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Full Environmental Assessment of TTFSE II Project, Component II: "Construction of a 3.4 km access road to Kapitan Andreevo Border Crossing Point (BCP), part of Maritsa Motorway"

FINAL REPORT

EXECUTIVE SUMMARY

Sofia
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Abbreviations List

BCP	Border Crossing Point
DNCS	Directorate for National Construction Supervision
EEA	Executive Environmental Agency
EMP	Environmental Management Plan
ES	Executive Summary
FEA	Full Environmental Assessment
MC	Ministry of Culture
MES	Ministry of Emergency Situations
MF	Ministry of Finances
MH	Ministry of Health
MI	Ministry of Interior
MoEW	Ministry of Environment and Water
MRDPW	Ministry of Regional Development and Public Works
MW	Motorway
NGO	Non Governmental Organization
NMAH	National Museum of Archaeology and History
NRIA	National Road Infrastructure Agency
PIT	Project Implementation Team
RIoEW	Regional Inspectorate of the Environment and Water
TEM	Trans-European Motorway
TEN-T	Trans-European Network - Transport
TTFSE	Trade and Transport Facilitation in South-Eastern Europe
RTP	Road Trafic Police
RIPHPC	Regional Inspectorate of the Public Health Protection and Control
SIRT	State Inspectorate on the Road Transport
VOC	Volatil Organic Compound
WB	World Bank

Introduction

Maritsa Motorway (MW) is an important transport way of national and international significance. It is an integral part of Corridor No.4 of the Trans-European North-South Motorway (TEM), linking the countries from Eastern and Central Europe to the Middle East and Asia. The TEM total length, including Maritsa Motorway on Bulgarian territory, is 365 km. The design and construction of the Motorway has started during the 70-ies of the last century. Nowadays some sections of the motorway are already commissioned, other are under construction and still other are in the process of bidding procedure for contractor selection.

A technical design document for Maritsa MW construction is already prepared, including the alignment of the road to Kapitan Andreevo village lands; the land acquisition procedures are also already completed. The linking section between Maritsa MW and Kapitan Andreevo BCP from km 114+000 to km 117+126.31 with the alignment to the North of Kapitan Andreevo village was subject to a separate basic design study elaborated in 2007.

The International Bank for Reconstruction and Development (IBRD) allocated to Republic of Bulgaria a loan for the implementation of the Second Project for Trade and Transport Facilitation in South-Eastern Europe (TTFSE II project) which is an extension of the successfully implemented TTFSE I Project. The Project aims to enhance regional trade by improving the capacity, efficiency and service provision quality at selected BCPs, situated at the external borders of the European Union with particular focus on the Trans-European Network (TEN-T).

The project loan will finance the construction of a 3.4 km-long access road, linking the Maritsa Motorway to Kapitan Andreevo BCP. The road route from 114+000 km to the BCP passes along its whole length through the lands of Kapitan Andreevo Village. The new access road will by-pass Kapitan Andreevo Village to get to BCP by a road of overall motorway-type dimensions, providing separation of cars and buses traffic flow from heavy trucks traffic flow by independent lanes. Currently the entire traffic to and from the BCP passes through Kapitan Andreevo Village.

Kapitan Andreevo Village is located in South-Eastern Bulgaria, at the border with the Republic of Turkey. Kapitan Andreevo Border Crossing Point is one of the most important BCPs of the country. The population of Kapitan Andreevo Village amounts to 1 067 inhabitants and in the last years keeps growing steadily. The population in active age amounts to 582 inhabitants, which is equal to 54,6 % and the number of the people over the active age is 171, which is equal to 16 %. The number of the unemployed people is only 14. There is no developed industrial production in the village. The main portion of the lands owned by the village is situated to the North of the village. The lands are with good physical and chemical characteristics and are used as agricultural lands.

The main objective of the Full Environmental Assessment is to assess the possible environmental impacts related to the construction works and to the operation of the 3.4 km access road and to identify mitigation measures for the environmental impact and the related monitoring activities.

The present Executive Summary (ES), Environmental Management Plan (EMP), and Full Environmental Assessment (FEA) are based on the design available at this point. After consideration of the cost estimate and resources available for this component, the Bulgarian Authorities intends to proceed with a redesign of the road for its optimization regarding reduce of cost, earth works and land for asquisition. Accordingly, the ES, EMP and FEA will be adjusted once the design is updated to reflect any possible environmental impacts assessed in relation with the new proposed alignment. The revised ES, EMP and FEA will be re-disclosed accordingly.

1. General information

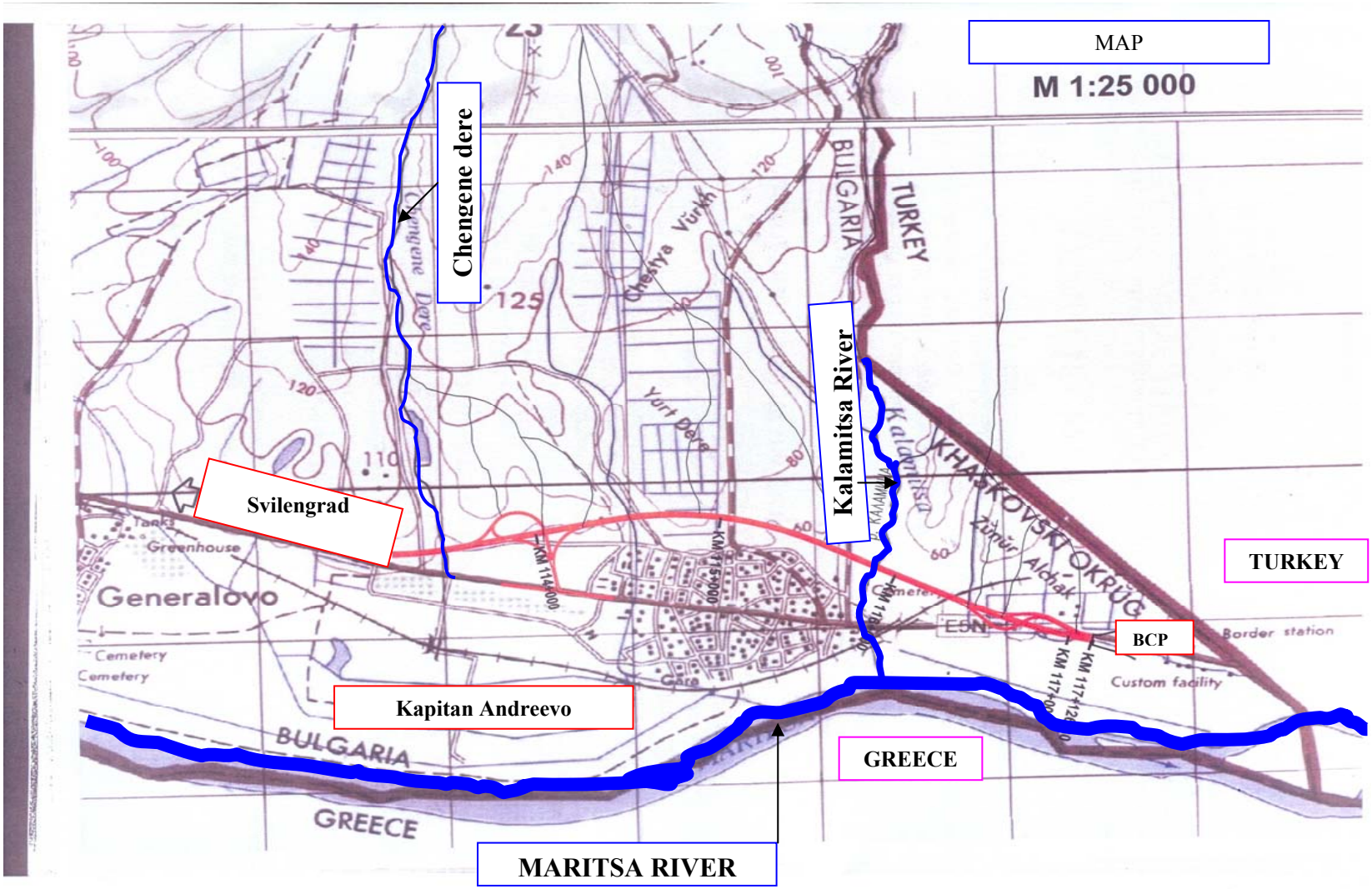
1.1. Subject and scope of the Project

The project, subject to the Full Environmental Assessment (FEA) is the „3.4 km access road to Kapitan Andreevo BCP", located in the region of Kapitan Andreevo Village, at the state border with the Republic of Turkey. According to the design the access road will by-pass the village in northern direction and will provide direct access to the BCP by eight lanes, four at the entry and four at the exit of the BCP. The project ensures separation of the car and buses traffic flow from the heavy trucks traffic flow.

The access road development is encompassed between km 114+000 and km 117+126.31. The route begins from km 113+480 and the segment is an extension of the already built motorway section between km 108+000 and km 114+000. The route ends at the entry of Kapitan Andreevo BCP at km 117+126.31. The access road by-passes Kapitan Andreevo Village and overpasses the existing railway without requiring its reconstruction.

Besides the access road, the development project will finance also the construction of different other facilities including: a heavy vehicles connection (TIR-connections for splitting and merging heavy vehicles traffic flow) at km 116+360, a Trumpet junction at km 114+050 to Kapitan Andreevo Village, a railway flyover at km 116+336 and the reconstruction of rural roads with implementation of flyovers at km 114+500 and 115+725. The reconstruction aims to achieve undisturbed rural and livestock aspects. The road at km 115+725 overpasses Kalamitza river by a bridge. For the wildlife passage 19 (nineteen) pipe and box culverts are foreseen by the project design.

The total land area, necessary for the project implementation associated with permanent land use, is 250.932 decare. The area affected by permanent land use conversion is as follows: cornfields – 190.683 decare, vineyard – 0.919 decare, grazing, common land – 14.361 decare, other village territory – 16.955 decare, gully – 4.941 decare and rural roads – 7.927 decare.



Layout of road I-8 across Kapitan Andreevo Village and 3.4 km access road

1.2. Legal and regulatory framework

The Full Environmental Assessment (FEA) implementation conforms to a set of legislative and regulatory acts of the Bulgarian legislation in force, as well as to a number of requirements and procedures of the World Bank in the matter.

The *Spatial Planning Act*, regulating public relationships, associated with spatial development, development project design and construction in the Republic of Bulgaria, was consulted for determining the restrictions on ownership for spatial-development purposes.

The *Road Act*, regulating public relationships in the field of ownership, utilization, management, construction, maintenance, rehabilitation and financing of roads in the Republic of Bulgaria, was consulted for determination of the conformity of the development project, as elements, scope and impact in and outside residential areas, to the legislative requirements. This act delineates the State responsibilities concerning the construction, maintenance and repair of the road, as well as the respective sanctions envisaged by the law for possible violations.

The *Road Traffic Act*, regulating the rights and obligations of the participants in the road traffic, as well as the compulsory measures applied in case of violation of the law, the related codes or regulations, were consulted for determining the development project conformity as organization and safety of the traffic in this segment and for determining the speed and the level of pollution caused by vehicles engines for this segment.

The *Environmental Protection Act* is a framework law in the field of the environment. The objective of this law is to preserve for the present and future generations the environment and to protect human health, to control and manage the factors impacting the environment and to avoid or reduce the pollution. This law regulates the responsibilities of the State, the municipalities, the legal or natural persons towards the environmental protection. The drafting of the FEA of „3.4 km access road to Kapitan Andreevo BCP" is entirely based on the requirements of the Environmental Protection Act, as well as on the requirements of the Regulation on the Terms and Conditions of EIA Implementation, studied in detail by this regulatory act.

The other major private laws in the field of the environmental protection related to the FEA are: *Clean Air Act, Water Act, Biodiversity Act, Protected Areas Act, Waste Management Act, Act on Environmental Protection from Noise, Act on Protection of Agricultural Lands, Soil Protection Act* and the related regulatory acts.

The land acquisition from the land owners, whose agricultural lands are in the scope of the 3.4 km access road to the border crossing point of Kapitan Andreevo, is enforced by an Act of the Council of Ministers and is regulated by the *State Property Act*, *Municipal Property Act* and *Succession Act*.

WB safeguard policies, procedures and guidelines concerning the Full Environmental Assessment of Road Projects and Involuntary Resettlement (OP4.12) have also been considered and consulted (Environmental Assessment Sourcebook and Road and the Environment handbook).

1.3. Institutional arrangements

Direct institutional levels involved in the construction of MARITSA MOTORWAY, including the access road of km 114+000 up to km 117+126.31, are the State through its Ministries, Agencies and Local Administration units, the Municipality, the National Road Infrastructure Agency, Civil Construction Companies, Banks etc.

The TTFSE II Project is implemented by a Project Implementation Team (PIT) at the Ministry of Finance (MOF). The PIT has the overall responsibility for project implementation and coordination, for all components, including planning, procurement, disbursement of funds, monitoring the use of funds, auditing arrangements, monitoring and evaluation, supervising the implementation of the Environmental Management Plans (EMPs), and reporting on the progress of implementation and use of project funds.

A Deputy Minister of Finance has been appointed as the National Project Coordinator of the proposed Project. This enable a direct and active participation of the management of the Ministry of Finance in the project implementation.

The National Customs Agency (NCA), the Border Police Directorate (BPD), and the National Roads Infrastructure Agency have an active role in the proposed project. The PIT directly involves each entity for matters relating to that entity in order to ensure an efficient implementation of the proposed project. The NRIA in particular is represented in all matters concerning the access road to Kapitan Andreevo BCP under Component 2. This covers detailed design, land acquisition, procurement and contract execution. The NCA, BPD and NRIA have appointed a Project Coordinators. The PIT together with these three organizations is implementing the Project.

The leading role for the Construction of 3.4 km access road to Kapitan Andreevo Border Crossing Point (BCP), part of Maritsa Motorway, is assigned to the Ministry of Finance and in particular to the Project Implementation Team (PIT) together with the National Road Infrastructure Agency. The PIT, acting under the Project Manager, in coordination with the NCA Project Coordinator, the BPD Project Coordinator and the NRIA Project Coordinator, is performing all technical responsibilities for Project implementation.

The responsible entities for the implementation control during the construction of the designed mitigation measures are the Directorate for National Construction Supervision (DNCS) at the Ministry of Regional Development and Public Works (MRDPW), the Regional Inspectorate of the Environment and Waters (RIoEW) at the Ministry of Environment and Water (MoEW), the Regional Inspectorate of the Public Health Protection and Control (RIPHPC) at the Ministry of Health (MH), the local Mayoralty, the Municipality, the National Museum of Archaeology and History (NMAH) to the Ministry of Culture (MC), the Road Traffic Police (RTP) at the Ministry of Interior (MI), the National Road Infrastructure Agency NRIA, the Executive Environmental Agency (EEA) at the MoEW and the Ministry of Finance through the Project Implementation Team.

The control over the implementation of the mitigation measures during the operation of the access road shall be exercised by: the National Road Infrastructure Agency, the Regional Inspectorate of the Environment and Waters (RIoEW) at the Ministry of Environment and Water (MoEW), the Executive Environmental Agency (EEA) at the MoEW, Svilengrad Municipality, the Road Traffic Police (RTP) at the Ministry of Interior (MI), the State Motor Vehicles Inspectorate (SMWI), and the Ministry of the Emergency Situations (MES).

During the construction and operation of the access road to Kapitan Andreevo BCP responsible entities for the monitoring are NRIA, RioEW, EEA and MoEW.

1.4. Institutions, legal entities and natural persons concerned by the project

In the process of design, construction and operation of the section from km 114+000 to km 117+126.31 a considerable number of legal entities and natural persons, as well as business developments will be involved.

The procedures under the relevant Bulgarian laws and the Bank Land Acquisition Policy Framework (OP 4.12) have been observed, including the ones regarding the selection of

a scenario for construction of an access road, approval of the alignment and change of the agricultural land use. Based on current assessment, the project implementation will affect the property of 8 legal entities, 82 individuals, 21 estates, which are municipal public property, 9 estates, which are state private property and 9 estates managed by the Svilengrad Municipality.

For the planned 3.4 km access road there is an updated land plot plan, prepared in compliance with the currently effective legislation in the Republic of Bulgaria and complemented by a draft plan for land acquisition in compliance with the Land Acquisition Policy Framework bank policy (OP/BP 4.12).

2. Project Alternatives - Road route options of the 3.4 km access road to the Kapitan Andreevo BCP

Basic scenario (no project) – "Existing road I – 8"

The existing road I – 8 is an extension of the constructed section of Maritsa Motorway from km 108+000 to km 114+000. This scenario proposes after km 114+000 to use road I – 8, passing through the centre of the Kapitan Andreevo Village.The road has two carriageways of 7 m width. There are some sidewalks constructed. There are no parking lots and extensions of the carriageway so the motor vehicles park and stop on the carriageways. According to Article 21 of the Road Traffic Act the motor vehicles shall pass through the village with a velocity of up to 50 km/h. The velocity limit prolongs the time needed to pass through the village and increases the amount of gases released by the motors and the hazardous emissions, the motors are accelerated and more hazardous emissions are emitted; the noise level is very high, some liquids are spilled out; the traffic throughput is limited and the danger of traffic accidents is extremely high as well.

Project Option "Green Colour Scenario"

This scenario is the one originally accepted as final option by the feasibility studies of the Maritsa Motorway developed in 1995; this choice was made out of six studied alignment options entitled as follows: "Green Colour", "Green Dotted", "Yellow", "Yellow dotted", "Blue", and "Blue dotted". The beginning of the "Green Colour Scenario" is envisaged to be at km 114+000 as an extension of the motorway. The road will by-pass Kapitan Andreevo Village after which the road will join BCP Kapitan Andreevo at km 117+099.91. The following construction aspects are envisaged: Trumpet junction at 114+000, two flyovers over the rural roads, bridge over the Kalamitza river, flyover over the railway at km 116+320, reconstruction of the railway from km 316+660 to km 317+700 where there is danger of floods.

Project Option - Access road scenario "Close TIR connections and low vertical alignment elevation", including separations of the flow of cars and buses from the flow of trucks.

In 2007, the feasibility studies for connection of Maritsa Motorway with the BCP examined four possible scenarios for the route from km 114+000 to km 117+126.31. These scenarious differ in low versus high road vertical alignment and close versus distant "TIR connections" (detached route for the trucks). On the grounds of the comparative analysis the expert team recommended the scenario of access road with "Close TIR-connections and low vertical alignment elevation" as being the best suitable from technical, economical and environmental matters.

The route passes to the North-Northeast of the Kapitan Andreevo Village at a distance of 85 m from the nearest house. The access road is designed with overall motorway-type dimensions split into two separate routes after km 116+360 – one for cars and buses and another one for trucks. Both routes joint directly Kapitan Andreevo BCP at one and the same level. The cargo vehicles join the Kapitan Andreevo BCP to the North of the car traffic and the outgoing cargo traffic connection branches-off and joins the BCP by an underpass to the motorway. There are two lanes envisaged for the traffic in both directions, both for cars and cargo vehicles.

The route passes over the existing railway through a flyover at km 116+336. A trumpet junction is designed at km 114+050, as well as a bridge over the Kalamitza river and two flyovers over the rural roads.

The selected scenario "Close TIR-connections and low vertical alignment elevation" has a lower construction cost compared to the other three options proposed by the feasibility studies from 2007. This scenario does not envisage an emergency road lane and the land to be acquired is less compared to the other scenarios.

Comparison and selection of scenarios

Before the Full Environmental Assessment, three alternative scenarios were outlined for comparison on the grounds of a set of criteria for selection of the best scenario. These included: (i) Project Option "Green Colour Scenario"; (ii) Project option "Close TIR-connections and low vertical alignment elevation" and (iii) Basic scenario (no project) "Existing road I – 8".

The "Green Colour Scenario", developed for the design project in 1995 follows the route passing to the North of Kapitan Andreevo Village. The disadvantages of the "Green Colour Scenario", include the following aspects:

- it does not solve the problem with the intersection of the incoming and outcoming motor vehicles at Kapitan Andreevo BC;

- it does not provide direct access to Kapitan Andreevo BCP;

- it requires a reconstruction of 1 km of the railway line;

- it does not envisage a possibility of potential enlargement of the graveyard;

- it does not provide solution of the overflow of the BCP access road roadbed during the flood period of Maritsa River (this is associated with its contamination by oil products).

Taking into account the above mentioned disadvantages the "Green Colour Scenario", was considered non-suitable for implementation under the specific conditions of the Detailed Spatial Development Plan of Kapitan Andreevo BCP developed in 2004. Consequently, the Full Environmental Assessment does not analyze this scenario regarding the impact on the environmental components and factors.

In consideration of the above circumstances, the FEA is elaborated for two alternative scenarios: the Basic scenario (No project) „Existing road I - 8" and the Scenario „Close TIR connections, low vertical alignment elevation".

This alternatives analysis shows explicitely the advantages of the Scenario „Close TIR connections, low road vertical alignment" in comparison with the Basic scenario (no project) – from economical and environmental point of view:

- Motor vehicles traffic is moved out of the settlement;
- Creates direct access with a highway overall size to Kapitan Andreevo BCP without passing through Kapitan Andreevo village;
- Cars and buses traffic is separated from heavy freight traffic in independent carriageways to accelerate border check and other operations;
- The incoming and outgoing vehicle flows from and to Kapitan Andreevo BCP are not intersected and they have separate lanes in each direction. Thus, collision less, safe and secure traffic is provided;
- Reconstruction of the railway line between Bulgaria and Turkey is not foreseen because the access road overpasses it;
- Graveyard at Kapitan Andreevo village is not affected; this also refers to its future expansion. Residential and other building are also not affected, which will not require resettlement;
- Traveling of people and vehicle traffic from Kapitan Andreevo village to neighboring pastures and fields and vise versa will be unchecked and non-contentious due to rural roads fly-over;

- Accelerating traveling of vehicles from the territory of the Republic of Bulgaria to the Republic of Turkey and vise versa.
- The acoustic environment of the residential areas at I – 8 roadside in Kapitan Andreevo village will be significantly improved. When the analyses were made they showed that the noise levels significantly exceeded the health standards. By constructing of the direct route these values drops significantly because the MW passes in earthworks;
- When the analyses were made they showed that the releases of harmful substances in the air along I – 8 road through Kapitan Andreevo village exceeded the maximum allowable rates. This was proved by the increased rate of respiratory and pulmonary diseases. By moving the MW route the likelihood of exceeding the standard ground concentration of nitrogen oxide in the residential areas of the village is excluded;
- Flooding of the access road in case of high water of the Maritsa river will be impossible

3. Assessment of the environmental conditions for project scenarios

3.1. Existing road I – 8 (Baseline conditions; No project Option)

3.1.1. Air Quality

The composition of the traffic passing through Kapitan Andreevo Village is the key factor of the air pollution. Significant exceeding of the maximal permissible concentrations of nitrogen oxides is observed. The pollution by non-methane volatile organic compounds, carbon oxide and dust is significant but it does not exceed the regulatory limits.

The maximal average annual ground concentrations of the nitrogen oxides exceed by a factor of 1.72 the normative requirements and the maximal one-time concentrations are higher by a factor of 2. The nitrogen oxides are harmful for human health. The worsening of the ambient air quality by the traffic necessitates the re-routing of the traffic out of the residential area.

3.1.2. Surface water

The existing road I – 8 passes very near and at low altitude to the river of Maritsa. The surface waters flow mainly into the Kalamitza river and its tributaries (gullies). The hydrological network is relatively poor. The small rivers and gullies dry out for 70-100 days during the period of low water level. The pollutions in the Kalamitza river caused by liquids from the I – 8 road are not significant. In case of high waters the Maritsa river floods road I – 8, which interrupts the trade and transport flows.

3.1.3. Underground water

The use of the existing road I-8 for access to the BCP does not impact the underground waters.

3.1.4. Drainage

The drainage of road I – 8 is organized in a traditional way and in compliance with the normative requirements to road construction. The water drainage facilities are in good condition but some of them need to be cleaned from waste and debris. For the natural watercourses – rivers, gullies and overflow banks - some bridges and water drains are constructed.

3.1.5. Water supply and sanitation

The potable water to the village is supplied by a water supply conduit from the town of Svilengrad and the water for household needs and irrigation is supplied by own water source and a local dam situated 8 km to the North of the village. There is no sewage system constructed. The irrigation system from the dam near the village is destroyed.

3.1.6. Soils

Road I – 8 is one of the roads with the most intensive traffic in the country, which impacts the condition of the adjacent soils. The surveys regarding the soil pollution with aerosols emitted by the motor traffic containing heavy metals were performed in 1993 for the purposes of preparation of the Environmental Study and the Environmental Impact Assessment of the Maritsa Motorway from km 2+900 to km 117+080. In 2008 samples were taken and an analysis of the soil samples was performed at a point near the Kapitan Andreevo Village - km 114+550. The results show that the content of heavy metals at the investigated points is below the Permissible Threshold Concentrations established by the Ordinance on Permissible Content of the Hazardous Substances in the Soil.

There is no contamination of the roadbed adjacent soils with aerosols generated by the vehicle traffic, containing heavy metals.

There is however visible pollution of the soils with domestic waste along road I – 8. The pollution is considerable in the parking space areas. Also, the areas next to the road along the village are polluted by household waste thrown by the drivers of vehicles.

3.1.7 Flora

Road I – 8, as a linear intensive load section, is not considered a serious source of pollution for flora.

The existing road passes through a settlement and an insignificant part of it includes artificial phitocenoses (agrocenoses) created by man. It has been found out, that the areas on both sides of the road to a distance of 150 m could be the most significantly polluted with heavy metals. The concentrations of heavy metals are highest in the strip up to 50-60 m from the carriageway, but the registrated concentrations in the roadbed adjacent soils are within the allowable limits. The insignificant heavy metal concentrations do not induce vegetation quality or modifications, as well as there is no overall pollution of the ambient air caused by long distance transfer.

The pollution caused by the use of salt and other de-icing materials during the winter maintenance of the roadway is also a source of pollution of the soil, respectively of the vegetation in the lands adjacent to road I-8. The monitoring shows that these substances cannot cause significant changes in the quality of the flora, in view of the limited quantities used, as well as thanks to the soft transient Mediterranean climate typical for this region.

3.1.8. Fauna

Depending on the biology of the species, the habitats preferred by them, food facilities and available data, the presence of the following animal species has been established: **Amphibia** – the European green toad (Bufo viridis); the European Fire-bellied Toad (Bombina bombina); the Common Tree Frog (Hyla arborea), **Reptilia -** the Hermann's tortoise (Testudo hermanni); the Spur-thighed tortoise (Testudo gracea); the Green lizard (Lacerta viridis); the Meadow lizard (Lacerta agilis); the Wall lizard (Podarcis taurica); the Caspian whip snake (Coluber caspius); the Aesculapian snake (Elaphe longisima); the Viper (Vipera ammodites), **Birds (Aves) –** the Partridge (Pedrix pedrix); the Quail (Coturnix coturnix); the Field-lark (Alauda arvensis), **Mammals (Mammalia):** the Hedgehog (Erinaceus concolor); the Mole (Talpa europaea); the Common vole (Microtus arvalis); the House mouse (Mus domesticus); the Field mouse (Apodemus mystacinus); the Lesser mole rat (Nannospalax leucodon); the Badger (Meles meles); the European polecat (Mustela putorius); the Weasel (Mustela nivalis). There is no disturbance of habitats of valuable species of conservation significance.

The mortality from collision of animal species with motor cars on road I-8 is a documented fact. With respect to the birds, the most vulnerable are the songbirds and the young birds. The songbirds often hunt insects on the roadway or low above it. The worldwide practice do not provide yet a solution of this problem.

3.1.9. Noise and vibrations

The main source of noise in the region of I – 8 is the traffic of vehicles passing through the Kapitan Andreevo Village via its central street. The impact of the noise is highest on the adjacent territories of up to 5 m from the axis of the traffic lane. In front of a given residential estate, the following equivalent noise levels have been measured: in the day time - 71.4 dBA and in the night time – 72.3 dBA.

The limit values of the noise level for the residential territories and territory planning zones are regulated and they are as follows: during the day – 60 dBA, during the evening – 55 dBA, during the night – 50 dBA.

The recorded noise levels in Kapitan Andreevo Village considerably exceed the hygiene limits: during the day the exceeding is by 11.4 dBA, and during the night it is by 17.3 dBA.

According to the information provided by the inhabitants of the houses, which are adjacent to the existing road, there are cracked and crannied walls observed. It can be assumed that this is a result of the traffic of heavy-freight vehicles

3.1.10. Waste

On road I – 8 there is no system for collection and processing of the waste. The municipality of Svilengrad periodically collects the household waste generated by the population of Kapitan Andreevo Village and the personnel of Kapitan Andreevo BPC. It should be mentioned that there is waste on the road and in the adjacent areas including in the village.

3.1.11. Health and sanitary aspects

The main risk factors for the population living next to the existing road in the village are noise, nitrogen oxides and dust. Currently, these factors exist when using road I-8 as a connection of Maritsa Motorway with Kapitan Andreevo BCP.

3.2. Scenario with close TIR-connections and low vertical alignment elevation

3.2.1. Air Quality

In 2020 as a result of the increase of the motor traffic an increase of the hazardous emissions is forecasted. For some emissions there are calculated concentrations exceeding the limits at a distance of up to 50 m from the end of the carriageway. The forecasted amounts of the hazardous emissions are as follows: nitrogen oxides calculated as NO_2 – 0.14 mg/m^3, given a permissible limit of 0.04 mg/m^3, volatile organic compounds – 20.06 mg/m^3, methane – 0.39 mg/m^3, carbon oxide – 252.134 mg/m^3, and particles (soot) – 1.77 mg/m^3.

The construction of scenario "Close TIR connections with low road alignment level" guarantees protection of the human health. The ground concentrations of hazardous substances at the closest residential territory of Kapitan Andreevo Village are below the regulated limits.

3.2.2. Surface water

From km 113+480 the route of the 3.4-km access road goes up to a fenced slope of 63 m altitude and is located at a distance of 1.4 km from the river bed. At km 117+126.31 the route goes down to the elevation in front of the Kapitan Andreevo BCP of 44.74 m altitude. In this section the distance to the riverbed is 0.45 km. In the section of the Motorway there are no affected water intake areas and installations for potable water supply.

The design solution envisages a bridge over the Kalamitza river at km 115+725. During the construction in this section of the river its natural bed will not be affected. The riverbed will be embraced by a bridge, whose abutment will lean outside the riverbed and their construction will not cause any negative changes to the outflow rates and surface water quality.

The construction of the 3.4 km access road will not worsen the condition of the surface waters, because the probability for direct contamination by aerosols of the river waters is minimal.

3.2.3. Underground water

The following underground water bodies belong to the Svilengrad region :

Underground Water Body (UWB) denomination	UWB code	UWB area, km^2
Neogene interstitial water - Svilengrad-Stambolovo	BG3G000000N011	712
Quaternary interstitial water - Svilengrad-Stambolovo	BG3G000000Q048	145

The following table summarizes only the pollutant concentrations that exceed the quality standard (QS) (the data are extracted from the Trimestrial Bulletin of the EEA for the period October – December 2007).

UWB code	**UWB denomination**	**Point code**	**Settlement**	**Date**	**Times over the permissible threshold**
Phosphates					
BG3G000000Q048	Quaternary interstitial water - Svilengrad-Stambolovo	8248	Momkovo	27.11.2007	1.72
BG3G000000Q048	Quaternary interstitial water - Svilengrad-Stambolovo	8248	Momkovo	05.12.2007	1.36

In the area of Kapitan Andreevo Village there are no available suitable monitoring points for the survey of the underground waters quality and quantity.

The construction of the access road to Kapitan Andreevo BCP according the scenario "Close TIR-connections and low vertical alignment elevation" do not affect any underground water source. The access road construction and operation will not impact the underground water.

3.2.4. Drainage

The road drain system at the embankment level is resolved by setting-up a trench system, faced with precast concrete elements. In the ditch, under the trench, a draining system will be installed, composed of pipes over concrete pads. In view of better maintenance of the drains and in cases of bends in the longitudinal slope of the system inspection pits are envisaged at 60 m intervals.

Surface waters from the rainfalls in the reach of the roadbed are directed and collected in the protective ditches.

In cases of horizontal bends with one-sided transverse slope envisaged is the design of collector systems in the dividing strip in order to evacuate the roadway run-off water. They consist of storm water collector pits and inspection pits situated at a distance calculated in dependence of the water flow rate, which will be absorbed. A drain system discharging in the inspection pits of the collecting system is envisaged to be built above the collection pipes.

The drainage of the underground water and the road side water is resolved by means of perforated drainage pipes under the road.

Taking into account this design solution for the drainage favorable impact should be expected on the regime of the surface watercourses, adjacent to the motorway section.

3.2.5. Water supply and sewage

There are no changes of the water supply of Kapitan Andreevo Village caused by the construction and operation of the section from km 114+000 up to km 117+126.31. There is no need to relocate the water supply pipelines, sewage and irrigation channels because the new route passes at higher elevations than the existing network and will not affect it.

3.2.6. Soils

The main part of the access road will pass via a new route on unimpaired areas such as agricultural lands of fifth, sixth and seventh category. After the implementation of the project the expropriated lands shall be classified as type of "soils that have lost their original profile and are completely or partially destroyed, where the impairment can be of permanent or temporary nature as a result of mechanical excavation of the soil". In the case of construction of the motorway section, these disturbances will have permanent nature.

It is possible to limit the diffusion of the pollutants on both sides of the road by planting (grassing) suitable vegetation. The pollution caused by the use of salt and other de-icing materials for winter maintenance of the roadway cannot cause noticeable changes in the quality of the soils, except a temporary change in pH values, due to relatively limited and seasonaly amounts applied. Localized but significant pollution of the soils can arise in the process of operation of the motorway as a result of accidental spills of oil, benzene or other hazardous substances.

Pollution of soils in the project area is not expected during the construction of the access roadgiven the implementation of a waste management system. The separated collection of the accumulated waste and its temporary storage on sites with foundations made of compacted insulation material will not have any negative impact on the soils. The timely collection of the

waste thrown out along the road will facilitate the preservation of the condition of soils and underground waters.

3.2.7. Flora

In order to have absorbing capacity, the width of these gas absorbing belts should be between 15 and 30 m on both sides of the MW and this entails additional acquisition of considerable areas of cultivated lands. The costs for vegetation planting, irrigation and maintenance are also considerable.

The pollution caused by the use of salt and other de-icing materials for winter maintenance of the carriageway will be limited due to the better conditions for drainage of the carriageways of the access road. There will be no considerable changes of the flora quality caused by the use of salt. The possibility of introduction of new roadside natural habitats has to do with the landscaping and biological consolidation of the roadside areas, scarps and embankments. The project aims to achieve through tree, bush and grass vegetation a harmony between the road and the surrounding landscape as well as a biological consolidation of the road scarps. The vegetative species to be used, have to meet certain climatic conditions, should absorb gases and should be gas resistant. The landscape and grassing design of the section from km 114+000 to km 117+126.31 envisages planting of the following vegetation groups: 10 – 12-year old coniferous and 7 – 8-year old deciduous saplings, as well as bushes and grass mixtures.

The main disturbances of the flora will be sustained during the construction of the section.

Subject of protection in the region are the natural habitats, included in Annex 1 to the Biodiversity Act (BA) and Annex 1 to the Directive 92/43/EEC, namely: 6210 Semi-natural dry grass and bush populations on limestone (Festuco- Brometalia); 6220 Pseudo-steppes with wheat and annual plants of the class Thero-brachypodietea; 62AO East Sub-mediterranean grass populations; 91AA Eastern forests of white oak (Quercus pubescens); 91MO Balkan-Panonian oak and durmast forests; 92AO Riverside galleries of willows and poplars (Salix alba, Populus alba).

Such natural habitats types are not identified in the frame of the access road route, where the construction effects will be well noticed.

The route of the access road passes mostly through artificial phytocenoses (agrocenoses), created by man. The analysis of the FEA, Section "Vegetation world" finds that insignificant areas of natural habitats are affected – only within the reach of the embankment and the bridge structure, passing over the Kalamitza river, which are not belonging to the habitat under protection.

The present vegetation populations, being affected by the motorway construction, refer to biocenoses, created by man or under strong anthropogenic influence, with poor species variety and lack of uniqueness in the populations, with high degree of tolerance and recoverability.

As a whole, the impact on the flora is evaluated as insignificant**,** in view of the circumstances mentioned above.

3.2.8. Fauna

The area of direct destruction of the natural habitats of animal species coincides with the width of the roadway and the easement strip of the motorway. It is caused by the excavation of the surface soil layer and its transformation in asphalt covering or in other type of habitats - strongly influenced by man. The linear structure of the road and its considerable width will

fragment the bio-corridors for some animal species and will bring about to chasing them away to neighbouring territories. The passing of the motorway section through a territory where no infrastructure existed before and the barriers associated with this will bring about follow-up impacts related to the fragmentation of the habitats, worsening of the habitats adjacent to the road, and reduction of the mortality on the road.

In the process of assimilation of the territory for building of the section of 3,4 km of the access road will be disturbed the natural habitats of representatives of the reptiles (**Reptilia) (**the Hermann's tortoise (Testudo hermanni), the Spur-thighed tortoise (Testudo gracea), the Caspian whip snake (Coluber caspius), the Aesculapian snake (Elaphe longisima)); of small mammals **(Mammalia) (**the Hedgehog (Erinaceus concolor), the Weasel (Mustela nivalis)) and birds **(Aves) (**the Partridge (Pedrix pedrix), the Quail (Coturnix coturnix), the Field-lark (Alauda arvensis), nesting on the soil).

Among the species identified in the access road route there are no habitats of fauna species of conservation significance.

During the operation of the road segment insignificant impact is expected affecting only some fauna species consisting in the worsening of the adjacent habitats quality resulting of noise contamination and disturbance in the scope of the territories immediately adjacent to the road route. In this aspect the bird sensitivity in comparison with the other animals is bigger, namely for the Partridge (Pedrix pedrix), the Quail (Coturnix coturnix), the Field-lark (Alauda arvensis), the Tawny Pipit (Anthus campestris), Pied Wagtail (Motacilla alba), Chaffinch (Fringilla coelebs), Short-toed Lark (Calandela brachydactyla). Other neagtive impact is the mortality from collision of animal species with motor cars on the road. The most vulnerable in this respect are slow moving reptiles (terrestrial turtles), small mammals (hedgehogs), as well as the nocturnal rodents.

For the passing of livestock, there are two rural flyovers envisaged at km 114+500 and km 115+725. The project envisages the construction of rectangular and pipe culverts to minimize the fragmentation impact. It is the ususal practice that the wild animals use for movement culverts under the access road. The territory through which the route of the access road will pass has experienced the anthropogenic impact and the fauna representatives located there have been accommodated to such an environment. The route of the access road pass through cultivable lands, which preconditions the presence of few animal species habitats in the area. In the process of the motorway operation no significant qualitative and quantitative changes will occur in the established equilibrium in the region concerning the ornithofauna. The project implementation will not disturb the daily and the seasonal nutritional migrations of the above mentionned animal species.

In compliance with the recommendations, the envisaged landscaping, planting and grassing activities will become premises for establishment of new habitats for some of the commented animal species.

3.2.9. Noise and vibrations

The noise sources during the construction of the access road will be: the different construction machines and service transportation for supply of materials and transportation of the wastes: dredging shovel, excavator, bulldozer, steam-roller, concrete mixture, compressor, cargo vehicles, asphalt spreading machine and other machines with noise levels within the limits of 80 to 105 dBA. Significant equivalent noise level is expected at the working sites (about and over 90 dBA), which will compromise the noise pattern in the relevant road segment. The residential areas of Kapitan Andreevo Village adjacent to the future roadbed will be exposed to impacts of differing scales depending on their distance from the road. Exceeding of the day and evening noise limit (55 dBA, 50 dBA) by respectively 15 dBA and 20 dBA can

be expected in the nearest village areas (85 m of distance). The noise impact is an adverse impact but it is limited to the daytime part of the 24-hour period. During the construction in the section close to the village, the construction activities need to be executed during the day time. During the earthworks and the construction and installation works, the vibrations will be an important factor at play for the occupational environment during the execution of some specific types of work. The local vibrations are an important factor for the staff of equipment operators.

A major noise source in the section during the operation of the access road will be the traffic that will pass through it. The access road along the village will pass through an embankment or an excavation. The dimension of the excavations will be with a maximum depth of 3 to 5 meters and these areas do not generate traffic noise and do not impact the environment and the village area thanks to the sufficient shielding effect of the excavation. Noise sources in the residential area of the village are the unscreened route sections lying on an embankment whos elevation relative to surrounding terrain ranges from 3 to 14.50 m. Taking into account the distance and the ground surface impact, the expected noise levels suffered by the residential territories close to these sections will be below 55 dBA for the daytime period and below 45 dBA for the nighttime period and will meet the sanitary norm. The planned grassing of the slopes (embankment and excavation slopes) with the appropriate bush and tree species will reduce additionally the traffic noise propagation in the village direction.

3.2.10. Waste

During the construction of the access road various kinds of waste will be generated by the clearance and preparation of construction site, excavation works, construction of road body, places for storage of construction materials, temporary assembly sites, road junctions, places for parking and unplanned repair works of transport vehicles, road construction and installation equipment, including technical servicing of the equipment, as well as places for temporary residential camps of workers. In this regard, a system is recommended for collection of the various types of waste and for monitoring of the pollutions by waste from the construction sites and maintenance facilities, as well as at the places for living and recreation of the construction staff. Separate collection of construction, non-hazardous and hazardous waste is envisaged. The generated waste will be transported to the main facility of the Construction Company, using vehicles which are in good technical condition. Temporary disposal areas will be arranged for proper storage of the excavated humus layer, excavated land masses, suitable materials for backfills and some unsuitable materials as well. All materials that are not used during the construction of the access road will be transported for disposal to the landfill for construction waste. The temporary disposal areas will be cleaned up and reclaimed.

The solid waste generated during the operation of the road will be collected by the organization maintaining the area adjacent to the road (the Regional Department of NRIA) and it will be submitted for further decontamination. Various types of hazardous liquid waste generated in cases of traffic problems or accidents will be spilled out on the carriageway and road adjacent areas. The spilled waste will be collected using adsorbents. The agglomerates of dangerous waste and adsorbents thus obtained will be collected and transported to the licensed landfills for hazardous waste and will be decontaminated there.

The impact of the waste generated during the operation of 3.4 km access road to Kapitan Andreevo BCP on the environmental components can be classified as insignificant, constant, retrievable and with small territorial range as well.

3.2.11. Landscape

The construction and operation of the section of 3.4 km access road will have an adverse impact on the landscape but with acceptable changes of its typology and area structures and vista. The predominant type of the landscape will not be changed; essential transformations

of the internal structure and functioning of the landscapes which could provoke additional degradation of the environmental balance are not expected. Only the local landscape will be transformed from an agrarian landscape into the anthropogenic one with the associated transport subsystem.

3.2.12. Health and sanitary aspects

The main health goal during the implementation of the access road is to provide safety both for the traffic on the road section and for better and safe living conditions of the population residing near the road with proven high traffic intensity. The main risk factors for the health of the workers over the construction period are: dust, toxic hazards, noise, common and local vibrations, unfavourable microclimate, physical load, etc. Risk factors for the health of the population during construction and operation of the motorway are mainly the polluted air and exceeded noise levels. As a whole, however, the future hazardous noise and dust-gas effects of the access road will be considerably less compared to the current situation. The new parameters of the route, in comparison with road I-8, will contribute to the more smooth and effective movement of vehicles that will reduce in practice the emission of noise, dust and toxic and chemical emissions. This will have a favourable effect on the environment and on the sanitary conditions in the region of Kapitan Andreevo Village.

Sanitary expert analysis proved, that the development proposal is not expected to cause a negative change of the health status of the residents living near the envisaged road route and that the health risk in the short-term and the long-term aspect can be forecasted as very low.

3.2.13. Cultural heritage

As a result from the performed investigations and studies four archaeological findings were recorded in the region (but not in the project area): a prehistoric, antique and medieval settlements in Kush tepe country; Sacrificial pits dating from the Iron Age and the Antiquity in Kissiova mogila country; Settlement dating from the Early Iron Age in Kichuk Chair country and Prehistoric settlement in Hauza country.

The access road operation will not directly impact any cultural monuments.

4. Environmental impact mitigation measures

4.1. Measures during the constriction works

Air Quality

The measures to be taken to mitigate or reduce the adverse impact on the ambient air are: operation of road-building machines and vehicles with defective engines shall not be allowed; idle running of the engines of construction machinery and vehicles shall not be allowed; overloading of trucks with bulk materials shall not be allowed; sites for temporary storage of bulk materials and construction waste in dry and windy weather shall be moistened; equipment for preparation and laying of asphalt mixture should not be warmed up after completion of the respective works; upon completion of construction works at a specific section, the areas dedicated to temporary storage of inert materials and construction waste shall be duly cleaned.

Surface water

The measures to be taken to mitigate or reduce the adverse impact on the surface water are related to interdiction of any disposal of construction waste materials in the Kalamitza river bed. The construction and transport equipment used shall be in good parameters working stage in order to prevent the pollution of the surface waters by oil products.

Soil

The measures to be taken to mitigate or reduce the adverse impact on the soil include: proper storage of excavated humus layer from the affected high category land that will be used in the landscaping of the roadside areas; organization of an information campaign for the land owners to keep the strip of 100m on both sides of the road free of agricultural crops.

Flora

The measures to be taken to mitigate or reduce the adverse impact on the flora are: maximum compatibility of the tree and bush varieties with the environment conditions and the existing local vegetation shall be pursued for the arrangement of the roadside areas; largest contribution of Quercus specie in the broad-leaved tree variety shall be envisaged; the arrangement of roadside areas shall exclude invasive bush species.

Fauna

The measure to be taken to mitigate or reduce the adverse impact on the fauna is the construction of protective enclosures along the access road to BCP Kapitan Andreevo against access of the animals to the roadbed.

Waste

The measures to be taken to mitigate or reduce the adverse impact of waste generation are: collection of the hazardous waste in closed vessels; temporary waste storage on the dedicated sites whose bottom layer is sealed with compressed insulation materials; preliminary planning and lying down of the borrowed excavations, storage areas for additional materials, disposal facilities for humus and for unsuitable materials only in the road easement zone in order to avoid impact on sensitive areas.

Noise

The measures to be taken to mitigate or reduce the adverse impact of noise generation are organization and management measures, namely: in order to reduce the noise impact on the residential area, the construction activities in the road sections close to the settlement area shall be well organized and conducted mainly during the daytime period; idle running of

construction machines shall be avoided; the heavy vehicles participating in the construction process shall observe preliminary delineated routes and shall observe strictly the allowable traffic speed when crossing settlements.

Health protection

The main requirements for the occupational safety and health at working places shall be observed: during operation using drilling equipment antivibration gloves shall be used; crane, excavator and bulldozer operators shall be provided with ear protectors; in the hot season the excavators and bulldozers cabins shall be provided with ventilators and the operators shall wear suitable working clothes for the season.

For the improvement of the living conditions in Kapitan Andreevo Village, proper work organization shall be created – strictly delineated route for the construction vehicles outside residential area, avoiding idle running of the equipment engines; implementation of the construction works only in daytime period, between 07.00 and 19.00 h.

Cultural heritage

As a result from the previously performed investigations and studies four archaeological findings were recorded in the region (however, these are not part of the project area): a prehistoric, antique and medieval settlements in Kush tepe country; Sacrificial pits dating from the Iron Age and the Antiquity in Kissiova mogila country; Settlement dating from the Early Iron Age in Kichuk Chair country and Prehistoric settlement in Hauza country.

Before the start of the construction phase of implementation of the access road, connecting Maritsa Motorway to Kapitan Andreevo BCP, archaeological prospecting investigations shall be performed for the four known archaeological findings in order to clarify the extent of affecting each of them.

4.2. Measures during operation

Air Quality

The measures to be taken to mitigate or reduce the adverse impact on the ambient air are: timely cleaning of sections contaminated by bulk material or spilling of other harmful substances; transportation of bulk materials with adequate coveror in closed-type platforms; the overloading of the transport equipment by bulk and powdered materials shall be prohibited.

Soils

The measures to be taken to mitigate or reduce the adverse impact on the soil are as follows: cleaning shall be made of the faced trench system, providing the drainage of the contaminated run-off water; organization shall be established by municipality offices for cleaning of the roadside area and the temporary parking areas from household and other waste and penalties for the offenders shall be introduced as well.

Waste

The emergency decontamination from different liquid or solid hazardous waste in emergency situations or road traffic accidents shall be performed only by specialised organizations and the waste shall be handed over for destruction to licensed legal persons depending on the type of waste concerned.

Noise

Noise impact reduction in the residential area shall be ensured by permanent maintenance of the road pavement. Noise level measurement in front of the roadside village buildings shall be performed and comparison with the forecasted levels shall be made. In case of exceeding of the forecasted levels and of the sanitary limits, anti-noise measures shall be planned.

Health protection

For the improvement of the living conditions of Kapitan Andreevo Village population, it is required to perform: regular maintenance of the cleanness and good working condition of the road aiming to reduce dust concentrations, including particulate matter in the ambient air; forestation by a dust- and aerosol–detaining green belt of suitable tree species around the access road from the site of Kapitan Andreevo Village.

In conclusion, in the Full Environmental Assessment and the respective Socioeconomic Assessment of the development project "Construction of a 3.4 km access road to Kapitan Andreevo Border Crossing Point (BCP), part of Maritsa Motorway" a comparison has been made between the two main alternatives for the traffic route – using I-8 road which crosses Kapitan Andreevo Village and using the access road which bypasses the village. On the grounds of the analyses, hypotheses, assessments, forecasts and conclusions made, it is proposed to adopt for implementation the construction of the "3.4 km access road to Kapitan Andreevo Border Crossing Point (BCP)" following the bypassing route and according to the scenario „Close TIR-connections and low vertical alignment elevation" and this proposition is justified by the following advantages:

(i) It provides direct access with overall highway-type dimensions to Kapitan Andreevo BCP by bypassing the Kapitan Andreevo Village, (ii) it provides splitting of the cars and buses traffic flow from the trucks traffic flow by independent lanes aimed at facilitation of the throughput capacity of the BCP. It provides safer and less collision-prone conditions for the traffic from and to Kapitan Andreevo BCP. It increases the security and safety for the population and the road traffic participants and is a predisposing factor for a sharp reduction in

the number of traffic accidents. It does not require reconstruction of the railway line "Bulgaria-Turkey", which would otherwise absorb considerable funding and will cause possible stoppage of the train traffic for this destination. It doesn't require demolition of residential buildings and resettlement of local people. It avoids flooding of the access road to Kapitan Andreevo BCP during Maritsa River's flood period and in this way ensures the uninterrupted road traffic between Bulgaria and Turkey. It reduces significantly the current air pollution and high noise levels in the settlement. It eliminates the risk of accidents in the village area, caused by the traffic from and to Kapitan Andreevo BCP. It is a predisposing factor for higher employment for the population and for development of the transport, trade and tourism in the region.

The construction and operation of the scenario „Close TIR-connections and low vertical alignment elevation" is recommended as environmentally friendly. Mitigation measures regarding the anticipated impact on the environment were specified. An Environment Management Plan was developed in detail. The appropriate monitoring measures aimed at avoiding possible contamination of the environment were defined.

5. Environmental monitoring plan during construction and during operation

The environmental monitoring plan is an important element of the environmental management. The objectives of the environmental monitoring are: to check the impacts forecasted in the Environmental Assessment (EA); to determine the actual extent of the impact; as well as to identify the unexpected impact.

The National Road Infrastructure Agency (NRIA) shall be the responsible entity for the monitoring implementation and is the organization which shall elaborate a plan for carrying out the monitoring surveys in compliance with the proposed monitoring actions in the Environmental Assessment Report.

The Plan shall be submitted for approval to the respective Regional Inspectorate of Environment and Water (RIoEW) and to the Executive Environmental Agency (EEA) at the construction start up.

NRIA shall assign to an authorized laboratory the implementation of the appropriate monitoring surveys during the construction and operation of the access road

The results from the monitoring studies shall be summarized by NRIA and the Agency shall prepare an annual report which shall be submitted to the competent authorities (RIoEW and EEA). In the cases when discrepancies are found as compared to the regulatory provisions on environmental protection, NRIA shall develop additional mitigation measures against unexpected impact in excess of the permissible limits (according the routine procedure).

The competent authorities (RIoEW and EEA) shall approve the results from the performed monitoring surveys and the proposed additional measures.

The approved Monitoring Report shall be submitted to the supreme control authority – the Ministry of Environment and Waters (MoEW) and to the Council of Ministers in the structure of which NRIA is included.

The TTFSE Project managing entity shall submit the Monitoring Report to the World Bank upon request.

6. Conducted consultations and public hearing

The public participation and support for the project is based on the timely awareness of institutions and organizations, the population and the various social groups, concerning the Project objectives and its impact on the social status and the environmental parameters. In the process of the Full Environmental Assessment some consultations were conducted with the institutions, public groups and NGOs interested in the project.

The first set of consultation working meetings were held on 9 January and 10 January 2008 on the territory of Svilengrad Municipality, Kapitan Andreevo Mayor Administration and Kapitan Andreevo BCP. NGO representative approved the project promotion initiative. The implementation of the intended project will solve a considerable social problem, such as re-routing of the traffic outside the populated area, and will contribute to the improvement of the environmental situation on the territory of the village. As a result of the consultations held have been identified some issues as follows: assessment of the design solution from the point of view of probability for avoidance of flooding of the road by the river of Maritsa, necessity of measures for provision of flow conductivity of the rivers (Kalamitza river and Maritsa river) and riverbanks consolidation, inclusion into the design of a control system of disturbances related to the road pollution and traffic safety, as well as an evaluation of the landscape development design.

A meeting has been organized with the mayor of Kapitan Andreevo Village and the issue of the project purposes has been discussed. The Mayor has expressed the general opinion of the affected owners of lands foreseen to be used for the project implementation, that there are no objections regarding the project implementation. This is justified mainly by the circumstances that, considering the current status of the lands for collective management, the rate of return per decare is very low. In the region of the concerned land territory the most of the lands are deserted and there is a minimum number of residents involved in agricultural activities.

Also, a meeting has been held with the customs administration at the BCP. At the meeting the most discussed issue was the one related to the traffic and the access regime at the BCP. The solution with traffic separation in two flows shall increase the throughput.

The second set of meetings was held on 24 January 2008 in the Municipality of Svilengrad and Kapitan Andreevo Village with the Head of the Ecology Service under the Municipality, as well as with the village inhabitants. The design of the road route affecting the estates within the land territory of Kapitan Andreevo Village was presented.

In 2007 the local people were informed about the project. The route has been designed to pass by the graveyard. After that they learned that the design was changed due to flooding of the road near the railway. However, the people did not have any specific information and they did not know exactly where the road would pass.

Local residents expressed an opinion that the project is very good and will solve a lot of environmental problems such as air pollution, intensive traffic and high traffic velocities. Besides, the noise problems and the traffic accident problems in the village will be solved as well. In view of the lands occupated by the road route, the general opinion of the attendees was that the incomes from the lands are minimal, because they are mainly leased. Only a small number of people work their lands and the lands are their only income source. The main crops grown there are wheat, sunflower, corn and tobacco. Also, a few estates with perennial plants such as vineyards are affected.

In conclusion of the meeting the attendees expressed the shared opinion of the population that the access road of 3.4 km needs to be constructed, passing North to the village.

The existing problems will be solved despite the discomfort associated with the free access to their lands and the free movement of people and animals. It is well understood by all attendees that the construction of the motorway and its extension by an access road to the BCP at the northern part of the village will solve the health-related problems of the people from Kapitan Andreevo Village, as well as their environmental problems.

The public hearing of the Full Environmental Assessment was held on 28 March 2008 at 10.00 o'clock in the Kapitan Andreevo Village. In addition to the residents of Kapitan Andreevo Village the public discussion was attended by a representative of an NGO (Scientific Technical Organisations – Svilengrad), representatives of Bulgarian Telecommunication Company, Border Police, Svilengrad Regional Police Office, District Police Directorate of Haskovo, Svilengrad Regional Police Office.

The consultant has acquainted the attendees with the result of the environmental assessment, has informed the stakeholders of the above-the-limit emissions of nitrogen oxides emitted by the traffic passing through the village, as well as of the above-the-limit noise levels. The attendees were interested in the project implementation term. The village inhabitants supported the project and mentionned some tragic traffic accidents and indicated the adverse effect of the daily noise and hazardous emissions discharged by the motors of the vehicles passing through the village. The project implementation will solve some considerable environmental problems associated with the pollution of the atmospheric air and high noise levels, as well as some safety-related problems

The attendees at the public discussion accepted the report and expressed their support to the intention to re-route the traffic out of the village.