ANNUAL REPORT

FOR THE ENVIRONMENTAL MANAGEMENT AND IMPLEMENTATION OF ENVIRONMENTAL TERMS DURING OPERATION AND MAINTENANCE OF CONCESSION PROJECT

PROJECT: "DESIGN - CONSTRUCTION - FINANCING - OPERATION - MAINTENANCE AND EXPLOITATION OF THE PROJECT IONIA ODOS MOTORWAY FROM ANTIRRIO TO IOANNINA, PATHE ATHENS (METAMORFOSI I/C) – MALIAKOS (SKARFEIA) AND CONNECTING BRANCH OF PATHE SCHIMATARI - CHALKIDA"

Date	31.01.2022
Created by:	Concessionaire NeaOdos

REFERENCE PERIOD

YEAR 2021

CONTENTS

1. INTRODUCTION

This Environmental Management Report outlines the company's NEA ODOS S.A., Environmental Management Processes during the operation and maintenance of the Concession Project for the year 2021 (01.01.2021 to 31.12.2021). This Report also includes the reference data on compliance with the environmental terms during the B' semester of 2021.

The implementing of a program to monitor the environmental impact for the NEA ODOS S.A., apart from its enforcement by the environmental terms of the project, is done in such a way that it has multiple beneficial nature to the man-made and the natural environment of the areas of influence, as well as to serve in the best possible way the users, where the **PATHE Motorway, Metamorfosi – Skarfeia Section 172 km,** and the **IONIA ODOS "Antirrio – Ioannina" of 196 km length** passes**.**

The monitoring of environmental and social parameters is done in such a way that enables early recognition of 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 diligent 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 similar environments.

At the PATHE motorway, section "Metamorfosi – Skarfeia", and at the IONIA ODOS MOTORWAY "Antirrio – Ioannina", a comprehensive environmental monitoring program is implemented, through which all Environmental Terms are met, as detailed below.

2. PROJECT DESCRIPTION

2.1 PATHE Motorway

State : Hellenic Republic
Concessionaire : NEA ODOS S.A.
Motorway : PATHE
Section : Metamorfossi – Skarfeia

The PATHE motorway at the **section Metamorfossi – Skarfeia** includes:

1. 30 (thirty) Junctions

- Metamorfosi I/C near K.P. 15+500
- Tatoi I/C K.P. near K.P. 17+000
- Pyrna I/C K.P. near K.P. 19+000
- Kalyftaki I/C near K.P. 20+000
- Varympompi I/C near K.P. 23+000
- Mpogiati I/C near K.P. 28+000
- Afidnes I/C near K.P. 34+000
- Kapandriti I/C near K.P. 35+000
- Markopoulo I/C near K.P. 39+500
- Malakassa I/C near K.P. 44+000
- Oinofyta I/C near K.P. 56+000
- Oinoi I/C-1st branch near K.P. 63+00
- Chalkida I/C near K.P. 66+000
- Half-junction Schimatari A near K.P. 66+500
- Half-junction Schimatari B near K.P. 67+500
- Ritsona I/C near K.P. 75+500
- Thebes I/C near K.P. 90+000
- Camp I/C near K.P. 100+500
- Akraifnio I/C near K.P. 107+500
- Kastro I/C near K.P. 115+00
- Martino I/C near K.P. 126+000
- Malesina I/C near K.P. 129+000
- Tragana I/C near K.P. 137+500
- Atalanti I/C near K.P. 145+500
- Livanates I/C near K.P. 149+500
- Arkitsa I/C near K.P. 154+500
- Loggos I/C near K.P. 166+000
- Latomeio I/C near K.P. 172+500
- Half-junction K. Vourla (East) near K.P. 177+500
- Half-junction K. Vourla (West) near K.P. 180+000

2. 3 (three) Frontal & 10 (ten) Lateral Toll Stations

i. Frontal

- Afidnes near K.P. 32+500
- Thebes near K.P. 96+00
- Tragana near K.P. 135+500

ii. Lateral

- 2 on the Kapandriti I/C near K.P. 35+500
- 2 on the Malakassa I/C near K.P. 44+000
- 2 on the Oinofyta I/C near K.P. 55+500
- 2 on the Thebes I/C near K.P. 90+000
- 2 on the Tragana I/C near K.P. 137+500

3. 5 (five) Motorists Service Stations (MSS)

- Varympompi MSS (to Athens) near K.P. 24+500
- Kapanditi MSS (to Lamia) near K.P. 36+500
- Malakasa MSS (Bilaterally) near K.P. 48+000
- Schimatari MSS (Bilaterally) near K.P. 70+500
- Atalanti MSS (Bilaterally) near K.P. 144+000

4. 13 (thirteen) Temporary Parking Areas with WC facilities

- Parking Area (towards Athens) near K.P. 38+500
- Parking Area (towards Athens) near K.P. 64+000
- Parking Area (towards Lamia) near K.P. 64+000
- Parking Area (towards Lamia) near K.P. 83+500
- Parking Area (towards Athens) near K.P. 84+500
- Parking Area (towards Lamia) near K.P. 98+000
- Parking Area (towards Athens) near K.P. 98+500
- Parking Area (towards Lamia) near K.P. 110+500
- Parking Area (towards Athens) near K.P. 113+500
- Parking Area (towards Lamia) near K.P. 131+000
- Parking Area (towards Athens) near K.P. 134+000
- Parking Area (towards Athens) near K.P. 141+500

- Parking Area (towards Lamia) near K.P. 142+500

5. 8 (Eight) Winter Maintenance Stations (WMS)

- Varympompi SCS near K.P. 24+500
- Markopoulo SCS near K.P. 38+500
- Schimatari SCS near K.P. 63+500
- Thebes SCS near K.P. 90+000
- Akraifnio SCS near K.P. 107+500
- Martino SCS near K.P. 126+000
- Tragana SCS near K.P. 135+500
- Latomeio SCS near K.P. 173+500

6. 6 (six) Tunnels

- Near K.P. 168+500 to near K.P. 169+500 (Bilaterally)
- Near K.P. 173+500 to near K.P. 176+000 (Bilaterally)
- Near K.P. 176+000 to near K.P. 176+500 (Bilaterally)

7. Other support facilities for the operation of the motorway

- Administration building near K.P. 23+000
- Customer service building and Parking Areas on the site of Afidnes toll station K.P. 32+355
- Police building near K.P. 32+500
- Markopoulo MCC (Maintenance Buildings) near K.P. 38+500
- Thebes MCC (Maintenance, Fire-fighting and Police Buildings) near K.P. 90+000
- Schimatari Traffic Management Center (TMC) near K.P. 63+500
- Atalanti MCC (Maintenance, Fire-fighting and Police Buildings) near K.P. 145+500
- Tunnel Control Center near K.P. 176+000

The exact CHs are depicted in Annex I.

The sections of the Concession Contract Project are divided in seven (7) Geographical Units (GU).

S/N	SECTION	Km
1	Metamorfosi – Yliki Section	80.37
2	Yliki – Kastro Section	20.71

3	Kastro – Tragana Section	20.38
4	Tragana – Arkitsa Section	18.77
5	Arkitsa – Agios Konstantinos Section	10.37
6	Agios Konstantinos – Kamena Vourla Section	16.11
7	Kamena Vourla – Mendenitsa (Skarfeia) Section	3.74

2.2 IONIA ODOS Motorway

State: Hellenic Republic
Concessionaire: NEA ODOS S.A.
Motorway: IONIA ODOS
Section: Antirrio – Ioannina

Ionia Odos includes:

1. 19 Junctions

- Antirrio I/C on near K.P. 5+500
- Gavrolimni I/C on near K.P. 18+500
- Evinochori half-junction on near K.P. 27+500
- Messolonghi I/C near K.P. 32+000
- Agrinio (South) I/C near K.P. 51+500
- Ag. Ilia I/C on near K.P. 55+500
- Aggelokastro I/C on near K.P. 60+00
- Rigani I/C on near K.P. 65+000
- Agrinio (North) I/C near K.P. 81+000
- Preveza I/C on near K.P. 89+500
- Amfilochia I/C on near K.P. 106+000
- Kompoti half-junction on near K.P. 130+500
- Arta I/C on near K.P. 141+000
- Filippiada I/C on near K.P. 153+000
- Ammotopos half-junction on near K.P. 160+000
- Gorgomylos I/C on near K.P. 168+500
- Terovo I/C on near K.P. 181+500
- Avgo I/C on near K.P. 192+500
- Egnatia I/C on near K.P. 201+000

2. 4 Frontal & 10 Lateral Toll Stations

a. Frontal:

- Klokova near K.P. 15+500
- Aggelokastro near K.P. 61+500
- Menidi near K.P. 116+00
- Terovo near K.P. 180+000

b. Lateral:

- 2 on Gavrolimni I/C near K.P. 18+500
- 2 on Messolonghi I/C near K.P. 32+00
- 2 on Agrinio I/C near K.P. 81+000
- 2 on Arta I/C near K.P. 141+000
- 2 on Gorgomylos I/C near K.P. 168+500

3. 9 Motorists Service Stations (MSS)

- On Evinochori I/C near K.P. 27+000 (bilaterally)
- On Amvrakia near K.P. 86+000 (bilaterally)
- On Amfilochia near K.P. 100+500 (to Ioannina)
- On Filippiada near K.P. 154+000 (bilaterally)
- On Episkopiko near K.P. 195+000 (bilaterally)

4. Other support facilities for the operation of the motorway (MCC – Maintenance Control Center, TMC – Traffic Management Center)

- Klokova TMC near K.P. 15+500
- Messolonghi MCC near K.P. 31+500
- Amfilochia MCC near K.P. 100+500
- Filippiada MCC near K.P. 154+000
- Episkopiko TMC near K.P. 195+000

5. 4 Tunnels

- Makyneia Tunnel, 500 m length near K.P. 9+100
- Klokova Tunnel, 2,890 m length near K.P. 11+500
- Kalydona Tunnel, 1,230 m length near K.P. 28+500
- Ampelia Tunnel, 870 m length near K.P. 197+500

6. Bridges

- Makyneia Bridge, 67.5 (r) & 102 m (l) near K.P. 9+000

- Evinos River Bridge, 254 (r) & 259 m (l) near K.P. 23+500
- Xirorema Bridge, near K.P. 105+500
- Krikelo Bridge, 97 m length near K.P. 111+000
- Menidi Bridge, 554 m length near K.P. 123+500
- Gymnotopos Bridge, 253 m length near K.P. 163+500
- Bridge near K.P. 168+000
- Tsagkaropoulos Bridge, 440 m length near K.P. 172+000
- Bridge 105 m length near K.P. 173+000
- Kryfovos Bridge, 280 m length near K.P. 189+000

7. 4 Winter Maintenance Stations (WMS)

- Messolonghi SCS near K.P. 31+500
- Amfilochia SCS near K.P. 100+500
- Filippiada SCS near K.P. 154+000
- Terovo SCS near K.P. 195+000

The exact K.Ps are depicted in Annex I.

The sections of the Project are divided in five (5) Geographical Units (GU), in accordance with the approved Environmental Terms of the project.

S/N	SECTION	Km
1	Antirrio – Kefalovrysso Section (South Agrinio Bypass End)	42,66
2	Agrinio Bypass Section	32,77
3	North Agrinio Bypass End (Kouvaras) – South Arta Bypass End (Kompoti)	53,36
4	Arta Bypass Section	16,05
5	North Arta Bypass End (Filippiada) - Ioannina (Eleousa)	50,30

3. SUPERVISORY SERVICES (PROJECT IMPLEMENTERS)

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, Supervisor Mr. Z. Karvounis.
- Directorate D17, Directorate of Infrastructure Operation, Maintenance & Exploitation with Concession Contract, 70 Panormou St., 115 23, Athens, Deputy Supervisor Ms. S. Chouliara.

Concessionaire: NEA ODOS S.A.
Motorway: PATHE (Metamorfossi – Skarfeia) & IONIA ODOS
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4 ENVIRONMENTAL AUTHORIZATION

4. 1 JMD ETA and their validity – Present Situation

4.1.1 PATHE (METAMORFOSSI – SKARFEIA)

The per-section validity period of the approved environmental terms for the PATHE section Metamorfosi – Skarfeia as well as the authorizations issued are presented in the following table:

S/N	Section	E.T. Validity	ET Decisions issued
1	Metamorfosi – Yliki Section	The section ETAD is valid until 17-09-2033 (Decision YPEN/GDPP/DIPA with prot. no. YPEN/DIPA 61030/1796/17.09.2018)	**MAIN PROJECT** • EYPE No 126119/08-02-2007, ET Approval JMD • EYPE No 200817/23-07-2012 ET Amendment Decision regarding the adjacent network • DIPA No 145495/21-01-2015 ET Amendment Decision regarding the parking areas, locations of future motorist service stations and lateral toll stations at Oinofyta. • DIPA No 1170/16-01-2018 ET Amendment MD on the design of the Kifissia, Varympompi junctions (with lateral toll stations) and Agios Stefanos lateral toll stations. • YPEN/DIPA/61030/1796/17-08-2018 Decision on the renewal of time of the ETs of the Metamorfossi - Yliki, Yliki - Kastro, Kastro - Tragana and Arkitsa - Ag. Konstantinos sections of PATHE motorway. • YPEN/DIPA/54395/1335/15-10-2019 Decision on ET Amendment of Metamorfossi – Yliki and Tragana – Arkitsa sections for the replacement of three bridges at Ritsona, Thiva and Atalanti junctions.

			• YPEN/DIPA/31281/05-11-2019 Decision approving the Data File for the adaptation to the requirements of the JMD 1915/2018 (B' 304) for the Metamorfossi - Skarfeia section of PATHE motorway. • YPEN/DIPA/70928/4601/02-11-2021, Decision amending the E.T. regarding: a) the Varymbobi I/C, b) the temporary traffic regulations at the junction of Elaion and Ermioni streets of the Municipality of Kifissia, c) the adaptation/compliance with the latest regulatory framework. **ANCILLARY WORKS** • EYPE No 144265/22-09-2009 Decision on approving the design for Afidnes, Thiva Frontal Toll Stations and Kapandriti, Malakassa, Thiva Lateral Toll Stations. • EYPE No 141083/20-10-2009 Decision on approving STIS for implementation and operation of Kapandriti and Thiva MEMC. • EYPE No 122399/1-4-2010 Decision on approving the construction and operation of PATHE snow removal centers. • EYPE No 195827/31-01-2011 Decision on approving the construction and operation of six parking areas. • EYPE No 197957/06-04-2011 Decision on approving the design of roads at Mpogiati I/C • EYPE No 200858/25-7-2012 Decision on approving the implementation and operation of clients service building and parking areas at Afidnes Frontal Toll Station. • EYPE No 172045/09-04-2014 TEPEM approval on Hellenic Police vehicle refueling facilities at Thiva. • DIPA No 151494/29.10.2015 TEPEM approval for the relocation of the maintenance building from Kapandriti MEMC to Malakassa area.

			• DIPA No 153346/15.12.2015, TEPEM approval for the relocation of the police building from the environmentally authorized position Kapandriti MCC (K.P. 29+000) to Afidnes area. • ΔΙΠΑ No 100451/30.05.2016, Approval of compliance documentation of at-grade I/C 1 Final Design at Malakassa I/C area. • DIPA No 39764/24.08.2016, Approval of compliance documentation of Oinoi at-grade I/C (IKL1) Final Design at Oinoi I/C area. • Prot. No. 10300/6-6-2018 TEPEM approval for the mechanical laboratories, laundry – lubrication facilities at Thiva, Martino & Atalanti MCC. • ΥΠΕΝ/ΔΙΠΑ/60950/1789/14-09-2018 TEPEM approval on the relocation of the fire-brigade building from Kapandriti MCC to Malakassa MCC • ΥΠΕΝ/ΔΙΠΑ/61255/3656/18-09-2020 TEPEM approval of Varimpompi snow removal station. • Prot. No. ΥΠΕΝ/ΔΙΠΑ/14194/956/02-03-2021 Decision on approving recharging and refueling points for vehicles at Schimatari MSS.
2	Yliki – Kastro	The section ETAD is valid until 17-09-20233 (Decision ΥΠΕΝ/ΔΙΠΑ with prot. no. ΥΠΕΝ/ΔΙΠΑ 61030/1796/17-09-2018)	**MAIN PROJECT** • JMD No 36118/94/10-07-1995, JMD approving the environmental terms • EYPE No 101617/22-09-2006: JMD renewing the validity time and ET amendments as to the Yliki alterations (91 & 97), pollutant retention tanks, and ATEMKE site restoration (for the concession) • EYPE No 140792/12-06-2009, E.T. amendment JMD • DIPA No 145495/21.01.2015 E.T. Amendment Decision about the Parking Areas, the future motorists service stations positions of the motorway and the lateral toll stations of Oinofyta.

			• YPEN/DIPA/61030/1796/17-09-2018 Decision on renewing the validity time of Environmental terms for the Metamorfosi – Yliki, Yliki – Kastro, Kastro – Tragana and Arkitsa –Ag. Konstantinos sections of the PATHE motorway. • No YPEN/DIPA/31281/2108/05-11-2019, Decision approving Documentation for the adaptation to the requirements of the JMD 1915/2018 (B' 304) for Metamorfossi - Skarfia section of PATHE Motorway.
3	Kastro – Tragana Section	The section ETAD is valid until 17-09-2033 (ΥΠΕΝ/ΓΔΠΠ/ΔΙΠΑ with ΥΠΕΝ/ΔΙΠΑ prot. no. 61030/1796/17.09.2018)	**MAIN PROJECT** • JMD No 33838/94/10-7-1995 JMD ET approval • EYPE No 103909/12-05-2006, JMD Amendment & Extension of ET validity time • EYPE No 139132/30-04-2009 JMD E.T. Amendment • DIPA 43269/09-09-2016, Decision amending E.T. regarding the Parking Areas, the future motorists service stations positions of the motorway and the lateral toll stations of Oinofyta. • DIPA 43269/09-09-2016 Decision amending E.T. regarding the construction of right side road network from Malessina I/C to MC 19 on Proskyna – Theologou street. • YPEN/DIPA /61030/1796/17-09-2018 Decision amending the validity time of ET for the Metamorfosi – Yliki, Yliki – Kastro, Kastro –Tragana and Arkitsa –Ag. Konstantinos sections of the PATHE motorway. • No YPEN/DIPA/31281/2108/05-11-2019, Decision approving the Documentation for the adaptation to the requirements of the JMD 1915/2018 (B' 304) for Metamorfossi - Skarfia section of PATHE Motorway. **ANCILLARY WORKS** • EYPE prot. no. 146696/18-11-2009 Decision approving design amendments at points of Kastro – Agios Konstantinos section for implementation and operation of: Tragana – Arkitsa – Loggos Lateral Toll Stations, Tragana, Arkitsa

			Frontal Toll Station and Fire Brigade, Police and Maintenance buildings at Atalanti junction_Assessment
4	Tragana – Arkitsa	The section ETAD is valid until 06.02.2032 (Decision ΥΠΕΝ/ΓΔΠΠ/ΔΙΠΑ with prot. no. oik. 6366/06.02.2017)	**MAIN PROJECT** • JMD No 36759/94/10-7-1995 approving environmental terms • EYPE No 103910/12-05-2006, JMD amending & extending the E.T. validity time • No 145495/21.01.2015 E.T. Amendment about the Parking Areas, the future motorists service stations positions of the motorway and the lateral toll stations of Oinofyta. • Decision 6366/06.02.2017 on E.T. validity time renewal and amendment about the Motorists Service Station of Atalanti MSS. • No YPEN/DIPA/54395/1335/15-01-2019, Amendment of the environmental terms of the sections of the replacement of three bridges at Ritsona, Thiva, Atalanti junctions. • No YPEN/DIPA/31281/2108/05-11-2019, approval of Documentation for the adaptation to the requirements of the JMD 1915/2018 (B' 304) for Metamorfossi - Skarfia section of PATHE Motorway. **ANCILLARY WORKS** • EYPE No 146696/18-11-2009 Decision approving design modifications at points of Kastro - Agios Konstantinos section for installation and operation of: Tragana, Arkitsa, Loggos Lateral Toll Stations, Tragana, Arkitsa Frontal Toll Stations and Fire Brigade, Police and Maintenance buildings at Atalanti junction_Assessment. • EYPE No 122399/1-4-2010 Approving the construction and operation of snow removal centers.

5	Arkitsa – Agios Konstantinos	The AEPO of the section shall be in force until 17.09.2033(decision ΥΠΕΝ/ΓΔΠΠ/ΔΙΠΑ with prot. no. 61030/1796/17-09-2018).	**MAIN PROJECT** • JMD No 39516/94/10-7-1995 approving the E.T. • EYPE No 103908/12-05-2006, JMD renewing the E.T. validity time • DIPA No 145538/21.01.2015 Decision approving E.T. for Arkitsa MSS. • YPEN/DIPA/61030/1796/17-09-2018 Decision renewing the validity time of Metamorfossi – Yliki, Yliki – Kastro, Kastro – Tragana and Arkitsa – Ag. Konstantinos of PATHE motorway • Prot. no YPEN/DIPA/31281/2108/05-11-2019, approving the Documentation for the adaptation to the requirements of the JMD 1915/2018 (B' 304) for Metamorfossi - Skarfia section of PATHE Motorway. **ANCILLARY WORKS** • ΕΥΠΕ prot. no. 146696/18-11-2009 Decision approving design amendments at points of Kastro – Agios Konstantinos section for implementation and operation of: Tragana – Arkitsa – Loggos Lateral Toll Stations, Tragana, Arkitsa Frontal Toll Station and Fire Brigade, Police and Maintenance buildings at Atalanti junction_Assessment
6	Agios Konstantinos – Kamena Vourla	The AEPO of the section is in force until 17.09.2034 (Decision of ΥΠΕΝ/ΓΔΠΠ/ΔΙΠΑ with prot. no. ΥΠΕΝ/ΔΙΠΑ 82386/5348/17.09.2019).	**MAIN PROJECT** • JMD No 85676/30-07-2002, E.T. Approval • JMD No 126386/04-06-2004 E.T. Amendment • Decision GDPP/DIPA 82386/5348/17-09-2019 Decision Renewing and Amending the E.T. as regards the Fire-Brigade building at Knimida section. • No YPEN/DIPA/31281/2108/05-11-2019, Decision approving the Documentation for the adaptation to the requirements of the JMD

			1915/2018 (B' 304) for Metamorfossi - Skarfia section of PATHE Motorway. **ANCILLARY WORKS** • EYPE No 122399/1-4/2010 Approval of construction and operation of snow removal centers.
7	Kamena Vourla – Mendenitsa	The Decision of ET approval is valid until 07-12-2036 (Decision YPEN/GDPP/DIPA with prot. no. YPEN/DIPA /56975/1510/07-12-2021)	• JMD No 67031/19-10-1998, E.T. Approval • No YPEN/DIPA/31281/2108/05-11-2019 Decision approving Documentation for the adaptation to the requirements of the JMD 1915/2018 (B' 304) for Metamorfossi - Skarfia section of PATHE Motorway. • No YPEN/DIPA/56975/1510/07-12-2021 Decision approving new ET as regards the operation of Kamena Vourla –Mendenitsa section of PATHE motorway.

4.1.2 CONNECTING BRANCH OF PATHE: SCHIMATARI - CHALKIDA

S/N	Section	E.T. Validity	ET decisions issued
1	Schimatari - Chalkida	The section ETAD is valid until 01-04-2029 (Decision YPEKA/GDPP/EYPE MD oik 171818/01-04-2014)	• JMD 106530/15-03-2000: Schimatari – Chalkida section improvement • MD 171818/01-04-2014 New EIA of the section approval due to expiry of the original JMD ETA validity and approval of frontal toll stations at Chalkida (Vathy)

4.1.3 IONIA ODOS MOTORWAY (ANTIRRIO – IOANNINA)

The per-section validity period of the approved environmental terms for the **IONIA ODOS** motorway as well as the authorizations issued are presented in the following table:

S/N	Section	E.T. Validity	E.T. Decisions issued
1	Antirrio – Kefalovrysso (South Agrinio Bypass End)	The JMD of the said section is valid until 19-11-2030 (Decision YPEN/GDPP/DIPA with prot. no. 149145/19.11.2015) & The MD is valid until 14-04-2030 (MD DIPA with prot. no. oik 147996/14-04-2015)	**MAIN PROJECT** • JMD EYPE/142128/25-07-2005 E.T. Approval • MD EYPE/ETA 166142/13-02-2013 ET amendment as to the road corridor alignment design of the mentioned project at Vasiliki, Evinos river and Antirrio areas as well as the micro-optimizations along the above mentioned approved project." • MD DIPA/147996/14-04-2015: Approval of Environmental Terms (ETA) for project "Ionia Odos: Antirrio – Kefalovrysso (South Agrinio Bypass End)", Kolova area from K.P. 6+163.5 to 11+827 (6+195.6 to 11+552 originally approved alignment design), and Amendment as to section from K.P. 5+4104.5 to 6+163.5 (5+104.5 to 6+195.6 originally approved alignment design), and K.P. 11+827 to 14+904.4 (11+552 to 14+904.4 approved alignment design). • DIPA Decision/148571/15.10.2015 amending the JMD 147996/14-04-2015 as regards the relocation of 5 pillars of the High Voltage Direct Current – HVDC • GDPP/DIPA Decision/149145/19.11.2015: Extension of the time validity of the ET. • MD ETA 8568/17-02-2017 "Amendment of the (I) 142128/25-07-2005 JMD EPO as to the environmental authorization of the final design of Antirrio I/C and the lateral toll stations of Gavrolimni I/C and Messolonghi

			I/C (near K.P. 14+300 and K.P. 27+530 of IONIA ODOS respectively), and (II) amendment 147996/14-04-2015 JMD EPO environmental authorization of the frontal toll station of Klokova (near K.P. 10+100 of IONIA ODOS). • Decision GDPP/DIPA 23650/15-05-2017 ΓΔΠΠ/ΔΙΠΑ "Amendment of ET for the environmental authorization of Evinochori MSS." • Decision GDPP/DIPA 1594/19-01-2018 Amendment of JMD EPO 142128/25-07-2005 and 147996/14-04-2015 as to the alterations of the final design. **ANCILLARY WORKS** • Decision 100769/05-02-2016: TEPEM approval of Messolonghi and Filippiada MEMC • Decision 23680/05.10.2016 Approval of the Technical and Environmental Study (TEPEM) for the motorway Administration and Traffic Management Building of IONIA ODOS and the Fire-fighting Building at Klokova
2	Agrinio Bypass	The section ETAD is valid until 01-02-2032 [Decision YPEN/GDPP/DIPA No 5559/01-02-2017 (Re: 153045/2015)]	• JMD 84982/96/11.04.1997 Approval of Environmental Terms • JMD EYPE 105889/08-07-2008 Extension of ET validity. • JMD EYPE 144713/23.09.2009: E.T. Amendment • MD DIPA Decision 100391/20.01.2016 E.T. Amendment • Decision No 5559/01.02.2017 ΓΔΠΠ/ΔΙΠΑ: extension of E.T. validity period.
3	Agrinio Bypass North End (Kouvaras) – Arta South Bypass End (Kompoti) and Arta North End Bypass	The section ETAD is valid until 02-03-2031 (Decision YPEN/GDPP/DIPA with prot. no. 11198/03.03.2016)	**MAIN PROJECT** • EYPE JMD 141564/25-07-2005 E.T. Approval • EYPE JMD 167980/30.04.2013: E.T. Amendment • Decision of DG for Dec. EYPE 174140/ 28.07.2014: E.T. Amendment

	(Filippiada) – Ioannina (Eleousa)		• JMD 150063/25.06.2015: "E.T. Amendment as to the sections at K.P. 105+500 to 108+700, 115+720 to 120+700, 152+446 to 154+796 to 181+710 to 186+650". • GDPP/DIPA Decision 11198/03-03-2016: E.T. Amendment for the relocation or reconstruction of existing pylons of DEI due to involvement in the IONIA ODOS motorway under construction and Extension of validity period • MD Decision 9443/22-02-2017 of DEPUTY MINISTER of ENVIRONMENT AND ENERGY: E.T. Amendment for the environmental authorization ➢ of Amvrakia MSS (K.P. 81+150 to 81+435), ➢ of Amfilochia MSS and MCC (K.P. 95+300 to 95+762), ➢ of Frontal Toll Stations: of Menidi (K.P. 111+300) and Terovo (K.P. 174+100), ➢ of lateral toll station Gorgomylos I/C (K.P. 163+110), ➢ of the aggregate quarry exploitation of total surface area 33,938 m2 at position TOUMPANOS of Amfilochia (K.P. 96+000), ➢ of Episkopiko MSS and MCC (K.P. 189+378 to 189+669) ➢ of the updated final design of the motorway to the sections from K.P. 152+446 to K.P. 162+354 and from K.P. 178+500 to K.P. 182+665. • GDPP/DIPA Decision 1592/19-01-2018 E.T. amendment as to the alterations of the final design. • GDPP/DIPA Decision oik. ΥΠΕΝ/ΔΙΠΑ/61239/3652/29-07-2021, ET Amendment as regards: (i) the technical differentiations of Kompoti semi-junction, (ii) the update of the final design of Amvrakia and Amfilochia MSS, (iii) the adjacent work of Terovo Snow-Removing Center. **ANCILLARY WORKS**

			• Decision 100769/05-02-2016: TEPEM Messolonghi (and Filippiada) MEMC
4	Filippiada - Arta Bypass	The section ETAD is valid until 23-09-2029 (Decision YPEKA/GDP/EYPE with prot. no. 175041/23.09.2014)	• JMD 120756/96/03.06.1997, Approval of Environmental Terms for the construction and operation of the project "Motorway Ioannina – Antirrio, section Filippiada – Arta Bypass from K.P. 60+000 to K.P. 82+000 starting at Ioannina to Preveza and Arta regional units, including a 1km section of connecting road with Arta town. • EYPE JMD 132550/31.07.2003 ET Amendment, • ΕΥΠΕ JMD 137938/31.12.2003 ET Amendment, • ΕΥΠΕ JMD 141631/30-06-2009 ET Amendment of as to the design of the Arta I/C • Decision of ΓΔΠ/ΥΠΕΚΑ/ΕΥΠΕ with prot. no οικ. 175041/ 23.09.2014) Extension of ET validity period and their amendment as to the final design of the project (longitudinal section/cross section of the road, technical and hydraulic works, side road network, tolls, road safety, etc.)

4.2 Submissions

1st semester of 2021

For **PATHE Motorway**, the reference period of the 1st semester of 2021, the Concessionaire did not submit the following environmental studies referring to the Operation & Maintenance of the Concession Project.

For **IONIA ODOS Motorway,** during the reference period of the 1st semester of 2021, the Concessionaire submitted the following environmental studies:

- Environmental Impact Study (EIS) of the required flood-protection works and interventions along the Ionia Odos motorway, Antirrio – Kefalovrysso Section (Agrinio Bypass South Edge).
  [Concessionaire to EYDE/KSESP with prot. no. 48947/02.04.2021, EYDE/KSESP to ΓΔΠΠ/ΔΙΠΑ with prot. no. EYDE/KSESP Φ9/18/91303/12.04.2020)].
- Environmental Impact Study (EIS) for the amendment of the Decision on Approval of Environmental Terms 84982/96/11.4.1997 of the project: "IONIA ODOS: Agrinio wide bypass (as in force), as regards the additional hydraulic/flood-protection works and interventions in the said section.
  [Concessionaire to EYDE/KSESP with prot. no. 48641-14.01.2021, EYDE/KSESP to GDPP/DIPA with prot. no. EYDE/KSESP Γ/Φ9/18/32140/08.02.2021].

B' semester of 2021

For **PATHE Motorway**, during the reference period of B' semester of 2021, the Concessionaire submitted the following environmental studies:

- Amendment File of JMD ETA 126119/08.02.2007 126119/08.02.2007 of PATHE motorway, as amended and in force, for the widening of the hopper of Thiva Frontal Toll Station.
  [Concessionaire to EYDE/KSESP with prot. no. 49284/22.07.2021, EYDE/KSESP to GDPP/DIPA with prot. no. EYDE/KSESP/Γ/Φ9.18/215109/06.08.2021].

For **IONIA ODOS Motorway**, during the reference period of B' semester of 2021, the Concessionaire submitted the following environmental studies:

- Amendment File of JMD 141564/25-07-2005 as amended and in force as regards the required flood-protection works and interventions along the Ionia Odos motorway: EIS resubmission as regards the flood protection of the areas upstream and downstream of the Ionia Odos motorway - Section S2, CH. 107+120 – CH. 141+500.

  [Concessionaire to EYDE/KSESP with prot. no. 49621/30.12.2021].

- Amendment File of JMD 84982/96/11-04-1997 as amended and in force regarding the required flood-protection works and interventions at section "Agrinio Bypass" [Concessionaire to EYDE/KSESP with prot. no. 49599/23.11.2021]

4.3 Outstanding issues

4.3.1 PATHE Motorway

The environmental studies that have been submitted up to the reference year of the present report for the section Metamorfossi – Skarfeia of the PATHE and the E.T. issuance is not yet completed are presented in the following table.

S/N	Section	Outstanding issues	Submissions	Observations
1	Tragana - Arkitsa	EIS submission of Lateral Toll Stations at Atalanti I/C and Livanates I/C	• Submission of Nea Odos S.A. to EYDE/KSESP with prot. no. 47295/27-02-2020 • Submission EYDE/KSESP to GDPP/DIPA with prot. no. Φ9/4765/06-07-2020	**Approval of DIPA is pending.**

4.3.2 IONIA ODOS Motorway

The environmental studies submitted for the Antirrio – Ioannina section of the IONIA ODOS and for which the E.T. issuance is not yet completed, are presented in the following table.

S/N	Section	Outstanding issues	Submissions	Observations
1	Antirrio – Kefalovrysso (south end of Agrinio bypass)	Amendment Folder of JMD EIA 142128/25-07-2005 and MD 147996/14-04-2015, as amended and in force regarding the required flood protection works and interventions along Ionia Odos motorway	• Submission of Nea Odos S.A. to EYDE/KSESP with prot. No 45308/29-10-2018. • Submission to EYDE/KSESP to DIPA/YPEN with prot. no. EYDE/KSESP/Γ/Φ9.18/7999/31-10-2018. • New submission of Nea Odos SA to EYDE/KSESP with prot. no. 48947/02-04-2021 • New submission of EYDE/KSESP to DIPA/YPEN with prot.no. EYDE/KSESP/Γ/Φ9.18/91303/12-04-2021	**CANCELLED** **Approval of DIPA is pending**
		Environmental Impact Study of the required flood-protection works and interventions along Ionia Odos Motorway	• Submission of Nea Odos S.A. to EYDE/KSESP with prot. No 48947/02-04-2021. • EYDE/KSESP Submission to GDPP/DIPA with prot. no. EYDE/KSESP/Γ/Φ9.18/91303/12-04-2021	**Approval of DIPA is pending**
2	North Agrinio Bypass End (Kouvaras) – South Arta Bypass End (Kompoti) and North Arta Bypass End (Filippiada) – Ioannina (Eleousa)	Amendment File of JMD 141564/25-07-2005 and MD 147996/14-04-2015, as amended and in force regarding the required flood protection works and interventions along Ionia Odos motorway	• Submission of Nea Odos S.A. to EYDE/KSESP with prot. No 45307/29-10-2018. • Submission to EYDE/KSESP to DIPA/YPEN with prot. no. EYDE/KSESP/Γ/Φ9.18/7998/31-10-2018. • New submission of Nea Odos S.A. to EYDE/KSESP with prot. no. 49621/30.12.2021	**CANCELLED** **Approval of DIPA is pending**
3	Agrinio Bypass (Kefalovrysso - Chryssovergi)	Amendment File of JMD 84982/11-04-1997 as amended and in force as for the required flood-protection projects and interventions along the Ionia Odos motorway	• Submission of Nea Odos S.A. to EYDE/KSESP with prot. No. 45444/03-12-2018. • EYDE/KSESP submission to DIPA/YPEN with prot. no. EYDE/KSESP/Γ/Φ9.18/612/25-01-2019.	**Approval of DIPA is pending**

		EIS on the amendment of AEPO (Decision Approving the ET) 84982/96/11-4-1997 as amended and in force as regards the additional hydraulic/ flood-protection works and interventions in this section.	• Submission of Nea Odos S.A. to EYDE/KSESP with prot. No 48641/14-01-2021. • Submission to EYDE/KSESP to DIPA/YPEN with prot. no. EYDE/KSESP/Γ/Φ9.18/32140/08.02.2021 • New submission of Nea Odos S.A. to EYDE/KSESP with prot. no. 49599/23.12.2021	**CANCELLED** **Approval of DIPA is pending**

5. SENSITIVE AREAS OF THE PROJECT

5.1 PATHE Motorway

The following table presents the natural areas under protection that the motorway passes through or is adjacent to, according to the approved E.T.

S/N:	Section	Ecologically Sensitive Areas
1	Yliki – Kastro Section	• GR 2410001 «Yliki and Paralimni Lakes – Voiotikos Kifissos System»
2	Kastro – Tragana Section	• GR 2410001 «Yliki and Paralimni Lakes – Voiotikos Kifissos System»
3	Tragana – Arkitsa Section	• GR 2440001 "Wetland and islands of Atalanti Bay"
4	Agios Konstantinos – Kamena Vourla Section	• GR 2440002 «Spercheios valley and estuary»

5.2 IONIA ODOS Motorway

The following table presents the natural areas under protection that the motorway passes through or is adjacent to, according to the approved E.T.

S/N:	Section	Ecologically Sensitive Areas
1	Antirrio – Kefalovrysso (South Agrinio Bypass End)	• GR2310001 "Acheloos Delta, Messolonghi – Aitoliko Lagoon, estuary of River Evinos, Echinades Islands, Petalas Island" • GR2310005 "Mount Varassova" • GR2310010 "Mount Arakynthos and the Strait of Kleisoura"
2	Agrinio Bypass	• GR2310008 "Ozeros Lake" • GR2310001 "Acheloos Delta, Messolonghi – Aitoliko Lagoon, estuary of River Evinos, Echinades Islands, Petalas Island"
3	North Agrinio Bypass End (Kouvaras) – South Arta Bypass End (Kompoti) and North Arta Bypass End (Filippiada) - Ioannina (Eleousa)	• GR2310007 "Amvrakia Lake area", • GR2110004 "Amvrakikos Gulf, Katafourko Lagoon and Korakonissia" • AB3090025 «Louros River» • GR2130012 "Broader area of Ioannina lake" • GR2110001 "Amvrakikos Gulf, delta of Louros river, Arachthos"
4	Arta Bypass	• Rivers Arachthos and Louros

6. ATMOSPHERIC POLLUTION

6.1 PATHE Motorway

According to the Environmental Terms of PATHE motorway the air pollution measurement network for PATHE motorway includes 3 measuring stations: at Varympompi Interchange, Schimatari Interchange and Arkitsa Interchange. The Varympompi station was put into trial operation on 21/12/2011. Arkitsa station was put into trial operation on 19/12/2011 and Schimatari station put into trial operation on June of 2013 (later, due to insufficient power supply at the position).

According to the Environmental Terms of the Ionia Odos Motorway, the air pollution measurement network also includes three (3) stations, at the Evinochori MSS, at the Filippiada MSS and at the Episkopi MSS. The station installation works began in June 2018 and their full operation (after the trial period) was completed in August 2018.

For the year 2021, a complete air pollution monitoring program was implemented by the above six air pollution stations, which are operating on a 24-hour basis. The air pollution report was submitted to the competent Services. The air pollution report was submitted to the competent services (Directorate KAPA/YPEN with prot. no. 11141/198/07.02.2022, EYDE (Directorate D17) with receipt prot. no. 32036/07.02.2022 & EYDE/KSESP with receipt prot. no. 31988/7-2-2022). A similar report will also be prepared and submitted for 2022.

For the measurement of pollutants, the stations have been equipped with approved analyzers in accordance with the National Legislation (Ministerial Decision No 14122/549/E.103/2011 (FEK 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 of the Council of the European Union of 21 May 2008 on ambient air quality and cleaner air for Europe. For every 24 hours, at each station the following are recorded:

1. The pollutants CO, NO_2, SO_2, O_3 (only for PATHE motorway), PM_{10}, $PM_{2,5}$, C_6H_6 (benzene)
2. The meteorological conditions of each installation area.

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 (which is installed at Afidnes Control Center), via the Nea Odos 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 (NO_2, CO, O_3, SO_2, Benzene, suspended particles PM_{10} and $PM_{2,5}$) are calculated and stored.

For 2021, the measured pollutant records were as follows:

6.1 PATHE Motorway

Suspended Particles PM_{10}

The Limit as of 01/01/2005 for PM_{10} 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.

Number of exceedances of PM_{10} daily mean values over 50μg/m³

Number of exceedances Average daily value in μg/m³	Varympompi	Schimatari	Arkitsa
	19	7	3

- **The average daily value (50μg/m³) was not exceeded > 35 times per year**

The average annual value for 2021 was:

Average annual value in μg/m³	Varympompi	Schimatari	Arkitsa
	22,88	18,18	13,55

- **The average annual value (40μg/m³) was not exceeded at any station.**

Suspended Particles $PM_{2,5}$

For suspended particles $PM_{2.5}$, the Limit as of 01/01/2010 is 25μg/m³ on the average annual value.

The average annual value for 2021 was:

Average annual value in μg/m³	Varympompi	Schimatari	Arkitsa
	12,01	11,23	8,84

No station exceeded the average annual value (25μg/m³).

NO_2

The Limit as of 01/01/2010 is 200μg/m³ on average hourly value and should not be exceeded more than 18 times per year. In addition, the average annual value should not exceed 40μg/m³.

Number of exceedances of average hourly value over 200μg/m³

Number of exceedances of average hourly value in μg/m³	Varympompi	Schimatari	Arkitsa
	0	0	0

No station exceeded the average hourly value (200μg/m³)>18 times per year

The average annual value for 2021 was:

Average annual value in µg/m³	Varympompi	Schimatari	Arkitsa
	39,13	29,88	23,60

- **There was no exceedance of the average annual value (40µg/m3)**

CO

The Limit as of 01/01/2005 is 10 mg/m³ (maximum daily eight-hour value).

Number of exceedances over 10 mg/m³

Number of exceedances of maximum daily eight-hour value in mg/m³	Varympompi	Schimatari	Arkitsa
	0	0	0

- **No station exceeded the maximum daily eight-hour value (10mg/m³).**

The average annual value for 2021 was:

Average annual value in mg/m³	Varympompi	Schimatari	Arkitsa
	0,31	0,20	0,18

SO_2

The Limit as of 01/01/2010 is 350µg/m³ as average hourly value and should not be exceeded more than 24 times per year. Also, the average daily value is 125 µg/m³, which should not be exceeded more than 3 times per year.

Number of exceedances of average hourly value over 350µg/m³

Number of exceedances Average hourly value in mg/m³	Varympompi	Schimatari	Arkitsa
	0	0	0

- **No station exceeded the maximum average hourly value (350µg/m³) more than 24 times per year.**

The average daily value for 2021 was:

Average daily value in µg/m³	Varympompi	Schimatari	Arkitsa
	2,27	3,62	2,29

- **No station exceeded the average daily value (125µg/m³)>3 times.**

O_3

The objective as of 01/01/2010 is 120µg/m³ as maximum daily eight-hour value and should not be exceeded more than 25 times per year (average in 3 years).

Number of exceedances of maximum daily eight-hour value over 120μg/m³

Number of exceedances of maximum daily eight-hour value in μg/m³	Varympompi	Schimatari	Arkitsa
	0	0	0

- **No station exceeded the maximum daily eight-hour value (120μg/m³)>25 times.**

The average annual value for 2021 was:

Average annual value in μg/m³	Varympompi	Schimatari	Arkitsa
	19,42	43,05	36,79

Benzene

The limit as of 01/01/2010 is 5μg/m³ on average annual value.

Average annual value in μg/m³	Varympompi	Schimatari	Arkitsa
	2,27	3,62	2,29

- **No station exceeded the average annual value (5μg/m³).**

6.2 IONIA ODOS Motorway

Suspended Particles PM_{10}

The Limit as of 01/01/2005 for PM_{10} 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.

Number of exceedances of PM_{10} daily mean values over 50μg/m³

Number of exceedances Average daily value in μg/m³	Evinochori	Filippiada	Episkopiko
	6	6	17

- **No station exceeded the average daily value (50μg/m³)>35 times per year.**

The average annual value for 2021 was:

Average annual value in μg/m³	Evinochori	Filippiada	Episkopiko
	13,96	12,47	17,76

- **No station exceeded the average annual value (40μg/m³).**

Suspended Particles $PM_{2.5}$

For suspended particles $PM_{2,5}$, **the limit of average annual value as of 01/01/2015 is 25 μg/m³.**

The average annual value for 2021 was:

Average annual value in μg/m³	Evinochori	Filippiada	Episkopiko
	9,03	8,52	10,85

- **No station exceeded the average annual value (25μg/m³).**

NO_2

The Limit as of 01/01/2010 is 200μg/m³ on average hourly value and should not be exceeded more than 18 times per year. In addition, the average annual value should not exceed 40μg/m³.

Number of exceedances of average hourly value over 200μg/m³

Number of exceedances of average hourly value in μg/m³	Evinochori	Filippiada	Episkopiko
	0	0	0

- **The average hourly value (200μg/m³)>18 times per year was not exceeded at any station**

The average annual value for 2021 was:

Average annual value in μg/m³	Evinochori	Filippiada	Episkopiko
	6,81	15,69	10,27

- **The average annual value (40μg/m³) was not exceeded at any station.**

CO

The Limit as of 01/01/2005 is 10 mg/m³ (maximum daily eight-hour value).

Number of exceedances over 10 mg/m³

Number of exceedances of maximum daily eight-hour value in mg/m³	Evinochori	Filippiada	Episkopiko
	0	0	0

- **The maximum daily eight-hour value (10mg/m³) was not exceeded at any station.**

The average annual value for 2021 was:

Average annual value in μg/m³	Evinochori	Filippiada	Episkopiko
	0,09	0,20	0,18

SO_2

The Limit as of 01/01/2010 is 350μg/m³ as average hourly value and should not be exceeded more than 24 times per year. In addition, the average daily value is 125 μg/m³, which should not be exceeded more than 3 times per year.

Number of exceedances of average hourly value over 350μg/m³

Number of exceedances Average daily value	Evinochori	Filippiada	Episkopiko
	0	0	0

in mg/m^3			

- **No station exceeded the average hourly value (350μg/m^3)>24 times per year.**

The average daily value for 2021 was:

Average daily value	Evinochori	Filippiada	Episkopiko
in μg/m^3	1,99	2,16	2,29

- **No station exceeded the average daily value (125μg/m^3)>3 times.**

Benzene

The limit as of 01/01/2010 is 5μg/m^3 on average annual value.

The average annual value for 2021 was:

Average annual value	Evinochori	Filippiada	Episkopiko
in μg/m^3	0,20	0,47	0,50

- **No station exceeded the average annual value (5μg/m^3).**

7. NOISE AND TRAFFIC VOLUME

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

- 53 24-hour traffic noise measurements at the PATHE Motorway, Metamorfossi – Loggos section
- 14 24-hour traffic noise measurements at the PATHE Motorway, Loggos – Skarfeia section
- 3 24-hour traffic noise measurements at the connecting branch of PATHE Motorway, Schimatari – Chalkida section
- 52 24-hour traffic noise measurements at the IONIA ODOS Motorway, Antirrio – Ioannina section

The above traffic noise measurements also include 24-hour traffic noise measurements following noise complaints/grievances, as sent by the Concession Project Supervisory Service or as done through the Nea Odos Customer Service Center. For the above sections, the new measurements conducted due to complaints are the following:

A total of 122 24-hour traffic noise measurements were obtained, and the result assessment of the 24-hour traffic noise measurements for 2021 shows that:

A. "Metamorfossi – Loggos" Section

In this section, which is the most burdensome regarding the volume, it is necessary to group the conclusions due to different local conditions. More specifically:

a. At positions P5, P13 there are exceedances due to non-implementation of anti-noise barriers for the reasons mentioned in the O.K.TH. (Road Traffic Noise) programme already submitted.

b. At position P11 the Lnight index value is totally marginal with Lnight = 60dB(A). Furthermore, in 2020 there was no exceedance even though we still had limit values. To validate those mentioned above, the measurement P18 was made, the results of which are in line with those of P11. In combination with the position P12 which does not show any exceedances neither this year nor in 2019 - 2020, it is recommended to repeat the measurement and, in case of future limit violations, all necessary protect measures to be taken.

c. At positions P15, P16, P19, P20, P26, P37, P38, P39, P40, P41, P42, P44, P50, P51, P52, P53, P54 & P55, there are exceedances but the receivers are outside of the statutory settlement limits and therefore do not require noise protection.

d. At positions P6, P7, P8, P9, P10, P17, P22, P25, P28, P30, P34, P36 & P43, there is no exceedance and all of the above positions are located behind embedded barriers.

e. At positions P4, P12, P14, P46, P47, P48, P74 there are no exceedances and the receivers are within statutory settlement limits.

f. At positions P35, P45, P49, there are no exceedance and the receivers are outside statutory settlement limits.

g. At positions P21, P23 and P24, there are exceedances in receivers within the settlement limit and behind implemented noise barriers, which are exclusively due to the heavily congested side network and more specifically, at the side network running through the Oinofyta settlement where the percentage of heavy-duty vehicles, which are also moving at speeds well past the 50km/h limit, is particularly high.

h. At Position P2 there is an exceedance in a receiver behind an implemented barrier, which, however, as mentioned above, has not been constructed in its entirety, with the result that about 80 meters from the beginning of the barrier and about 100 meters from its end are missing. It is noted that the load of the lateral network is very heavy and contributes significantly to the final noise level. The Special Acoustic Design Computation and Application of noise barriers (EAMYE) has been elaborated and approved with the prot. no. YPEN/D.KAPA/41689/902/18-06-2021 which increases the height of the existing noise barriers while at the same time the possible use of new improved sound-absorbing materials is proposed.

i. At positions P1 and P3 there is an exceedance in a receiver within the settlement and behind a constructed noise barrier around CHs from 16+051 to 16+650 direction of Lamia. The

specific noise barrier falls under the responsibility, design and construction of ΔΜΕΟ.Δ9. An on-site autopsy revealed that the barrier has been constructed beyond the approved study and more specifically by approximately 90 meters in the direction to Lamia. Nevertheless, the construction of the barrier is particularly poor, with the main characteristics being the gaps(/openings) between the transparent PMMA sheets and the retaining wall, as well as the poor fitting of the elastic gaskets that in many cases hang from the metal uprights. Prot. No.: YPEN/D.KAPA/41689/902/18-06-2021 which increases the height of the existing noise barriers while at the same time the possible use of new improved sound absorbing materials is proposed.

j. At position P17 the Lnight index was exceeded once more. The high level of the receiver in relation to the road surface of the motorway as well as the existence of a noise barrier from CH. 25+327 to CH. 25+592 on the motorway, which until now operated satisfactorily, should be highlighted. It is proposed to investigate the relocation of the existing noise barrier in front of the houses because, due to difference in altitude, it does not cover the receivers, and to take into consideration that a) the solution of the construction-extension of noise barriers on the motorway is not proved b) the area in front of the receiver belongs to the Municipality of Kifissia-Municipal Unit of Ekali and therefore the Concessionaire cannot intervene independently.

k. Regarding the complaint of Theodorou (P29) at Schimatari, the receiver is within the settlement limit and both Lden and Lnight indicators have been exceeded. For this position, an EAMYE (Special Acoustic Design Computation and Application of noise barriers) has been elaborated and approved with prot. no YPEN/D.KAPA/7752/156/19.02.2020. The construction of the barrier is in the construction phase, which has been postponed due to the pandemic - COVID 19.

l. Furthermore, the Position 10 at the 3rd General High School of Kifissia, EAMYE (Special Acoustic Design Computation and Application of noise barriers) with prot. no. YPEN/D.KAPA /33248/776/24-05-2021 has been elaborated and approved to upgrade the existing noise barrier with new noise-absorbing materials (the construction has been completed).

m. Finally, the Kaltsa's complaint (P7) investigation shows significant improvement in all indicators, all within boundaries, but an EAMYE study, which had been approved with prot. no. YPEN/DKAPA/15969/656/21/03/2018 No by the Department of Noise and Radiation of Directorate of KAPA. However, due to the location of the barrier and the significantly increased traffic load, it is recommended the measurement to be repeated and that all necessary protect measures be taken in case of continued exceedance.

B. "Schimatari – Chalkida" Section

In this section, in the total of three (3) 24-hour traffic noise measurements, there is NO

exceedance and no additional measures are necessary.

C. "Loggos – Skarfeia" Section

a. As regards positions P59, P70 and P73 no exceedances were presented. The following were observed at this section:
b. At position 56 an exceedance was observed at the Lnight index for the first time. The receiver is located within the settlement limit. A recheck is suggested in next year's program,
c. At Position 57 no exceedances were observed and the receiver is behind an implemented barrier and outside the established settlement limit.
d. At Position 58 no exceedances were observed and the receiver is outside the established settlement limit.
e. At Position 60 no exceedances were observed and the receiver is behind an implemented barrier and within an established settlement limit.
f. At Positions 61, 62, 63, 65 and 66 exceedances were found in the Lnight index; at position 65 an exceedance was found also at Lden index. Upon approval of the 2019 program, the elaboration of EAMYE (Computational and Experimental Studies of Acoustic Waves) has been proposed, which is in the phase of assignment by the competent body.
g. At Position 64 an exceedance was observed both at the Lden index and the Lnight index for the first time. If the exceedances remain next year, an EAMYE should be elaborated.
h. At Position 68, both the Lden and Lnight indices were exceeded but the receiver is located outside the limits of the settlement and thus it does not need noise protection.

D. IONIA ODOS "Antirrio – Ioannina" Section

In this section and in positions P50 of all P52 traffic noise measurements performed, there is NO exceedance of an indicator. Limit value of Lnight index= 60dB(A) Exceedance is observed in two cases, entirely marginal in position P22 and position P50 and only for the L_{night} indicator where there are houses outside the settlement boundary. More specifically, the house in Position P50 was not expropriated during construction, at the request of its owner. In any case, the evolution of the phenomenon will be monitored, but it is recalled that, under the current legislation, the above

indicators do not require anti-noise protection.
However, there are several measurements that are close to the statutory thresholds and need to also be monitored in the next program, as the approved environmental terms require.

For the year 2021, the monitoring program O.K.TH. (Road Traffic Noise) that has been submitted and approved by the Directorate of KAPA/YPEN with the prot. no the YPEN/DKAPA/78038/1517/03-02-2022.
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.
- 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 indicators, as well as the Ld-e of existing legislation in line with JMD with No 211773/2012 (FEK 1367/B/27-4-2012).

For the year t2021, Road Traffic Noise Monitoring program has been completed and approved. For the year 2022, similar program shall be implemented, which is expected to be completed within the year (recording of 24-hour measurements in selected positions), when it shall be submitted to the Directorate of KAPA/YPEN for approval.

It is noted that the traffic volume is monitored daily at the section from Metamorphossi to Skarfeia of PATHE motorway, at the transit level at all toll stations (Afidnes, Kapandriti, Malakassa, Oinofyta, Thebes and Tragana), and are reported in monthly reports. For 2021, the Annual Average Daily Traffic was calculated at 22,039 transits (in both directions) at the Metamorfossi – Skarfeia section of PATHE, while the Annual Average Daily Traffic was calculated at 5,841 transits (in both directions) at IONIA ODOS.

The tables below show the CHs of 24-hour measurements in all motorway sections. More specifically:

Section: Metamorfossi – Loggos

S/N MEASUREMENT	AREA	DIRECTION	CH.
P1	Metamorfossi	Towards Lamia	16+300
P2	Metamorfossi	Towards Athens	16+320
P3	Metamorfossi	Towards Athens	16+320
P4	Kifissia	Towards Lamia	20+320
P5	Kifissia	Towards Lamia	20+520
P6	Kifissia	Towards Lamia	20+880
P7	Kifissia	Towards Athens	21+080
P8	Kifissia	Towards Athens	21+650
P9	Kifissia	Towards Lamia	21+450
P10	Kifissia	Towards Athens	21+650
P11	Kifissia	Towards Athens	21+780
P12	Kifissia	Towards Athens	22+150
P13	Kifissia	Towards Lamia	22+800
P14	Nea Erythraia	Towards Lamia	23+520
P15	Nea Erythraia	Towards Lamia	23+830
P16	Krioneri	Towards Athens	25+100

P17	Ekali	Towards Lamia	25+430
P18	Kifissia	Towards Athens	21+780
P19	Afidnes	Towards Lamia	34+500
P20	Malakassa	Towards Lamia	44+100
P21	Oinofyta	Towards Athens	59+250
P22	Oinofyta	Towards Athens	59+380
P23	Oinofyta	Towards Athens	59+530
P24	Oinofyta	Towards Athens	59+680
P25	Oinofyta	Towards Athens	59+760
P26	Oinofyta	Towards Athens	59+940
P27	Oinoi	Towards Athens	62+880
P28	Schimatari	Towards Athens	65+900
P29	Schimatari	Towards Athens	65+960
P30	Schimatari	Towards Athens	66+750
P34	Kastro	Towards Athens	115+320
P35	Tragana	Towards Lamia	137+250
P36	Tragana	Towards Athens	137+670
P37	Municipality of Dafnoussia	Towards Lamia	146+240
P38	Municipality of Dafnoussia	Towards Lamia	146+700
P39	Livanates	Towards Athens	146+900
P40	Municipality of Dafnoussia	Towards Lamia	148+450
P41	Livanates	Towards Lamia	150+050
P42	Municipality of Dafnoussia	Towards Lamia	150+800
P43	Livanates	Towards Lamia	151+250
P44	Municipality of Dafnoussia	Towards Athens	152+200
P45	Arkitsa	Towards Athens	153+840
P46	Arkitsa	Towards Lamia	153+880
P47	Arkitsa I/C	Towards Athens	154+780
P48	Kedros	Towards Lamia	157+350
P49	Municipality of Dafnoussia	Towards Athens	158+250
P50	Municipality of Dafnoussia	Towards Lamia	158+900
P51	Achlades	Towards Athens	159+140
P52	Municipality of Dafnoussia	Towards Athens	119+400
P53	Municipality of Dafnoussia	Towards Athens	161+320
P54	Municipality of Dafnoussia	Towards Lamia	162+280
P55	Louros	Towards Athens	162+970
P74	Kifissia	Towards Lamia	22+485

Section: Schimatari – Chalkida

S/N MEASUREMENT	AREA	DIRECTION	CH
P31	Kalochori – Pantichi	Towards Chalkida	6+500
P32	Vathi	Towards Chalkida	7+000
P33	Vathi	Towards Chalkida	7+500

Section: Loggos - Skarfeia

S/N MEASUREMENT	AREA	DIRECTION	CH.
P56	Kamena Vourla	Towards Athens	170+000
P57	Kamena Vourla	Towards Lamia	171+350
P58	Agios Konstantinos	Towards Lamia	173+340
P59	Kamena Vourla	Towards Lamia	176+900
P60	Kamena Vourla	Towards Lamia	178+680
P61	Kamena Vourla	Towards Lamia	179+100
P62	Kamena Vourla	Towards Lamia	179+190
P63	Kamena Vourla	Towards Lamia	179+300
P64	Kamena Vourla	Towards Lamia	179+600
P65	Kamena Vourla	Towards Lamia	179+690
P66	Kamena Vourla	Towards Lamia	179+785
P68	Kamena Vourla	Towards Lamia	182+520
P70	Patereika	Towards Lamia	186+220
P73	Kamena Vourla	Towards Lamia	179+600

Section: Ionia Odos

S/N MEASUREMENT	AREA	DIRECTION	CH.
P1	ANTIRRIO	Towards Antirrio	4+960
P2	MAKYNEIA	Towards Antirrio	8+850
P3	RIZA	Towards Antirrio	10+700
P4	RIZA	Towards Ioannina	11+080
P5	RIZA	Towards Antirrio	11+210
P6	CHANIA GAVROLIMNIS	Towards Ioannina	18+490
P7	AGIOS GEORGIOS	Towards Ioannina	27+140
P8	AGIOS GEORGIOS	Towards Ioannina	27+520
P9	STOUMPEIKA	Towards Antirrio	30+350
P10	AGIOS THOMAS	Towards Ioannina	33+700
P11	AGIOS THOMAS	Towards Ioannina	33+980
P12	AGIOS THOMAS	Towards Antirrio	34+400
P13	AGIOS THOMAS	Towards Antirrio	35+250
P14	TRELAGKATHA	Towards Antirrio	35+830
P15	TRELAGKATHA	Towards Ioannina	35+820
P16	TRELAGKATHA	Towards Antirrio	36+090
P17	TRELAGKATHA	Towards Ioannina	36+260
P18	TRELAGKATHA	Towards Ioannina	36+950
P19	AGRILIA	Towards Antirrio	37+500
P20	NEA YDRAGOGEIA	Towards Ioannina	39+600
P21	NEA YDRAGOGEIA	Towards Antirrio	39+600
P22	KEFALOVRYSSO	Towards Antirrio	47+600
P23	KEFALOVRYSSO	Towards Ioannina	48+360
P24	KEFALOVRYSSO	Towards Ioannina	48+790
P25	KEFALOVRYSSO	Towards Antirrio	48+880
P26	CHALIKI	Towards Ioannina	49+800
P27	KEFALOVRYSSO	Towards Antirrio	55+150

P28	KEFALOVRYSSO	Towards Ioannina	55+120
P29	RIGANI	Towards Antirrio	67+120
P30	RIVIO	Towards Antirrio	86+180
P32	KAMPOS AMFILOCHIAS	Towards Antirrio	107+650
P33	KRIKELLOS	Towards Ioannina	108+860
P34	KRIKELLOS	Towards Antirrio	109+180
P35	KRIKELLOS	Towards Ioannina	111+400
P36	RIVIO	Towards Ioannina	86+780
P37	PSILA ALONIA	Towards Ioannina	132+450
P38	AGIOS DIMITRIOS - ARTA	Towards Ioannina	139+400
P39	AGIOS DIMITRIOS - ARTA	Towards Ioannina	139+700
P40	AGIOS DIMITRIOS - ARTA	Towards Ioannina	141+100
P41	ARTA	Towards Antirrio	145+130
P42	ARTA	Towards Ioannina	145+190
P43	ARTA	Towards Ioannina	145+370
P44	ARTA	Towards Ioannina	146+300
P45	ARTA	Towards Antirrio	147+600
P46	ARTA	Towards Antirrio	149+900
P47	KAMPI	Towards Ioannina	153+800
P48	KAMPI	Towards Antirrio	153+880
P49	AMMOTOPOS	Towards Ioannina	159+650
P50	NEOS GORGOMILOS	Towards Antirrio	169+600
P51	NEOS GORGOMILOS	Towards Antirrio	173+400
P52	EPISKOPIKO	Towards Antirrio	195+410
P53	EPISKOPIKO	Towards Ioannina	196+300
P54	EPISKOPIKO	Towards Ioannina	196+600

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 the subcontractors request proper management documentation. A relevant database containing the agreements and waste delivery receipts of authorized mineral oil management companies is established.

As for the hazardous liquid 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.

Inspections are performed at the construction and maintenance worksites and the corresponding checklist table is filled. Based on the checks, in case of failure to comply with the

provisions, guidelines (corrective actions) for compliance are provided. The implementation of the corrective actions is checked through new inspections based on the check list.

Furthermore, the concession company submits annual reports for waste producer at the electronic waste registry (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). For the year 2020, the concession company submitted the relevant report of waste producer to the electronic waste registry (EWR) for every JMD ETA of the motorway separately. For 2021, the process shall be completed in accordance with the deadlines.

8.2 Solid wastes

There is cooperation 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, all procedures provided by the current legislation shall apply and there is cooperation with management entities authorized for environmental purposes.

Inspections are performed at the construction and maintenance work sites and the corresponding check list table is filled. Based on the checks, in case of failure to comply with the provisions, guidelines (corrective actions) for compliance are provided. The implementation of the 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 enterprise the establishments of which produce waste and falling within the scope of Chapter A of Law 4014/2011 (A' 209).

For PATHE and Ionia Odos motorway, the NEA ODOS S.A. was registered in the Electronic Waste Registry (Reg. No 1739), as it falls within the scope of the provisions of Law 4014/2011, since in accordance with the No DIPA/ 37674/2016 (FEK 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.

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.

Moreover, NEA ODOS S.A., in the context of corporate social responsibility, has contracted Alternative Management System companies and recycles paper, plastic, batteries, used/damaged electrical and electronic equipment. Additionally, NEA ODOS S.A. disposes a certified environmental quality management system certified by ISO 14001:2015. For 2020, the concession company submitted the relevant report of waste producer to the electronic waste registry (EWR) for every JMD ETA of the Concession Project separately. For 2021, the process shall be completed in accordance with the deadlines.

For all previous years (before the operation of EWR), NEA ODOS 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 work taken place during the second semester of 2021 and for which the compliance with the Environmental Terms was checked, are the following:

- Vegetation pruning and maintenance.
- Garbage collection by garbage truck.
- Advertising billboard removal.
- Dead animal removal.
- Drain and culvert cleaning and maintenance.
- Sanitation system gutter slots cleaning.
- Drainage and other hydraulic works cleaning.

- Manual waste collection.
- Sweeping/Cleaning.
- Parking Area cleaning and washing.
- WC cleaning
- Bins replacement.
- Fencing Repair.
- Metal safety rails replacement
- Tunnel Maintenance.
- Road Marking Works.

For all the above works, compliance to the E.T. is recorded on a monthly basis in the checklists and the corresponding tables per JMD included herein.

10. ACCIDENTS – ACCIDENTAL POLLUTION – ACTION PLAN

An Action Plan for emergency situations has been drawn up, in which 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 an Appendix 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 immediately after the release of the hazardous load. Such materials are immediately 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 the contaminated absorbents and the hazardous waste produced by such an incident shall be completed in accordance with the existing legislation, by appropriately authorized companies for the decontamination, transfer and management of hazardous waste, with the aim of timely response to highway accidents.

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

- On-site infrastructure

A total of 9 Winter Maintenance stations have been environmentally authorized (with No 122399/1-4-2010 of EYPE) along the PATHE motorway. The installed and operating stations are located in the areas of Markopoulo, Schimatari, Thebes, Akraifnio, Martino, Tragana and Ag. Konstantinos (Latomeio).

For IONIA ODOS, the installed stations are located in the areas of Messolonghi, Amfilochia, Filippiada and Terovo.

- Visual disturbance by signs

All advertising billboards and signs within the concession limit have been removed. Regular inspections are carried out throughout the motorways, the advertising billboards - signs located within the expropriation limit are removed.

- Tunnel fire safety

There is cooperation with the Fire Department. Fire drills under “Large Scale” conditions was conducted on 28/3/2018 at Knimida Tunnel. The tunnel firefighting equipment is functional, with a network of 6'' pipelines, under 7 Atm stable pressure, and HDS every 50m in each tunnel over 500m in length, with two taps, a storz and a 25m hose, in accordance with the Construction Study.

- Pollution Control Units

Upon completion of the motorway improvements in Yliki area, the retention – infiltration rainwater runoff tanks have been constructed at the site, as provided by E.T. d-29.5 of JMD 101617/22.09.2006 for the Yliki-Kastro section.

It should be noted that the Concessionaire has designed 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.

Two of the total seven Pollution Control Units have not been constructed in the section "Agios Konstantinos - Kamena Vourla", which are planned to be constructed in accordance with the E.T. d-32 of JMD 85676/30.07.2002. The Greek State is expected to install the remaining two tanks.

- Water Quality

Within the framework of the water-monitoring program, measurements were carried out for 2021, which are distributed as follows:

- 10 samplings in one set on the IONIA Motorway.

- 4 samplings in a set on the PATHE Motorway at Yliki section.

The samplings were collected in special sterile collectors with a capacity of 2 liters provided by a specialized laboratory that performed the chemical analysis.

In detail, the following were performed:

- IONIA ODOS motorway:

IONIA ODOS		Samplings 2021
A	**Antirrio - Kefalovrysso** (ΑΕΠΟ: 142128/2005)	28/09/2021
1	Evinos River	2
B	**Agrinio Bypass** (ΑΕΠΟ: 84987/1997)	
1	Acheloos River	2
2	Ozeros Lake	1
Γ	**Kouvaras - Kompoti, Filippiada - Eleousa** (ΑΕΠΟ: 141564/2005)	
1	Louros River	1
1	Amvrakia Lake	1
D	**Arta Bypass** (ΑΕΠΟ: 120756/1997)	
1	Louros River	1
2	Arachthos River	2
	TOTAL OF MEASUREMENTS:	**10**

- PATHE Motorway at Yliki section:

PATHE		Samplings
A	YLIKI	29/09/2021
1	Voiotikos Kifissos	2
2	Yliki Lake	2
	TOTAL OF MEASUREMENTS:	**4**

The monitoring parameters for all samples are listed in the table below.

Monitoring Parameters

AGENT TYPE	CHEMICAL AGENT	MEASURING UNIT
fats & oils	fats & oils	mg/L
physicochemical analysis	temperature	◦C
	pH	4-10

	conductivity	μS/cm
	salinity	**ppt**
	turbidity	NTU
	total hardness	**French degrees**
organic load	BOD_5 (Biochemical oxygen demand)	mg/l
	COD (Chemical Oxygen Demand)	mg/l
	TOC (Total organic carbon)	**mg/l**
	DO (Dissolved Oxygen)	**mg/l**
solids	TSS (Total Suspended Solids)	mg/l
	TDS (Total Dissolved Solids)	mg/l
Nutrient ions	NO_3	mg/l
	NO_2	mg/l
	PO_4	mg/l
	Ammonia (NH_4)	mg/l
	SO_{3}^{-}	**mg/l**
	F^-	**mg/l**
	Cl^-	**mg/l**
	Na^+	**mg/l**
	K^+	mg/l
	Ca^{2+}	**mg/l**
	Mg^{2+}	**mg/l**
metals	Pb	μg/l
	Cd	μg/l
	Fe	μg/l
	As	**μg/l**

By observing the results it can be clearly identified that, as regards the seasonality of the measurements, no significant differentiation was observed.

Near Nea Odos (both Ionia Odos and PATHE) there are various sources of pollution of the adjacent water bodies, to which the exceedance of the concentrations of certain measured parameters can be attributed to a large percentage. The motorway runs through many crops but also passes through many settlements, thus the water bodies receive pesticides, fertilizers and household waste. So, mainly during the summer period, agricultural and other anthropogenic activities of the surrounding area may place severe strain on the water bodies.

It is briefly stated that for the IONIA ODOS motorway:

- ✓ There were no excessive concentrations of cadmium, lead and arsenic in any set and for any sample.
- ✓ There were no excessive concentrations of iron and in many cases even the drinking water limit was met.
- ✓ There was no overrun/exceedance on either BOD or COD in the case of rivers and lakes that are directly affected by the motorway. It is obvious that the above conclusion excludes lagoons and places that are heavily mixed with seawater and are far from being affected by the impact of the motorway.
- ✓ There was no exceedance of the limits of sulfate, chlorine, ammonia, fluorine, phosphate, nitrate and nitrite ions in the case of rivers and lakes directly affected by the motorway. It is obvious that the above conclusion excludes lagoons and places that are heavily mixed with seawater and are far from being affected by the impact of the motorway.
- ✓ Especially for the Evinos river mouth, it should be noted that the differences observed in the prices of the two sets are exclusively related to the fact that the water of the river is mixed with seawater. The percentage of seawater in the sample obviously affects both indicators such as conductivity, salinity and suspended solids but also organic factors such as BOD and COD. For this reason and due to the large distance of the samples from the area of influence of the motorway in the next sets, it is proposed for these samples to be taken upstream and downstream of the motorway axis to draw safer and comparable conclusions to other rivers and streams.

For PATHE motorway – YLIKI SECTION:

- ✓ The total of the samples almost completely satisfies the limits of drinking water, a fact that demonstrates the non-strain of water bodies from the operation of the motorway. At this point It should be noted that the water bodies of both Yliki and Voiotikos Kifissos are of great environmental importance and the fact of their zero strain from the motorway, a section with particularly high traffic, proves the completeness and effectiveness of the environmental management of the road.

Taking into account the overall results of all the examinations (analyzes), the operation of Nea Odos (IONIA ODOS & PATHE – YLIKI REGION), which places severe strain on the water bodies, may be characterized as negligible in relation to the other anthropogenic activities, as the comparison of the upstream and downstream results of Nea Odos (both in Ionia and PATHE) for each water body does not show any significant change.

The full report includes in detail the positions of the measurements and the values of the parameters, is kept by the Concessionaire and is at the disposal of any interested party upon request.

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 SERVICE

Nea Odos S.A. is the "Concessionaire" for the Project "Ionia Odos Motorway from Antirrion to Ioannina, Athens PATHE (Metamorfossi I/C) – Maliakos (Skarfeia) and Connecting Branch of PATHE Schimatari – Chalkida" pursuant to the Concession Agreement.

With the Operation & Maintenance Contract dated 5/3/2021 the Concessionaire has assigned to the Operator, and the Operator has undertaken, all the obligations, rights, risks and responsibilities of the Concessionaire, under the Concession Agreement, regarding the operation and maintenance of the Concession Project under the regime of the principle of absolute correspondence of obligations (back to back).

According 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 fulfilment of the Environmental Requirements in accordance with the provisions of the Concession Agreement.
- Submits reports and updates to the State in accordance with the provisions of the Concession Agreement.

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

The AETs are separate by motorway section and specified in terms of the needs of each area, but also in terms of the impact of the O&M of the motorway on the environment.

For the effective fulfillment of those mentioned above, an Environmental Management System is implemented, designed to cover these special requirements. To maintain a relevant certification according to the corresponding international standard ISO 14001 provides the possibility of maintaining in force the above environmental conditions 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 mentioned above, 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 that covers the extended range of the environment. The group of scientists consists of: Civil Engineer – Transportation Expert – Acoustical Engineer, Environmentalist – Environmental Planner, and 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 2021, the 1st semi-annual Report of Environmental Monitoring of the Concession Project under study, which was submitted by the Concessionaire under prot. no. 49291/23.07.2021 letter of the Supervisory Authorities and GPDD/YPEN (D17 receipt prot. no.: 201862/26.07.2021, DIPA receipt prot. no. 71097/4586/26.07.2021 & KSESP receipt prot. no. 201837/26.07.21), has been drafted.

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), which is implemented by the company responsible for the operation, 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

As part of inspections by public services, an autopsy was performed by a team from the Region of Central Greece (DI.PE.XOS/P.S.E) at the motorists' service station (MSS) on PATHE, in the area of Atalanti, Prefecture of Fthiotida, Region of Central Greece, where no problems of environmental degradation were found.

For 2021, no environmental deterioration problems have been identified caused by the operation and maintenance of the motorways, and no fines have been imposed on the company responsible for the operation.

17. CERTIFICATIONS

NEA ODOS S.A. and the Operator have developed and implemented individually a common 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 2021, the planned annual inspection for NEA ODOS S.A. and the first inspection certifying the Operator according to the standards Management Systems ISO 9001 (Quality), ISO 45001 (Health & Safety), ISO 14001 (Environment) were successfully carried out by the independent certification body Bureau Veritas.

Furthermore, NEA ODOS S.A. and the Operator, recognizing the need to operate efficiently the motorways individually, designed a Business Continuity Plan on which they relied for the implementation of a Business Continuity Management System (BCMS) each one. In 2020, the BCMS was certified for NEA ODOS S.A. according to the international standard ISO 22301:2012, thus making it the first Concessionaire Company to receive the relevant certification.

The annual inspection to certify the BCMS of NEA ODOS S.A. (and upgrade to the new standard ISO 22301:2019) and the first inspection to certify the BCMS of the Operator is expected to be completed in early 2022.

Moreover, NEA ODOS S.A. in 2015 designed and implemented a Road Safety Management System, which has been certified according to the international standard ISO 39001:2012, which constitutes a milestone for the safe and efficient fleet management, and demonstrates the company's commitment to implement safe practices on the motorway. The Operator implements the system in 2021.

In July 2021, the independent certification body TUV Hellas successfully carried out the first inspection to certify the ISO 39001 (Road Safety) Management System of the Operator.

Collectively, NEA ODOS S.A. and the Operator are certified according to the following International Standards:

NEA ODOS 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 continuance of the Certifications for all standards and for at least one year until the next scheduled annual inspection.

18. ENVIRONMENTAL BUDGET

The required percentage for the total operating and maintenance of the motorway budget required to fully comply with the Environmental Terms and restrictions of the relevant JMD-ETA has been secured as a matter of priority. Expenditure on environmental protection projects is given in the annual progress reports on compliance with the Environmental Terms.

Investment Categories for the Environment	2021 (in €)
Environmental Studies (EIA, TEPEM, Renewal Studies, ETA, Computational and Experimental Studies of Acoustic Waves, Environmental Authorization of accompanying works and activities, etc.)	
Vegetation Protection and Maintenance and new planting	
Traffic noise monitoring program	
Environmental Advisors and personnel for monitoring the implementation of the E.T.	
Atmospheric Pollution and Meteorological Data Stations Operation and Air Pollution Monitoring	
Certifications It refers to the cost of the company integrated system which is included in ISO 14001:2015	
Disposal and Waste management	
Insurance for environmental liability	
Environmental Education and Training	
Noise barriers (designs and installation)	
TOTAL:	

19. CORPORATE SOCIAL RESPONSIBILITY

Nea Odos 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 the core and substantial issues that NEA ODOS S.A. 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 Provision of Human Resources Services
- Caring for the Environment
- Collaboration with Local Communities and Social Contribution

The Corporate Responsibility Report is posted at http://www.neaodos.gr

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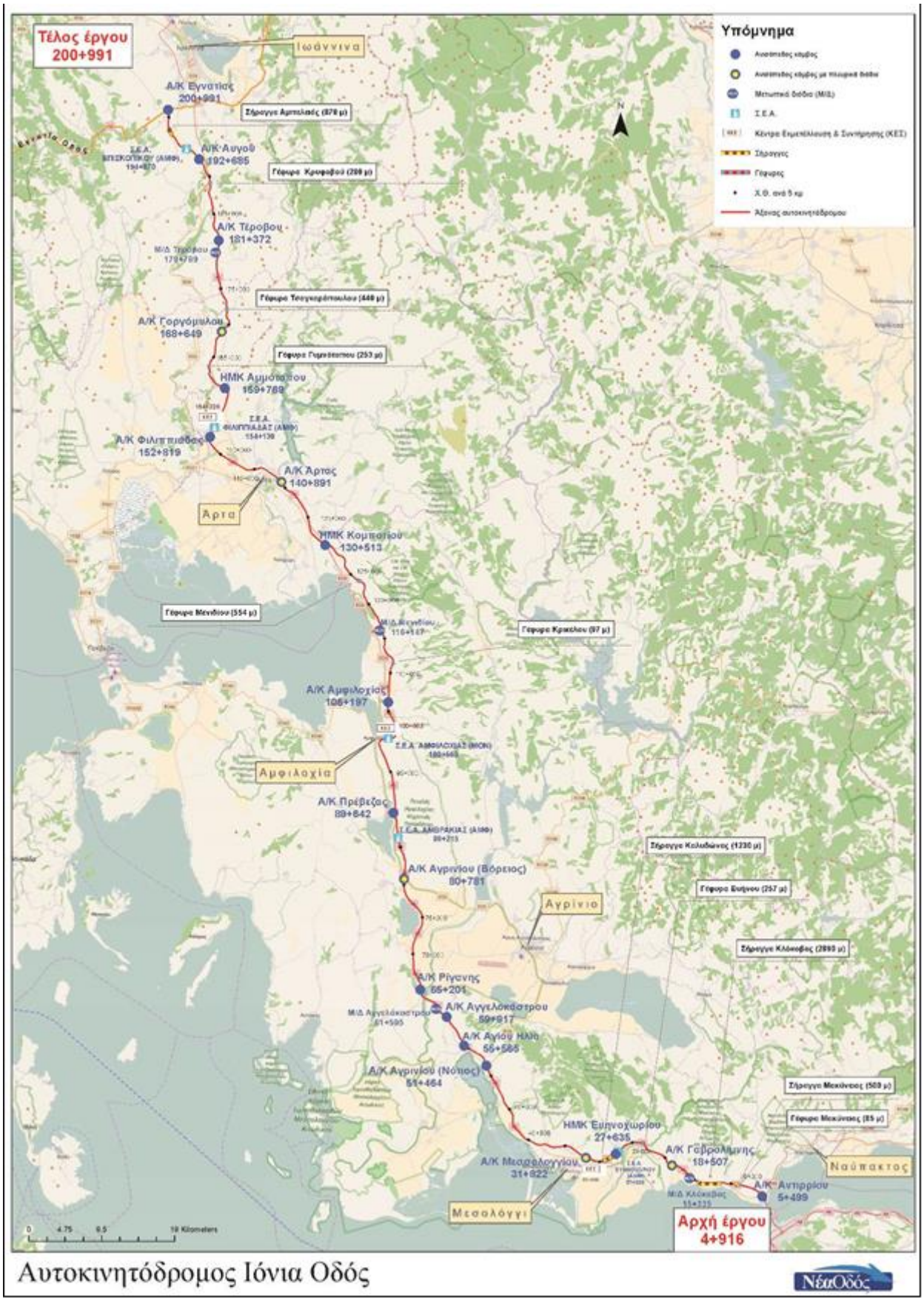
Οι κεντροβαρικές γεωγραφικές συντεταγμένες του έργου δίνονται στον πίνακα που ακολουθεί:

Θέση	Νέα Εθνική χιλιομέτρηση (έγγραφο Α4/01/11/24334/20-05-2014 της ΕΥΔΕ ΛΣΕΠ)	X	Y
Μεταμόρφωση - Υλίκη			
Αρχή Έργου (Αρχή ΑΚ Μεταμόρφωσης)	15+169	477.704,13	4.212.074,72
ΑΚ Μεταμόρφωσης	15+570	477.885,35	4.212.432,43
ΑΚ Ταταϊου	16+795	478.803,39	4.213.176,19
ΑΚ Πύρνας	18+770	480.528,53	4.214.128,39
ΑΚ Καλυφτάκη	20+060	481.232,95	4.215.205,97
ΑΚ Βαρυμπόμπης	23+225	483.636,34	4.217.100,85
ΑΚ Μπογιατίου	27+960	486.135,72	4.221.052,73
ΑΚ Αφιδνών	33+765	486.836,62	4.226.499,61
ΑΚ Καπανδριτίου	35+240	487.071,91	4.227.935,73
ΑΚ Μαρκόπουλου	39+370	485.441,08	4.231.099,25
ΑΚ Μαλακάσας	44+130	480.901,82	4.231.825,53
ΑΚ Οινοφύτων	55+690	471.458,59	4.237.784,29
ΑΚ Οινόης-1 κλάδος	62+915	465.593,99	4.241.982,75
ΑΚ Χαλκίδας	65+820	463.808,89	4.244.245,76
ΗΜΚ Σχηματαρίου Α	66+385	463.341,50	4.244.550,69
ΗΜΚ Σχηματαρίου Β	67+655	462.189,35	4.245.085,15
ΑΚ Ριτσώνας	75+525	454.958,29	4.247.772,51
ΑΚ Θηβών	89+835	440.725,56	4.246.258,46
Τέλος τμήματος	95+535	435.241,84	4.247.626,84
Υλίκη - Κάστρο			
Αρχή Έργου (5,7χλμ μετά ΑΚ Θηβών)	95+535	435.241,84	4.247.626,84
ΑΚ Στρατοπέδου	100+270	431.916,01	4.250.486,06
ΑΚ Ακραίφνιου	107+320	430.828,63	4.255.672,12
ΑΚ Κάστρου	114+815	426.936,82	4.260.067,73
Τέλος έργου (πέρας ΑΚ Κάστρου	116+247	426.951,53	4.261.499,37
Κάστρο - Τραγάνα			
Αρχή Έργου(πέρας ΑΚ Κάστρου)	116+247	426.951,53	4.261.499,37
ΑΚ Μαρτίνου	125+770	430.127,15	4.269.494,11
ΑΚ Μαλεσίνας	129+095	429.301,45	4.272.016,37
Τέλος έργου (αρχή ΑΚ Τραγάνας)	136+630	424.421,06	4.274.683,45
Τραγάνα - Αρκίτσα			
Αρχή Έργου (αρχή ΑΚ Τραγάνας)	136+630	424.421,06	4.274.683,45
ΑΚ Τραγάνας	137+475	423.615,59	4.274.923,36
ΑΚ Αταλάντης	145+325	418.648,20	4.280.224,65
ΑΚ Λιβανάτες	149+555	417.755,41	4.284.354,75
ΑΚ Αρκίτσας	154+500	415.271,46	4.288.009,41
Τέλος έργου (πέρας ΑΚ Αρκίτσας)	155+400	414.377,53	4.287.920,95
Αρκίτσα – Άγιος Κων/νος			
Αρχή Έργου (πέρας ΑΚ Αρκίτσας)	155+400	414.377,53	4.287.920,95
Τέλος έργου (αρχή ΑΚ Λόγγου πέρας ομώνυμης Γέφυρας)	165+767	404.407,05	4.289.687,45

Θέση	Νέα Εθνική χιλιομέτρηση (έγγραφο Α4/01/11/24334/20-05-2014 της ΕΥΔΕ ΛΣΕΠ)	X	Y
Άγιος Κων/νος – Καμένα Βούρλα			
Αρχή Έργου (αρχή ΑΚ Λόγγου πέρας ομώνυμης Γέφυρας)	165+767	404.407,05	4.289.687,45
ΑΚ Λόγγου	166+180	404.021,217	4.289.837,355
ΑΚ Λατομείου	172+640	398.968,909	4.291.029.900
ΑΚ Κ. Βούρλων (Δυτ)	177+585	394.435,212	4.292.011,886
ΑΚ Κ. Βούρλων (Ανατ)	179+895	392.278,646	4.292.683,852
Τέλος έργου (πέρας ΑΚ Κ. Βούρλων (Ανατ.))	181+882	390.404,314	4.292.770,696
Καμένα Βούρλα - Μενδενίτσα			
Αρχή Έργου (πέρας ΑΚ Κ. Βούρλων (Ανατ.))	181+882	390.404,314	4.292.770,696
Τέλος έργου	185+127	387.206	4.293.354



Project: PATHE (Metamorfossi - Skarfeia), Ionia Odos (Antirrio - Ioannina)