - MAINTENANCE AND
EXPLOITATION OF THE PROJECT
“CENTRAL GREECE MOTORWAY (E65)”**



Date	July 2022
Created by:	Concessionaire 

**REFERENCE PERIOD
A' SEMESTER 2022**

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1. INTRODUCTION

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This Environmental Management Report outlines the company's, KENTRIKI ODOS S.A., Environmental Management Processes during the operation and maintenance of the Concession Project for the first semester of 2022 (01.01.2022 to 31.12.2022).



The company ODOS KENTRIKIS ELLADOS S.A. has implemented a program to monitor the environmental impact, in accordance with the Concession Contract and the approved Environmental Terms (E.T.) of the project. The implementation of the program is done in such a way that it has multiple beneficial nature to the man-made and the natural environment on the areas of influence, as well as to serve in the best possible way the users at the section **Skarfeia – Raches (57 km) of the PATHE – E65 Motorway** and the section **Xyniada – Trikala (79.5 km) of the E65 Motorway**.



The monitoring of environmental and social parameters is done in such a way that enables early recognition of any harmful tendencies and permits the reduction and/or elimination of the negative effects, by intervening with suitable protective measures. Additionally, the constant monitoring enables the effectiveness assessment of the proposed protection measures, so that



the protection of the affected by the operation and the maintenance of the motorway environmental parameters is ensured over time. The collection and recording of qualitative and quantitative evidence during constant E.T. monitoring also aims to promote further awareness on the impacts that the construction of such projects may have on a

similar Environment.

At the PATHE motorway, section “Skarfeia – Raches”, and at the E65 motorway, section “Xyniada – Trikala”, a comprehensive environmental monitoring program is implemented, through which all Environmental Terms are met, as detailed below.

2. PROJECT DESCRIPTION

2.1 PATHE E65 Motorway

State : Hellenic Republic

Concessionaire : ODOS KENTRIKIS ELLADAS S.A.

Motorway : PATHE

Section : Skarfeia – Raches

1. 12 (twelve) Junctions

The PATHE motorway at the section Skarfeia

– Raches includes:

- Skarfeia semi-I/C near K.P. 185+500
- Molos semi-I/C near K.P. 190+500
- Thermopyles semi-I/C near K.P. 198+500
- Mpralos (Thermopiles) I/C near K.P. 203+000
- E65 semi-I/C near K.P. 207+000
- Anthili semi-I/C near 210+000
- Roditsa I/C near K.P. 212+500
- Ag. Paraskevi I/C near K.P. 217+500
- Ag. Marina I/C near K.P. 223+500
- Stylida – Karavomylos I/C near K.P. 232+000
- Karavomylos – Achinos I/C near K.P. 237+000
- Raches semi-I/C near K.P. 241+000



2. 2 (two) Frontal & 8 (eight) Lateral Toll Stations

i. Frontal

- Agia Triada near K.P. 195+000
- Mavromantila near K.P. 220+000

ii. Lateral

- 2 on Molos I/C near K.P. 190+500
- 2 on Thermopyles I/C near K.P. 203+000
- 2 on Ag. Marina I/C on K.P. 223+500
- 2 on Karavomylos I/C near K.P. 232+000



3. 6 (six) Temporary Parking Areas

- Near K.P. 188+000 to Lamia

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- Near K.P. 188+000 to Athens
- Near K.P. 221+500 to Lamia
- Near K.P. 221+700 to Athens
- Near K.P. 239+250 to Lamia
- Near K.P. 239+250 to Athens

4. 6 (six) Tunnels

- Near K.P. 225+800 to K.P. 226+500, Bilaterally
- Near K.P.227+500 to K.P. 228+500 Bilaterally
- Near K.P. 228+500 to K.P. 229+000 (to Lamia)
- Near K.P. 228+700 to K.P. 229+000 (to Thessaloniki)

5. 3 Winter Maintenance Stations (WMS)

- Agia Triada WMS near K.P. 195+000
- Agia Marina WMS near K.P. 223+500
- Stylida WMS near K.P. 232+000

The sections of the Concession Contract Project are divided in five (5) Geographical Units (GU).

S/N	SECTION	Km
1	Skarfeia – Thermopyles	17.32
2	Thermopyles – Spercheios (except the bridge under construction by ERGOSE)	8.50
3	Spercheios - Ag. Paraskevi I/C	3.50
4	Ag. Paraskevi I/C – Ag. Marina I/C	8.50
5	Ag. Marina – Raches	19.20

2.2 Central Greece Motorway (E65)

The Central Greece Motorway, Xyniada – Trikala Section includes:

1. 8 Junctions

- Xyniada I/C near K.P. 32+000
- Smokovo semi-I/C near K.P. 48+500
- Anavra I/C near K.P. 61+000
- Sofades I/C near K.P. 72+500
- Karditsa I/C near K.P. 81+000
- Proastio I/C near K.P. 97+500
- Loggos semi-I/C near K.P. 106+500
- Trikala I/C near K.P. 111+500



2. 2 Frontal and 3 Lateral Toll Stations

i. Frontal (2):

- Sofades near K.P. 66+000
- Trikala near K.P. 105+500

ii. Lateral (3):

- 2 on Anavra I/C near K.P. 61+000
- 2 on Proastio I/C near K.P. 97+500
- 2 on Trikala I/C near K.P. 111+500 (not in operation)



3. 2 Motorists Service Stations (MSS)

- Xyniada MSS near K.P. 43+500 bilaterally (not constructed)
- Sofades MSS near K.P. 70+500 bilaterally

4. 8 Parking Areas

- Near K.P. 105+000 to Lamia
- Near K.P. 102+000 to Egnatia
- Near K.P. 86+500 to Lamia
- Near K.P. 86+500 to Egnatia
- Near K.P. 52+000 to Lamia
- Near K.P. 52+000 to Egnatia



- Near K.P. 35+000 to Lamia
- Near K.P. 35+000 to Egnatia

5. One Maintenance Control Center (MCC)

- Sofades MCC near K.P. 70+500



6. 3 Winter Maintenance Stations

- Xyniada WMS (same position as MCC/MSS near K.P. 43+500) (not constructed)
- Sofades WMS (same position as MCC/MSS) near K.P. 70+500
- Trikala WMS (near K.P. 105+500) (not constructed)



7. 2 Tunnels

- Tunnel T3A of 113m length near K.P. 45+600
- Tunnel T3 of 387m length near K.P. 46+000

8. 9 Bridges > 50 m

- Bridge of aprox. 70 m length near K.P. 48+500
- Bridge of aprox. 160 m length near K.P. 49+000
- Bridge of aprox. 295 m length near K.P. 51+000
- Bridge of aprox. 150 m length near K.P. 54+000
- Bridge of aprox. 150 m length near K.P. 55+500
- Bridge of aprox. 51.5 m length near K.P. 70+500
- Bridge of aprox. 92 m length near K.P. 90+000 (Kalentzis River)
- Bridge of aprox. 587 m length near K.P. 103+500 (Pineios River)
- Bridge of aprox. 74 m length near K.P. 110+500 (Trikala – Larisa highway)



The exact K.P.s are depicted in Annex I.

3. SUPERVISORY SERVICES (PROJECT OWNERS)

The Supervisory Services of the Concession Project are:

- **Special Service for Public Works/Construction of Transportation Projects with Concession Contract** (EYDE/KSESP), 5 Karystou St., 115 23, Athens,
- **Directorate D17, Directorate of Infrastructure Operation, Maintenance & Exploitation with Concession Contract**, 70 Panormou St., 115 23, Athens,

Concessionaire: ODOS KENTRIKIS ELLADAS S.A.

Motorway: PATHE (Skarfeia – Raches & E65 (Xyniada – Trikala))

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4. ENVIRONMENTAL AUTHORIZATION

4.1 JMD ETA and their validity – Present Situation

4.1.1 PATHE: Skarfeia – Raches Section

S/N	Section	E.T. Validity	E.T. Decisions issued
1	Skarfeia – Lamia Subsection Skarfeia - Thermopyles	The section ETAD is valid until 27.12.2033 Decision YPEN/ G.D.P.P./DIPA with YPEN prot. no. 96975/4083/27.12.2018)	MAIN PROJECT <ul style="list-style-type: none"> • JMD No 146113/12.07.2005, E.T. Approval • JMD No 129696/06.06.2007. E.T. Amendment • G.D.P.P./DIPA 96975/4083/27.12.2018. E.T. amendment and renewal • G.D.P.P./DIPA /85272/3419/27.11.2018: E.T. amendment for the construction and the operation of 6 Parking Areas • G.D.P.P./DIPA 3048/162/05.08.2020. Compliance with JMD 1915/2018 requirements (B' 304). ANCILLARY WORKS EYPE 122881/08.03.2010, Environmental authorization for Ag. Triada toll station and Molos I/C.
2	Thermopyles – Nea Koiti Spercheiou	The section ETAD is valid until 05-03-2030 (Decision YPAPEN/ G.D.P.P./DIPA with prot. no. oik. 146836/05.03.2015)	MAIN PROJECT <ul style="list-style-type: none"> • JMD No 131550/04.03.2003, E.T. Approval • G.D.P.P./DIPA 146836/05.03.2015 Amendment and renewal of E.T. • G.D.P.P./DIPA 3048/162/05.08.2020. Compliance with JMD 1915/2018 requirements (B' 304). ANCILLARY WORKS EYPE 122881/08.03.2010, Environmental authorization for Thermopyles I/C toll station and Molos I/C.
3	Nea Koiti Spercheiou - Roditsa I/C	The section ETAD is valid until 14/09/2033	MAIN PROJECT <ul style="list-style-type: none"> • JMD No 146109/30.09.2005 E.T. Approval • G.D.P.P./DIPA 145496/21.01.2015. E.T. Amendment

		(Decision YPEN/ G.D.P.P./DIPA with prot. no. YPEN/ΔΙΠΑ/60908/1786/14.09.2018)	<ul style="list-style-type: none"> G.D.P.P./DIPA 60908/1786/14.09.2018. E.T. Renewal ΓΔΠΠ/ΔΙΠΑ 3048/162/05.08.2020. Compliance with JMD 1915/2018 requirements (B' 304).
4	Lamia –Raches Subsection Roditsa I/C – Ag. Marina I/C	The section ETAD is valid until 15.03.2031 (Decision YPEN/ G.D.P.P./DIPA with prot. no. oik. 13590/15.03.2016)	MAIN PROJECT <ul style="list-style-type: none"> JMD 130665/02.05.2003 E.T. Approval JMD 195214/11.01.2011 amendment of the Decision No 130665/2.5.2003 E.T. Approval G.D.P.P./DIPA 13590/15.03.2016 Renewal and Amendment of E.T. G.D.P.P./DIPA 85272/3419/27.11.2018: E.T. amendment for the construction and the operation of 6 Parking Areas G.D.P.P./DIPA 3048/162/05.08.2020. Compliance with JMD 1915/2018 requirements (B' 304).
5	Stylida – Karavomylos Total Bypass	The section ETAD is valid until 23-05-2029. (YPEKA/G.D.P.EYPE Ministerial Decision No oik. 172866/23.05.2014)	MAIN PROJECT <ul style="list-style-type: none"> JMD 100198/30.05.2006 E.T. Approval EYPE 172866/23.05.2014 Amendment and renewal of E.T. G.D.P.P./DIPA 12757/10.03.2016 Amendment of E.T. G.D.P.P./DIPA 85272/3419/27.11.2018: E.T. amendment for the construction and the operation of 6 Parking Areas G.D.P.P./DIPA 3048/162/05.08.2020. Compliance with JMD 1915/2018 requirements (B' 304). ANCILLARY WORKS <ul style="list-style-type: none"> EYPE 121667/08.12.2020 Environmental licensing of the toll stations at the locations of Ag. Marina – Stylida I/C and Stylida – Karavomylos I/C.

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			<ul style="list-style-type: none">• G.D.P.P./DIPA 77442/4790/07.08.2020, Technical Environmental Study (TE.PE.M.) of the snow removal station at Agia Marina I/C (CH. 223+320).
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4.1.2 E65: Xyniada – Trikala Section

The per-section validity period of the approved environmental terms for the Central Greece Motorway (E65) as well as the authorizations issued are presented in the following table:

S/N	Section	E.T. Validity	E.T. Decisions issued
1	Lamia – Makrychori	The section ETAD is valid until 16.12.2030. (Decision of Director-General for Environment of YPEN/ DIPA No 151991/16.12.2015).	MAIN PROJECT <ul style="list-style-type: none"> • JMD No JMD ETA 144504/18.11.2005, E.T. Approval • Decision of Director-General for Environment of YPEKA No 167266/01.04.2013. Modification of the section K.P. 0+000 - K.P. 14+500 (except the Lamia I/C). • Ministerial Decision 171820/04.04.2014. ET Amendment as regards the exploitation of quarries. • Ministerial Decision 173471/27.06.2014. Modification of the sections K.P. 31+212 – K.P. 85+000 (except the section K.P. 47+313 – K.P. 51+483). • Ministerial Decision 147997/14.04.2015. Modification of the section K.P. 47+313 – K.P. 51+483. • Decision of Director-General for Environment of YPEN No 151991/16.12.2015. Extension of E.T. validity period. • Ministerial Decision 24355/13.05.2016. Environmental authorization for Lateral toll stations on Anavra I/C and Frontal toll stations on Sofades. • Ministerial Decision 61420/16.12.2016. Modification on the section K.P. 14+500 – K.P. 31+212 and Lamia I/C (K.P. 5+500). • Ministerial Decision 17095/04.04.2017. Amendment as regards the execution of the water exploitation projects (drilling for water supplies) at Fthiotida and Karditsa regional units for the operational needs of the motorway.

			<ul style="list-style-type: none"> • Ministerial Decision 21166/22.05.2017. Amendment as regards the integration of the water exploitation project development authorization at Fthiotida and Karditsa regional units for the operational needs of the motorway. • Ministerial Decision 17095/04.04.2017. Amendment as regards the execution of the water exploitation projects (drilling for water supplies) at Fthiotida and Karditsa regional units for the operational needs of the motorway • Decision of Director-General for the environmental policy of the YPEN No 22199/23-11- 2017. Environmental authorization Xyniada MSS and Sofades MSS. • Decision of Director-General Decision of Director-General for the environmental policy of the YPEN No 52131/22.12.2017 Update of the final design of the section K.P. 31+212 – K.P. 85+000 • YPEN/DIPA/67165/2283-07-2019. ET amendment regarding the environmental licensing of the borrow pit at “Kalamaki” location of Agia Paraskevi, Municipality of Lamia. • Decision of Director-General for the environmental policy of the YPEN No 27870/1460/31.03.2020 ET amendment regarding the “Samolakas” worksite • Decision of Director-General for the environmental policy of the YPEN No 19921/991/18.09.2020 ET amendment regarding the update of the final design at subsection CH. 0+000 to CH. 32+300 • Decision of Director-General for ΔΙΠΑ environmental policy, οik. ΥΠΕΝ/ΔΙΠΑ 15910/1074/06.05.2022, E.T. amendment regarding the update of flood protection Projects a) of the road project hydraulic design (additional/supplementary hydraulic technical works by positions in the sections from K.P. 0+000 to K.P. 24+000 and from K.P. 32+000 to CH. 61+000), b) of the
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			<p>final design of the layout of the road project (variation of the alignment from K.P. 19+000 to K.P. 23+500).</p> <p>ANCILLARY WORKS</p> <ul style="list-style-type: none"> • Decision of Director-General for the environmental policy of the ΥΠΕΝ No 5396/07-02-2017: Approval of Technical and Environmental Study (TEPEM) for the installation and the operation of a Traffic Management Center in the Sofades MCC near K.P. 69+700 of E65 • Decision of Director-General for the environmental policy of the ΥΠΕΝ No 77444/4791/07.08.2020: Approval of TEPEM for the Tunnel Control Centre and the Police Department of Lianokladi
2	Improvement of the connecting road of Lamia – Karditsa NR with Central Greece (E65) at Xyniada I/C location	The ETAD is valid until 01.12.2030 (decision Secr.-Gen. of Decentralized Administration with prot. no. 4644/212888/01-12-2015)	<ul style="list-style-type: none"> • Secr.-Gen. of Decentralized Administration with prot. no. 4644/212888/01-12-2015 E.T. approval
3	Makrychori – Kalampaka	The section ETAD is valid until 16-12-2030. (Decision of Director-General for Environment of ΥΠΕΝ/ G.D.P.P./DIPA with prot. No 151991/16.12.2015)	<ul style="list-style-type: none"> • JMD ETA 145521/18.11.2005. E.T. Approval • Decision of Director-General for Environment of ΥΠΕΚΑ No 203583/04.12.2012. As regards the construction of the C-C on K.P. 137+000. • Decision of Director-General for Environment of ΥΠΕΚΑ No 172041/26.11.2013. Modification of the section K.P. 85+800 - K.P. 137+550 (except the sections K.P. 115+100 - K.P. 118+043 and K.P. 131+475 - K.P. 132+420). • Decision of Director-General for Environment of ΥΠΕΝ/ΔΙΠΑ No 151991/16.12.2015. Extension of validity period. • Ministerial Decision 17095/04.04.2017. Amendment as regards the execution of water utilization projects (water wells) in the Prefectures of Fthiotida and Karditsa for the needs of the operation of the motorway.

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			<ul style="list-style-type: none"> • Ministerial Decision 21166/22.05.2017. Amendment as regards the execution of projects integration of the permit for the execution of water utilization projects in the Prefectures of Fthiotida and Karditsa for the needs of the operation of the motorway • Decision of Director-General for the environmental policy No 52133/22.12.2017. Update of the final design. • G.D.P.P./DIPA 95851/4000/21.12.2018. Amendment of E.T. and authorization of Trikala MSS
4	Kalampaka – Egnatia	<p>The section ETAD is valid until 21/05/2028.</p> <p>(Decision G.D.P.P./DIPA No 9728/21.05.2018)</p>	<ul style="list-style-type: none"> • JMD 147014/18.11.2005. E.T. Approval • JMD 151991/16-12-2015. Extension of E.T. validity period. • G.D.P.P./DIPA No 9728/21.05.2018 E.T. Approval due to amended design

4.2 Submissions

For **PATHE Motorway, Skarfeia – Raches Section**, during the reference period (A' semester of 2022), the Concessionaire submitted the following environmental studies:

- Technical Report of para. 1A under Article 6 of Law 4014/2011 as amended and in force, to restore the failure of trenches, adjacent to K.P. 193+600 of PATHE Motorway near the Agia Triada Toll Station (from K.P. 8+450 to K.P. 8+950, Skarfeia-Thermopyles section with JMD EPO 146113/12.07.2005)
[Concessionaire to EYDE/KSESP prot. no. 23081/09.06.2022].

For **E65 Motorway**, during the reference period (A' semester 2022), the Concessionaire did not submit any environmental studies referring to the Operation & Maintenance of the Concession Project.

4.3 Outstanding issues

4.3.1 PATHE: Skarfeia – Raches Section

The table below provides the environmental studies submitted for PATHE Motorway, Skarfeia - Raches Section; the issuance of the E.Ts is still under completion.

S/N	Section	Outstanding issues	Submissions	Observations
1	Skarfeia - Thermopyles	Technical report of para. 1A under Article 6 of Law 4014/2011 as amended and in force, to restore the failure of trenches, near the K.P. 193+600 of PATHE Motorway near the Agia Triada Toll Station (from K.P. 8+450 to K.P. 8+950, Skarfeia - Thermopyles section with JMD EPO 146113/12.07.2005)	<ul style="list-style-type: none">• Kentriki Odos S.A. submission to EYDE/KSESP with prot. no. 23081/09.06.2022	Approval of DIPA is pending.

4.3.2 E65: Xyniada – Trikala Section

The following table provides the environmental studies submitted for the PATHE Motorway, Skarfeia - Raches Section; the issuance of the E.Ts is still under completion.

S/N	Section	Outstanding issues	Submissions	Observations
1	E-65 – Section S2; Anavra – Karditsa Section (subsection K.P. 61+056 –	Amendment file of EPO regarding the supplementary works under Article 18.6 of the concession	<ul style="list-style-type: none">• Kentriki Odos S.A. submission to EYDE/KSESP with prot. no. 22861/22-12-2021• EYDE/KSESP submission to ΓΔΠΠ/ΔΙΠΑ with prot. no. Φ9.18/377227/28.12.2021	Approval of DIPA is pending.

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	K.P. 83+560)	agreement for the urgent anti-flood shielding works along the E-65.		
2	E65 – Section S2; Makrychori - Kalampaka, subsection K.P. 88+237 – K.P. 89+919	Submission of Environmental Impact Study for the amendment of the JMD EPO 145521/18-11-2005, as amended and in force regarding the required anti-flood protection projects along Central Greece Motorway	<ul style="list-style-type: none"> • Kentriki Odos S.A. submission to Directorate Δ17 with prot. no. 20800/29.10.2018 • EYDE/KSESP submission to ΓΔΠΠ/ΔΙΠΑ with prot. no. Φ1/7986/31-10-2018 	Approval of DIPA is pending.
3	E65 – Section S2: Makrychori – Kalampaka Section, subsection K.P. 85+800 – K.P. 137+553	Documentation File for the adjustment to the requirements of the JMD 1915/2018 (OGG 3048/2018) of E65 motorway, Makrychori – Kalampaka section	<ul style="list-style-type: none"> • Kentriki Odos S.A. submission to the Δ17 Directorate with prot. no. 21470/20.11.2019 • D17 submission to ΓΔΠΠ/ΔΙΠΑ with prot. no. ΑΕ/ΚΕ/00/08/10/13316/13-01-2020 	Approval of DIPA is pending.

5. SENSITIVE AREAS OF THE PROJECT

The following table presents the natural areas under protection that the motorway passes through or is adjacent to.

S/N:	Section	Natura 2000 Area
1	Skarfeia – Thermopyles	<ul style="list-style-type: none"> • Spercheios valley and estuary – Maliakos Bay (GR2440002)
2	Thermopyles – Spercheios (except the bridge under construction by ERGOSE)	<ul style="list-style-type: none"> • Spercheios valley and estuary – Maliakos Bay (GR2440002) • Lower Course and estuary of Spercheios River (GR2440005)
3	Spercheios - Ag. Paraskevi I/C	<ul style="list-style-type: none"> • Spercheios valley and estuary – Maliakos Bay (GR2440002)
4	Ag. Paraskevi I/C – Ag. Marina I/C	<ul style="list-style-type: none"> • Spercheios valley and estuary – Maliakos Bay (GR2440002) • The karst springs of Ag. Paraskevi are located 250m away from the project, which are the main habitat of Pungitius Hellenicus, the rare and protected fish P.D.67/81. • Sensitive environmental element of the area is the stork colony in the area between the settlements of Ag. Paraskevi and Megali Vrysi.



6. ATMOSPHERIC POLLUTION

By the approved environmental terms, no program for air quality monitoring is required at the PATHE section (Skarfeia – Raches).

According to the environmental terms and the relevant approvals at the section Makrychori – Kalampaka of the E65 Motorway, a Measuring Station for Air Pollution is installed. The station is installed at the G.U. of Sofades area at the entrance of the adjacent Motorist Service Station. The station has been put on trial on 15.03.2019.

For the year 2021, a complete air pollution monitoring program was implemented by the above three air pollution stations, which are operating on a 24-hour basis. The air pollution report was filed by the Concessionaire to the competent services (ΚΑΠΑ/ΥΠΕΝ Directorate with prot. no. 11123/197/07.02.2022, ΕΥΔΕ Directorate D17) with receipt prot. no. 32053/07.02.2022 & ΕΥΔΕ/KSESP 31981/07.02.2022). A similar report will also be elaborated and filed for 2022.

To measure the pollutants, the stations have been equipped with approved analyzers in accordance with the National Legislation (Ministerial Decision No 14122/549/E.103/2011 (Gov. Gazette 488/B/30.3.2011) “Measures to improve the air quality, in accordance with the provisions of Directive 2008/50/EC” of the European Parliament and the Council of the European Union of 21 May 2008 on ambient air quality and cleaner air for Europe. For every 24 hours, the following are recorded at all stations:

1. The PM₁₀, PM_{2,5}, CO, NO, NO₂, NO_x, SO₂, C₆H₆ (Benzene) pollutants
2. The meteorological conditions of each installation

The pollutants are measured continuously throughout the day. The average primary pollution values are calculated every five minutes in the recording system that is installed at each station and connected to the analyzers. These measurements are transferred to the server of the air pollution measuring system, via the optical fiber network, where they are stored. At the end of each month the measurements are corrected on the network server. The corrections include calibration results and analyzer limit and slip corrections. After corrections, the average hourly, eight-hour, and 24-hour values of pollutants (NO₂, CO, O₃, SO₂, Benzene, suspended particles PM₁₀ and PM_{2,5}) are calculated and stored. For 2021, the measured pollutant records were as follows:

Suspended Particles PM₁₀

The Limit as of 01/01/2005 for PM₁₀ particles is 50µg/m³ on average daily value and should not be exceeded more than 35 times per year. In addition, the average annual value should not exceed 40µg/m³.

- The value of $50\mu\text{g}/\text{m}^3 > 35$ times per year was not exceeded.
- The average value of $40\mu\text{g}/\text{m}^3$ was not exceeded.

Suspended Particles $\text{PM}_{2.5}$

For suspended particles $\text{PM}_{2.5}$, the limit of the average annual value as of 01/01/2015 is $25\mu\text{g}/\text{m}^3$.

- The average value of $25\mu\text{g}/\text{m}^3$ was not exceeded.

NO_2

The Limit as of 01/01/2010 is $200\mu\text{g}/\text{m}^3$ on average hourly value and should not be exceeded more than 18 times per year. In addition, the average annual value should not exceed $40\mu\text{g}/\text{m}^3$.

Number of exceedances of average hourly value of over $200\mu\text{g}/\text{m}^3$

- The value of $200\mu\text{g}/\text{m}^3 > 18$ times per year was not exceeded.
- The average annual value of $40\mu\text{g}/\text{m}^3$ was not exceeded.

CO

The Limit as of 01/01/2005 is $10\text{ mg}/\text{m}^3$ (maximum daily eight-hour value).

- The maximum daily eight-hour value of $10\mu\text{g}/\text{m}^3$ was not exceeded.

SO_2

The Limit as of 01/01/2010 is $350\mu\text{g}/\text{m}^3$ as the average hourly value and should not be exceeded more than 24 times per year. Also, the average daily value is $125\mu\text{g}/\text{m}^3$ for which it should not be exceeded more than 3 times per year.



- The maximum average hourly value ($350\mu\text{g}/\text{m}^3$) > 24 times per year was not exceeded.
- The average hourly value of $125\text{ mg}/\text{m}^3$ 3 times per year was not exceeded

Benzene

The limit as of 01/01/2010 is $5\mu\text{g}/\text{m}^3$ on average annual value.

- The average annual value ($5\mu\text{g}/\text{m}^3$) was not exceeded.

7. NOISE AND TRAFFIC VOLUME

The year 2021, the 24-hour traffic noise measurements of the monitoring program obtained are:

- **9 24-hour** traffic noise measurements of the monitoring program at the PATHE Motorway, **Skarfeia – Raches Section**
- **7 24-hour** traffic noise measurements at the E65 Motorway, **Xyniada – Trikala Section**

A total of **16 24-hour** traffic noise measurements were obtained, and the result assessment of the 24-hour traffic noise measurements for 2021 shows that:

A. “Skarfeia – Raches” Section

In this section, in the total of 9 24-hour traffic noise measurements, **there is NO exceedance** and no additional measures are necessary.



B. “Xyniada – Trikala” Section

In this section, in the total of 7 24-hour traffic noise measurements, **there is NO exceedance** and no additional measures are necessary.

The above measurements were carried out in accordance with the standards and the requirements of existing legislation. For the conduction of the measurements, special scientific equipment was used, which meets all the international standards and guidelines provided by the European and Greek legislation. For the year 2021, the monitoring program O.K.TH. (Road Traffic Noise) that has been submitted to the Directorate of KAPA/YPEN was approved with the YPEN/DKAPA/7836/1516/02.02.2022.

The noise measurement results and records of the road traffic volume, with the position, date, and measurement time interval, the prevailing meteorological conditions, the contact details and name of the measurement manager were recorded in a results sheet. In the case of systematic excess of the current limit for road traffic noise recording, the construction and operation of the project entity shall take the necessary measures to address the excesses.

- Before each 24-hour traffic noise measurement, calibration of the instruments was performed using specific acoustical calibrator, so that the reliability of the results be monitored during the recordings of the traffic noise environment.

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- The following are mentioned for all measurement positions: the exact position, the exact time period and day of measurement, while it is noted that the measurement was performed under lack of rain and strong wind conditions, while for conditions of light wind, speed < 3 m/sec, always the use of a special windbreaker cover for the microphone was ensured. No traffic noise recordings were performed if other sources of noise pollution were noted in the immediate environment of the recording position, e.g. residents gatherings, construction of roads, buildings etc., or if the traffic flow was not the usual (e.g. weekends or holidays), or if the traffic fluidity was interrupted or disturbed from any random event, such as accident, etc.



In every 24-hour measurement, the following were recorded:

- the L1, L10, L50, L95, L99 indexes as well as the maximum (Lmax) and minimum values (Lmin);
- the O.K.TH. (Road Traffic Noise) level L10 (18-hour); & the level A-weighted equivalent LAeq (08.00–20.00);
- the level A-weighted equivalent LAeq (24h); and
- the Lden, Lday, Levening & Lnight indexes, as well as the Ld-e of existing legislation in line with JMD with No 211773/2012 (FEK 1367/B/27-4-2012).

For 2021, the monitoring program of the Road Traffic Noise has been completed and approved. For 2022, a similar program is ongoing, which is expected to be completed within the year (recording of 24-hour measurements in selected positions), when it shall be submitted to the Noise, Vibration and Radiation department of the Directorate of KAPA/YPEN for approval.

Finally, it is noted that daily monitoring of the traffic volume is performed both on the PATHE motorway, “Skarfeia – Raches” Section, and the Central Greece motorway (E65), “Xyniada – Trikala” Section, at the transit level at the toll stations, and monthly reports are submitted. For 2021, the Annual Average Daily Traffic (AADT) calculation equals to 9.720 transits for both directions for the PATHE motorway, “Skarfeia – Raches” Section, while ας for the Central Greece motorway (E65), “Xyniada – Trikala” Section, the calculation equals to 1.819 transits for both directions.

8. WASTE MANAGEMENT

8.1 Liquid wastes

A comprehensive Environmental Management Plan has been developed and implemented, which includes the procedure for the management of hazardous liquid waste in accordance with the environmental terms and the existing legislation, while proper management documentation is requested by the subcontractors. Relevant archive has been created with the agreements and waste delivery receipts of authorized mineral oil management companies.

As for the hazardous liquid waste (engine, gear, lubricating oils etc.) resulting from the operation and maintenance works on the motorway, the concession company follows all procedures provided by the current legislation and cooperates with management entities authorized for environmental purposes and their quantities and distribution method are recorded in the respective approved Alternative Management System.

8.2 Solid wastes

The Concessionaire has contracted with the subcontractor for the cleaning and the collection of solid waste from the motorway, which are then transferred to appropriate licensed premises.

For the hazardous solid waste resulting from the operation and maintenance works on the motorway, the concession company follows all procedures provided by the current legislation and cooperates with management entities authorized for environmental purposes.



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Moreover, fluorescent tubes and other mercury-containing waste, lead batteries, tires collected from the motorway, engine, gear and lubricating oils, iron and steel, plastics, animal tissue waste (dead animals), plant-tissue waste, and waste produced by the operation and maintenance works on the motorway and the quantity and delivery mode to each approved Alternative Management System of which is recorded.



management system certified by ISO 14001/2015.

Furthermore, ODOS KENTRIKIS ELLADOS S.A., in the context of corporate social responsibility, has entered into agreements with Alternative Management System companies and recycles paper, plastic, batteries, used/damaged electrical and electronic equipment and toner. Additionally, ODOS KENTRIKIS ELLADOS S.A. disposes a certified environmental quality



Finally, it should be noted that, in the context of the Environmental Monitoring, inspections are conducted at places where maintenance works are carried out and the corresponding checklist is filled. Based on the checks, in case of failure to comply with the provisions, compliance directives (corrective actions) are provided. The implementation of corrective actions is checked through new inspections based on the checklist.

8.3 Waste Producer Table – EWR

Pursuant to Article 42, of Law 4042/2012 (FEK 24/A/13.02.2012), as amended by Article 157, paragraph 1 of Law 4389/2016 (FEK 94/A/27.05.2016) and JMD 1/1 (FEK 1/B'/04.01.2017), the Electronic Waste Registry was established, and by JMD 43942/4026 (FEK B' 2992/19.09.2016), liable for the electronic recording and registration are every organization or company the

establishments of which produce waste and falling within the scope of Chapter A of Law 4014/2011 (Α' 209).

ODOS KENTRIKIS ELLADOS S.A. was registered in the Electronic Waste Registry (Reg. No 3959), because it falls within the scope of the provisions of Law 4014/2011, since - in accordance with the No ΔΙΠΑ οικ. 37674/2016 (OGG 2471/B/10.08.2016) - the motorways fall under Group 1 projects (Air and land transportation projects) – Road building, S/N 1, and under subcategory A1.

For 2021 the concession company successfully submitted the relevant report of waste producer to the electronic waste registry (EWR) for every JMD ETA of the Concession Project separately.

For all previous years (before the operation of EWR), ODOS KENTRIKIS ELLADOS S.A. has prepared and submitted the relevant reports for waste producer pursuant to JMD 13588/725/06 and on the basis of Law 2939/2001 (and its amendment Law 3854/2010).

9. CLEANING AND MAINTENANCE

All cleaning and maintenance works that took place during the first semester of 2022 and for which compliance with the Environmental Terms was checked, are mentioned below:

- Vegetation pruning and maintenance.
- Drain and culvert cleaning and maintenance.
- Advertising billboard removal.
- Sweeping.
- Parking Area cleaning and washing.
- Bins replacement.
- Metal rails replacement.
- Metal safety rails replacement.
- Fencing repairs after accidents.
- Rodent extermination and tunnel gutters inspection.



For all the above works, monthly inspections are performed ensuring compliance to the E.T.; in the relevant Reports, checklists and corresponding tables per JMD are included.

10. ACCIDENTS – ACCIDENTAL POLLUTION – ACTION PLAN

An Action Plan for emergencies has been drafted, describing the measures for the timely collection and removal of hazardous substances after a relevant incident on the motorway are described, designed to prevent the pollution of waterways, soil, or wider environment of the motorway.

The Plan is appended to the Police and Firefighting Agreement conducted between the Concessionaire and the Ministry of Interior, the Police and the Fire Department and includes all the measures to be taken and the necessary equipment to be used by the Operator in case of an accident and leakage of non-biodegradable substances.

It is also pointed out that during incident of hazardous cargo management, the competent bodies of the Fire and Traffic Departments shall be entirely in charge of the coordination. The Operator's role is auxiliary with a focus on the traffic management (signs, blocks, diversions) at the direction of the relevant departments, the restoration of the road surface (cleaning, obstruction removal, etc.) and infrastructures (damages, rails restoration, etc.) and the re-opening of the relevant road after the end of the incident.

The primary and essential tool to address accidental leakage - which creates an immediate risk of surface water and soil pollution - is the use of adsorbents, such as sand, sawdust, or special geotextile provided immediately after the release of hazardous cargo. Such materials are readily available by the Operator, the patrol units and the maintenance contractor for direct intervention.

The decontamination process, as well as the transportation and entire management of contaminated absorbents and the hazardous waste produced by such an incident shall be completed in accordance with the existing legislation, by appropriately licensed companies for the decontamination, transportation and management of hazardous waste, with the aim of timely response to highway accidents.

11. SPECIAL TERMS (E.G. TANKS, DRAINAGE MANAGEMENT)

- Pollution Control Units

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It is pointed out that the tanks for temporary retention of contaminated leachate in the section of “Total Bypass of Stylida – Karavomylos” have been constructed in accordance with the E.T. d-13 of JMD 100198/30.05.2006.

It should be noted that, upon completion of the State subcontracting works at the PATHE E65 sections, the pollution retention tanks provided by the JMD EPO 146113/12-07-2005 for the “Skarfeia – Thermopyles” section were constructed and delivered to the Concessionaire.

Respectively, as for E65, pollution retention tanks have been constructed to comply with the E.T. 29 and 48 of JMD 144504/18.11.2005.

It is noted that the Concessionaire has planned and disposes a pollution response plan to be implemented in case of accidental pollution that will include the use of these tanks in application of the ETs and its contractual obligations.

- Water Quality

Within the framework of the water-monitoring program, for 2022, ten (10) samplings were carried out in one set on E-65 Motorway and Sperchios PATHE section.

The samplings were collected on May 2022 in special sterile collectors with a capacity of 2 liters provided by a specialized laboratory that performed the chemical analysis. The results of the water sampling will be displayed in the second semester (annual report) where the analyses will be completed.

12. PLANTINGS – MAINTENANCE OF VEGETATION

A contract has been concluded with a Subcontractor for the maintenance and management of the vegetation and the plantings.

13. CONCESSIONAIRE’S ENVIRONMENTAL DEPARTMENT

The Aftokinitodromos Kentrikis Elladas Concession S.A. is the “Concessionaire” for the Project “Central Greece (E65) Motorway” according to the Concession Agreement.

Under the Operation & Maintenance Agreement dated 5.3.2021 the Concessionaire has assigned to the Operator, and the Operator has assumed all of its obligations, risks, liabilities

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and rights of the Concessionaire under the Concession Agreement, in respect of the operation and maintenance of the Concession Project, on a back to back basis.

Pursuant to the provisions of the Concession Agreement and the Operation and Maintenance Agreement, the Concessionaire – inter alia - retains the following responsibilities:

- Monitors and supervises the performance of the Environmental Requirements in accordance with the Concession Agreement provisions
- Submits reports and updates to the State in accordance with the Concession Agreement provisions

The obligations regarding the protection of the environment during the Operation & Maintenance activities of the motorways are set out in Art. 11 of the Concession Agreement, Art. 2.3 and Art. 2.6 of the SCC and in Annex A of the SCC (Environmental Licensing of the Project). The JMDs of the Approved Environmental Terms (JMD AET) that govern the Project are set out in Annex E.

The AETs are different by motorway section and specific in terms of needs for all areas, but also in terms of the motorway O&M impact on the environment.

For the effective implementation of those above mentioned, an Environmental Management System is up and running to cover these specific requirements. Maintaining a relevant certification according to the corresponding international standard ISO 14001 provides for the possibility of maintaining in force the above environmental terms for a longer period.

This System, in synergy with the correspondingly certified Environmental Management System of the Concessionaire will cover horizontally the entire Concession Project.



To implement those aforementioned, both the Operator and the Concessionaire dispose a department for Environment with specialized personnel, which is responsible for the inspection and compliance with the E.T. along the motorways. They also cooperate with a special advisor in order to create a group of scientists to cover the extended range of the environment. The group of scientists consists of a Civil Engineer – Transportation Expert –

Acoustical Engineer, an Environmentalist – Environmental Planner, and an Environmentalist – Chemist – Acoustical Engineer, to fully meet the inspection needs of the E.T. for the road project.

14. REPORTS (SEMI-ANNUAL – ANNUAL SUBMISSIONS)

For the year 2021, the 1st semi-annual Report of Environmental Monitoring of the Concession Project under study, which has been submitted by the Concessionaire under prot. no. 22652/23.07.2021 letter of the Supervisory Authorities and ΓΔΠΠ/ΥΠΕΝ (Δ17 receipt prot. no. 201851/26.07.2021, ΔΙΠΑ receipt prot. no. 71081/4585/26.07.2021 & KSESP receipt prot. no. 201854/26.07.2021), as well as the annual report of 2021 Environmental Monitoring of the under-study Concession Project, which has been submitted by the Concessionaire under prot. no. 22965/17.03.2022 to the Supervisory Authorities and ΓΔΠΠ/ΥΠΕΝ (Δ17 receipt prot. no. 80553/17.03.22, ΕΥΔΕ/KSESP receipt prot. no. 80684/17.03.22 and ΔΙΠΑ/ΥΠΕΝ receipt prot.no. 26649/1753-18.03.22).

15. MONTHLY FOLLOW UP – CHECK LISTS

Based on the Environmental Monitoring and Control Program and the Environmental Management System, the “Tables for the Implementation of the Environmental Terms” are established, outlining the ways and methodology of the necessary actions, in order to ensure the implementation of the Environmental Terms.



Environmental supervisors, in collaboration with the project engineers, perform regular (monthly) checks and complete the control tables, i.e. the implementation of the "Environmental Monitoring and Control Program". They also provide the necessary guidelines or directions based on the Environmental Monitoring and Control Program for any environmental issue that arises.

After each regular (monthly) check, the corresponding checklist is filled out, which shows deviations from the implementation of the environmental terms identified by the inspections. The same table provides the proposed corrective actions. The tables are sent to the company responsible for the operation to take all necessary actions and the appropriate measures to comply with the environmental law and the environmental terms of the project. In the following recheck, it is examined whether all the necessary measures and the proposed corrective actions have been taken and the corresponding fields of the monthly checklist are filled.

The Environmental Management System (EMS) being implemented consists of the Manual, the Procedures, the Work Instructions related to the environment and the compliance with the

environmental requirements of the project. The environmental management manual, procedures and instructions are applied uniformly throughout the project and are constantly evolving to meet project needs.

16. INSPECTIONS BY ENTITIES – FINES

For the reference period (A' semester 2022), no environmental deterioration caused by the operation and maintenance of the motorway problems have been identified, and no fines have been imposed on Odos Kentrikis Elladas S.A..

17. CERTIFICATIONS

ODOS KENTRIKIS ELLADAS S.A. and the Operator have developed and implemented individually an Integrated Management System (IMS) resulting from the integration of the Quality, Environment and Safety & Health Systems applied by each company. The aim of both IMSs is to ensure the most efficient management of quality, environmental and S&H issues by eliminating overlapping procedures and controls.

In July 2022, the independent certification body Bureau Veritas is expected to carry out the annual inspection scheduled for ODOS KENTRIKIS ELLADOS S.A. and the Operator according to the standard Management Systems ISO 9001 (Quality), ISO 45001 (Health & Safety), ISO 14001 (Environment).

Furthermore, ODOS KENTRIKIS ELLADOS S.A. and the Operator - recognizing the need for the smooth operation of the motorways falling within their responsibility - separately designed a Business Continuity Plan on which they relied for the implementation of their own Business Continuity Management System (BCMS). In 2020, the BCMS of ODOS KENTRIKIS ELLADOS S.A. has been certified according to the international standard ISO 22301:2012, thus making the latter the first Concession Company to receive the relevant certification.

The annual inspection seeking to certify the BCMS of ODOS KENTRIKIS ELLADOS S.A. (and upgrade to the new standard ISO 22301:2019) and the first inspection seeking to certify the Operator's BCMS were completed in February 2022. In addition, ODOS KENTRIKIS ELLADOS S.A. in 2015 planned and implemented a Road Safety Management System certified in accordance with the international standard ISO 39001:2012, thus constituting a milestone for the safe and efficient fleet management, and demonstrating the company's commitment to implement safe practices on the motorway. The Operator implements the system in 2021.

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In July 2011 the annual inspection to certify the Operator's ISO 39001 (Road Safety) Management System is expected.

Collectively, ODOS KENTRIKIS ELLADOS S.A. and the Operator are certified according to the following Management Systems Standards:

ODOS KENTRIKIS ELLADOS S.A.

- ISO 9001 (Quality Management System)
- ISO 45001 (Health & Safety Management System)
- ISO 14001 (Environmental Management System)
- ISO 39001 (Road Traffic Safety Management System)
- ISO 22301 (Business Continuity Management System)

OPERATOR

- ISO 9001 (Quality Management System)
- ISO 45001 (Health & Safety Management System)
- ISO 14001 (Environmental Management System)
- ISO 39001 (Road Traffic Safety Management System)

Following the above inspections, the independent bodies recommended the continuing Certifications for all standards and for at least one year, until the next annual scheduled inspections.



18. ENVIRONMENTAL BUDGET

The necessary percentage of the total budget for the operation and maintenance of the motorway required to fully comply with the Environmental Terms and restrictions of the relevant JMD-ETA is made available as a matter of priority. Expenditure on environmental protection projects is included in the annual progress reports on compliance with the Environmental Terms.

19. CORPORATE SOCIAL RESPONSIBILITY

ODOS KENTRIKIS ELLADOS S.A. compiles a Corporate Responsibility Report in accordance with the Global Reporting Initiative (GRI) standard, the GRI Standards, and meets the Baseline Selection criteria (in accordance with: Core option).

The Report covers all core and substantial issues that the company has identified and focuses on, including environmental issues.

The Reports are issued on an annual basis and cover the 5 Corporate Responsibility pillars for Operation & Maintenance activities:

- Road Safety
- Quality on providing Services
- Caring for the Environment
- Collaboration with Local Communities and Social Contribution

The Corporate Responsibility Report is posted at <http://www.kentrikiodos.gr>.

20. ANNEXES

Annex I

