

CATEGORY A PROJECT  
SKOPJE WASTEWATER TREATMENT PLANT  
FYR MACEDONIA

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ENVIRONMENTAL AND SOCIAL ACTION PLAN  
FINAL

1 November 2018

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## Abbreviations

AESR	Annual Environmental and Social Report
CESMP	Construction Environmental and Social Management Plan
CSOP	Construction Site Organisation Plan
CWMP	Construction Waste Management Plan
E&S	Environmental and Social
EBRD	European Bank for Reconstruction and Development
EIB	European Investment Bank
ESAP	Environmental and Social Action Plan
ESIA	Environmental and Social Impact Assessment
ESMS	Environmental and Social Management System
EU	European Union
FYR	Former Yugoslavian Republic
MoEPP	Ministry of Environment and Physical Planning
MoTC	Ministry of Transport and Communication
OESMP	Operational Environmental and Social Management Plan
OHS	Occupational Health and Safety
PR	Performance Requirements
SEP	Stakeholder Engagement Plan
WWTP	Wastewater treatment plant

## 1 INTRODUCTION

The European Bank for Reconstruction and Development (EBRD) and the European Investment Bank (EIB) (the Lenders) are considering providing finance to FYR Macedonia to fund the construction of a new wastewater treatment plant (WWTP) (the Project) in the City of Skopje (the City).

This Environmental and Social Action Plan (“ESAP”) includes key actions which the Public Enterprise (PE) Vodovod i Kanalizacija Skopje (the Public Enterprise or PE) should undertake during the implementation of the Project to ensure that EBRD’s Performance Requirements (“PRs”), EIB Environmental and Social Practices and Standards, and national and EU legislation are met. ESAP has been developed taking into account the findings of the environmental and social (“E&S”) due diligence carried out in July and August 2018. **The ESAP will constitute an integral part of the financing agreement with the Lenders.**

The PE **will be responsible for ensuring that third parties or contractors working on project sites meet the requirements of the ESAP** by adopting and implementing an appropriate contractor management system. This is expected to be accomplished by inclusion of appropriate requirements and conditions in public procurement documents, contracts and subcontracts, and through direct oversight and supervision by the PE. The Tender Documents and construction contract will meet EIB procurement requirements.

**The PE is required to establish and maintain an E&S Management System (ESMS)** appropriate to the nature and scale of the Project and commensurate with the level of its E&S impacts and issues in line with good international practice. The PE will also need to designate specific personnel, including management representative(s), with clear lines of responsibility and authority to maintain and implement the ESMS, and ensure that employees with direct responsibility for activities relevant to the E&S performance of the Project and the PE’s operations are suitably qualified and trained.

**The PE is also required to establish an overarching E&S Policy** defining the E&S objectives and principles that enable the Project to achieve sound E&S performance. The policy will provide a framework for the E&S assessment and management process consistent with the principles of the PRs.

**The PE will monitor the implementation of actions specified in this ESAP.**

Based on the monitoring results, the PE will identify and reflect any necessary corrective and preventive actions in an amended ESAP (as agreed with the Lenders), implement the agreed corrective and preventive actions, and follow up on these actions to enhance their performance.

**The PE will be required to provide regular reports to the Lenders on the E&S performance of the Project**, including compliance with the PRs and implementation of the ESMS, ESAP and Stakeholder Engagement Plan. The PE will prepare and submit to Lenders Annual Environmental and Social Reports on E&S and health and safety issues, and will be audited or otherwise evaluated by the Lenders throughout the implementation phases of the Project. The Lenders may also periodically verify the monitoring information through site visits by the Lenders’ E&S specialists and/or independent experts. The PE must promptly notify the Lenders of any E&S incident or accident relating to the PE or the Project which has, or is likely to have, a significant adverse effect, or of any changes to the Project’s scope, design or operation that is likely to materially change its E&S impacts and issues.

## Environmental and Social Action Plan

No.	Action	Environmental & Social Risks (Liability/Benefits)	Requirement (Legislative, EBRD PR, Best Practice)	Resources, Investment Needs, Responsibility	Timetable	Target and Evaluation Criteria for Successful Implementation	Status
PR 1	<b>Assessment and Management of Environmental and Social Impacts and Issues</b>						
1.1	<p><b>Permits and approvals:</b></p> <ul style="list-style-type: none"> <li>Submit updated Environmental and Social Impact Assessment (ESIA) to the Ministry of Environment and Physical Planning (MoEPP) for <b>ESIA approval</b> prior to any construction activities</li> <li>Submit a request to MoEPP to obtain a <b>Water Management Consent and Water Permit</b> for the WWTP and siphon prior to any construction activities</li> <li>Submit a request to Ministry of Transport and Communication (MoTC) to obtain the <b>Construction Permit</b> for both the WWTP and the siphon prior to any construction activities</li> <li>Prepare and obtain approval for a <b>Use &amp; Maintenance Project</b> for both the WWTP and siphon (issued by MoTC) and the sewage collector (issued by the City of Skopje), after completion of construction and prior to operation</li> <li>Submit a request to obtain <b>Use Permits</b> for the WWTP and siphon (issued by MoTC) and the collector (issued by the City), prior to operation</li> <li>Ensure compliance with the requirements of above listed permits</li> </ul>	<ul style="list-style-type: none"> <li>Compliance with national requirements</li> </ul>	<ul style="list-style-type: none"> <li>Law on Environment</li> <li>Law on Water</li> <li>Law on Construction</li> </ul>	<p><i>Responsibility:</i> PE for WWTP</p> <p>City of Skopje for collector and siphon</p> <p><i>Resources:</i> In-house resources</p>	In line with the timeframes defined by national requirements	<p>Permits obtained in a timely manner</p> <p>Included in AESR to Lenders</p>	
1.2	<p>Develop and implement an <b>Environmental and Social Management System</b> (ESMS) (to include the already existing operational procedures developed within the ISO 9001 Quality Management (QM) certificate, HACCP Certificate and ISO Certificates for Laboratory and Verification of Measuring Equipment and Laboratory for Sanitary Testing (ISO 17020 and ISO 17025, as well as systems planned to be introduced by the PE such as ISO 14001), covering environmental and social (E&amp;S) requirements including:</p> <ul style="list-style-type: none"> <li>Review of E&amp;S risks and associated operational controls</li> <li>Clearly defined roles, responsibilities and authority for implementation of the ESMS</li> <li>Implementation and monitoring of Construction Site Organisation Plan (CSOP) (including a Construction</li> </ul>	<ul style="list-style-type: none"> <li>Optimisation of environmental management through a formalised system</li> <li>Compliance with EBRD requirements</li> </ul>	<ul style="list-style-type: none"> <li>EBRD PR1 - Environmental and Social Management Systems</li> <li>Best practice</li> </ul>	<p><i>Responsibility:</i> PE Management</p> <p><i>Resources:</i> In-house resources</p>	As soon as possible but prior to start of construction at the latest	<p>ESMS developed and implemented</p> <p>ESP developed</p> <p>Roles and responsibilities for implementation of ESMS defined and clearly communicated to the involved PE employees</p> <p>Included in AESR to Lenders</p>	

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	<p>E&amp;S Management Plan (CESMP)), Operation Environmental and Social Management Plan (OESMP), Stakeholder Engagement Plan (SEP) and this ESAP</p> <p>Develop and implement an overarching <b>E&amp;S Policy</b> (ESP) for the ESMS defining the environmental and social objectives and principles that enable the project to achieve sound environmental and social performance</p>						
1.3	<p><b>Prior to start of WWTP construction</b>, require from its contractors to prepare and implement:</p> <ul style="list-style-type: none"> <li>• <b>Construction Waste Management Plan (CWMP)</b> taking into consideration all relevant EU and national legislation, including the procedure for regular recording of waste quantities generated during the construction phase</li> <li>• <b>Construction Site Organisation Plan (CSOP)</b> including a <b>Construction E&amp;S Management Plan (CESMP)</b> - At a minimum, the CESMP will cover measures for the following aspects: air emissions, noise and vibration management, measures for prevention and control of surface and groundwater pollution during construction, soil management, hazardous material management, biodiversity protection, spill response management, emergency preparedness and response (including fire and explosion management), grievance management for workers and for external stakeholders, security personnel requirements, information disclosure and stakeholder engagement, chance find procedure, community health and safety management, traffic management, workers' health and safety (OHS Plan).</li> </ul>	<ul style="list-style-type: none"> <li>• Compliance with national and EBRD requirements</li> </ul>	<ul style="list-style-type: none"> <li>• Law on Construction</li> <li>• Law on Environment</li> <li>• Law on Water</li> <li>• Law on Protection against Noise</li> <li>• Law on Waste Management</li> <li>• Regulation on Minimum OHS Requirements in Temporary Mobile Sites</li> <li>• EBRD PR1, PR2, PR3, PR4, PR 8, PR 10</li> <li>• Good international practice</li> </ul>	<p><i>Responsibility:</i> PE to supervise, Contractor to implement</p> <p><i>Resources:</i> Contractors' internal resources</p>	Prior to start of construction	<p>Request for development of CWMP and CSOP (with CESMP) incorporated into contracts with Contractor</p> <p>Evidence of CWMP and CSOP (with CESMP) with accompanying plans prior to start of construction</p> <p>Included in AESR to Lenders</p>	
1.4	<p><b>Prior to start of WWTP operation</b>, ensure that an OESMP is in place.</p> <p>At a minimum, the <b>OESMP</b> will cover:</p> <ul style="list-style-type: none"> <li>• mitigation measures for the following aspects: waste management (Waste Management Plan – also including hazardous waste), soil management, air emissions management, noise management, measures for prevention and control of surface and groundwater pollution spill response management, hazardous material management, biodiversity protection, emergency preparedness and response</li> </ul>	<ul style="list-style-type: none"> <li>• Compliance with EBRD and national requirements</li> </ul>	<ul style="list-style-type: none"> <li>• EBRD PR 1, PR 2, PR 3, PR 4, PR 10</li> </ul>	<p><i>Responsibility:</i> PE</p> <p><i>Resources:</i> In-house resources</p>	Prior to start of WWTP operation	<p>Evidence of OESMP</p> <p>Included in AESR to Lenders</p>	

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	(covering management of the malfunctions of the WWTP, fire and explosion), traffic management, security personnel requirements, grievance management for workers and for external stakeholders, information disclosure and stakeholder engagement, and health and safety management <ul style="list-style-type: none"> <li>• <b>Monitoring Plan</b> for the following aspects: air emissions, emissions to water, noise levels, influent quality, effluent quality and sludge analysis</li> </ul>						
1.5	Undertake <b>analysis of sludge</b> during testing period of the WWTP.  Upon receiving data on sludge characteristics, officially address MoEPP to decide if an IPPC permit will be needed for the sludge incineration plant.	<ul style="list-style-type: none"> <li>• Compliance with EU and national requirements</li> </ul>	<ul style="list-style-type: none"> <li>• Law on Environment</li> <li>• Decree for Determination of Activities of Facilities for which an IPPC Permit is Needed</li> <li>• EU IED Directive</li> </ul>	<i>Responsibility:</i> PE  <i>Resources:</i> In-house resources	Prior to operation phase of WWTP	Included in AESR to Lenders	
1.6	Submit <b>annual environmental and social reports</b> to the Lenders, including ESAP implementation progress.	<ul style="list-style-type: none"> <li>• Implementation of the ESAP to mitigate project-related risks and fulfilment of the annual reporting requirements to the Banks</li> </ul>	<ul style="list-style-type: none"> <li>• EBRD 2014 E&amp;S Policy</li> <li>• EIB Statement</li> <li>• Respective E&amp;S covenants in the legal agreement with the Banks</li> </ul>	<i>Responsibility:</i> PE  <i>Resources:</i> In-house resources	Communicate E&S contact name and contact details to Lenders within 3 months from signing  Regular contact with Lenders on ESAP implementation  Annual E&S reporting to the Banks	Internal responsibility assigned for implementation of the ESAP and submission of AESR to Lenders.  Name and contact details communicated to Lenders.  AESR in the Lenders-approved format including ESAP implementation progress submitted to Lenders on time, as required by the legal agreements.	
<b>PR 2</b>	<b>Labour and Working Conditions</b>						
2.1	The PE to develop, adopt and communicate to all of its employees an <b>internal grievance procedure for workplace concerns</b> in accordance with PR 2.	<ul style="list-style-type: none"> <li>• Compliance with EBRD requirements</li> </ul>	<ul style="list-style-type: none"> <li>• EBRD PR2 – Grievance mechanism</li> <li>• EBRD Guidance Note on Grievance Management</li> </ul>	<i>Responsibility:</i> PE  <i>Resources:</i> In-house resources	Prior to start of WWTP operation	Developed, adopted and communicated internal grievance procedure  Included in AESR to Lenders	
2.2	The PE to monitor that Contractor follows the <b>national legislation on labour and OHS, as well as PR 2</b> provision on	<ul style="list-style-type: none"> <li>• Compliance with local legislation</li> </ul>	<ul style="list-style-type: none"> <li>• Labour Law</li> <li>• Law on Safety at</li> </ul>	<i>Responsibility:</i> PE to supervise,	During the entire construction	Provisions on applying the relevant requirements of	

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	<p>grievance mechanism for workplace concerns.</p> <p>The Contractor to ensure that any sub-contractors apply the same standards.</p> <p>The PE to monitor contractor E&amp;S performance including implementation of PR 2 standards by carrying out regular site visits (both planned and unannounced).</p>	requirements and EBRD PR 2	<p>Work</p> <ul style="list-style-type: none"> <li>EBRD PR2 – Non-employee workers</li> </ul>	<p>Contractor to implement</p> <p>Resources: Contractor's resources</p>	phase	<p>Macedonian legislation and PR2 incorporated into contracts with Contractor</p> <p>Periodic checks including site visits and reports on contractors</p> <p>Included in AESR to Lenders</p>	
<b>PR 3</b>	<b>Resource Efficiency and Pollution Prevention and Control</b>						
3.1	<p>Ensure that the Main Design is developed on the basis of requirements of the Urban Wastewater Directive, IED Directive, Landfill Directive, relevant national legislation for WWTP design and construction and BAT techniques for sludge incineration.</p> <p>In the Main Design, analyse the possibility of final treatment of sludge from the three small WWTPs (Volkovo, Saraj and Dračevo) at the Skopje WWTP incinerator. Determine the final dimension of the sludge treatment line, including the incinerator, by calculating additional quantities of sludge to avoid disposing of the sludge at the Drisla landfill.</p>	Compliance with EU and national requirements	<ul style="list-style-type: none"> <li>Urban Wastewater Directive</li> <li>IED Directive</li> <li>Landfill Directive</li> <li>EBRD PR3</li> <li>Best practice</li> </ul>	<p>Responsibility: PE to supervise, designer to implement</p> <p>Resources: Designer's resources</p>	During development of the tender documentation for the Main Design	<p>Included requirements in the tender documentation</p> <p>Included in AESR to Lenders</p>	
3.2	<p>Require from Contractor to include in <b>CESMP</b> and implement <b>mitigation measures for air quality</b>. In addition to measures defined in the ESIA, also include the following:</p> <ul style="list-style-type: none"> <li>Machines and vehicles to be used in construction activities must have use/operation permits</li> <li>Machines and vehicles must have installed filters to reduce soot emission</li> <li>Vehicles need to be regularly maintained</li> <li>The equipment and machinery need to be shut down when not in use</li> <li>High quality fossil fuels (with low percentage of sulphur and lead) need to be used as motor fuel for machinery and equipment</li> </ul> <p>The CESMP to include <b>monitoring</b> provisions during the construction phase as defined in the ESIA.</p>	Compliance with local legislation, EBRD requirements and EU directive requirements	<ul style="list-style-type: none"> <li>IED Directive</li> <li>Law on Environment</li> <li>Law on Ambient Air Protection</li> <li>EBRD PR3</li> </ul>	<p>Responsibility: PE</p> <p>Resources: In-house resources</p>	Prior to start of WWTP operation	<p>Evidence of CESMP</p> <p>Included in AESR to Lenders</p>	
3.3	<p>Require from Contractor to include in CESMP and implement mitigation measures for <b>noise management</b>. In addition to measures defined in the ESIA, also include the following:</p> <ul style="list-style-type: none"> <li>Equipment and machinery need to be shut down</li> </ul>	<ul style="list-style-type: none"> <li>Compliance with local legislation, EBRD requirements and EU directive</li> </ul>	<ul style="list-style-type: none"> <li>Law on Protection Against Noise</li> <li>EBRD PR2</li> <li>Environmental Noise Directive</li> </ul>	<p>Responsibility: PE</p> <p>Laboratory analysis to be</p>	Development of CESMP - prior to start of WWTP construction	<p>Evidence of CESMP</p> <p>Included in AESR to Lenders</p> <p>Records on implementation</p>	

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	when not in use <ul style="list-style-type: none"> <li>Machinery must have use/operation permits</li> <li>In case of noise complaints by local residents, simultaneous use of machines that generate noise over 70 dB needs to be limited</li> <li>Machines and vehicles to be used in construction activities must have use/operation permit</li> <li>records on the technical condition of construction machinery and transport vehicles, and excluding any faulty equipment from operation,</li> <li>records on use of personal protective equipment by employees at the construction site.</li> <li>Monitoring plan with specified type of monitoring, sampling/ measurement locations, and emission limits values or references, measurement and supervision frequency, responsible persons, timeline, etc.</li> </ul>	requirements		performed by an authorised laboratory subcontracted by the PE  <i>Resources:</i> In-house resources	Implementation - during WWTP construction	of the monitoring plan	
3.4	Require from Contractor to include in <b>CESMP</b> and implement: <ul style="list-style-type: none"> <li>an <b>Emergency Preparedness and Response Plan (EPRP)</b>. The EPRP should be prepared in close cooperation with the Crisis Management Center of the City of Skopje, and should specify the possible risks, assign an emergency response trained team, rapid clean up measures depending on the extent of the spills, flood accidents, earthquake, etc.</li> <li>A <b>Hazards Management and Spill Prevention Plan</b> (as part of the EPRP), including provisions on monitoring of purchasing, substitution of products with less hazardous ones, labelling and storage conditions, operational controls and everyday handling of hazardous materials and chemicals on the site, checks of containers and tanks, and trainings delivered to avoid leaks and spill of hazardous materials.</li> </ul>	<ul style="list-style-type: none"> <li>Compliance with national, EBRD and EU requirements</li> <li>Best construction practices</li> <li>Adequate emergency response</li> </ul>	<ul style="list-style-type: none"> <li>EBRD PR 3</li> <li>Law on Environment</li> <li>Law on Water</li> </ul>	<i>Responsibility:</i> PE to supervise Subcontracted construction company to implement  <i>Resources:</i> In-house resources	During the entire construction phase	Evidence of EPRP and Hazards Management and Spill Prevention Plan prior to start of construction  Formal contractor monitoring procedure implemented and audited to confirm compliance.  Included in AESR to Lenders	
3.5	Include in <b>OESMP</b> and implement specific mitigation <b>measures for air quality</b> . In addition to measures defined in the ESIA, also include the following: <ul style="list-style-type: none"> <li>Machines and vehicles to be used in maintenance activities must have use/operation permits</li> <li>Machines and vehicles to be used in maintenance activities must have installed filters to reduce soot emission</li> <li>High quality fossil fuels (with low percentage of</li> </ul>	Compliance with local legislation, EBRD requirements and EU requirements	<ul style="list-style-type: none"> <li>Law on Environment</li> <li>Law on Ambient Air Protection</li> <li>Law on Waste Management and Rulebook on emission limit values during waste incineration</li> </ul>	<i>Responsibility:</i> PE  <i>Resources:</i> In-house resources	Development of OESM - prior to start of WWTP operation  Implementation - during the WWTP operation	Evidence of OESMP  Included in AESR to Lenders	

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	sulphur and lead) need to be used as motor fuel for machinery and equipment		and combustion processes, conditions and manner of work for installations for incineration and combustion <ul style="list-style-type: none"> <li>• EBRD PR3</li> <li>• IED Directive</li> </ul>				
3.6	Include in <b>OESMP</b> and implement specific mitigation <b>measures for noise management</b> . In addition to measures defined in the ESIA, also include the following: <ul style="list-style-type: none"> <li>• Equipment and machinery need to be shut down when not in use</li> <li>• Machinery must have use/operation permits</li> <li>• In case of noise complaints by local residents, simultaneous use of machines that generate noise over 70 dB needs to be limited</li> <li>• Machines and vehicles to be used in construction activities must have use/operation permits</li> <li>• Monitoring plan with specified type of monitoring, sampling/ measurement locations, and emission limits values or references, measurement and supervision frequency, responsible persons, timeline, etc.</li> </ul>	<ul style="list-style-type: none"> <li>• Compliance with national, EBRD and EU requirements</li> </ul>	<ul style="list-style-type: none"> <li>• Law on Protection Against Noise</li> <li>• EBRD PR2, PR4</li> <li>• Environmental Noise Directive</li> </ul>	<i>Responsibility:</i> PE  Laboratory analysis to be performed by an authorised laboratory subcontracted by the PE  <i>Resources:</i> In-house resources	Development of OESMP - prior to start of WWTP operation  Implementation - during WWTP operation	Evidence of OESMP  Included in AESR to Lenders  Records on implementation of the monitoring plan	
3.7	Implement a <b>monitoring plan</b> for flue gas treatment and odour treatment facilities in line with national legislation and the IED Directive.	Compliance with local legislation, EBRD requirements and EU directive requirements	<ul style="list-style-type: none"> <li>• Law on Environment</li> <li>• Law on Waste Management and Rulebook on emission limit values during waste incineration and combustion processes, conditions and manner of work for installations for incineration and combustion</li> <li>• EBRD PR3</li> </ul>	<i>Responsibility:</i> PE to subcontract the competent laboratory  Subcontracted laboratory to analyse air emission  <i>Resources:</i> In-house resources	Continuously, during the operation phase in line with the national legislation	Records on the implementation of the monitoring plan  Included in AESR to Lenders	
3.8	<b>Monitor the quality of surface water and groundwater</b> during construction as follows: <ul style="list-style-type: none"> <li>• Measurement of surface water quality, suspended</li> </ul>	<ul style="list-style-type: none"> <li>• Compliance with national, EBRD and EU requirements</li> </ul>	<ul style="list-style-type: none"> <li>• Law on Environment</li> <li>• Law on Water</li> <li>• EBRD PR3</li> </ul>	<i>Responsibility:</i> PE  Laboratory	During the entire construction phase	Evidence of reports regarding the monitoring of wastewater, surface waters and groundwater	

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	<p>matter, pH, turbidity, dissolved oxygen and other parameters such as PAH, upstream and downstream points of the Vardar River where the main construction activities will be implemented. Sampling and laboratory analysis of physical and chemical water characteristics, once prior to commencement of construction activities, followed by monthly monitoring</p> <ul style="list-style-type: none"> <li>Measurement of the quality and ground water levels at the location of the WWTP at different distances from the river. Laboratory analysis of samples collected with a piezometer - once a month.</li> <li>Report on monitoring results to the competent administrative body</li> </ul>		<ul style="list-style-type: none"> <li>WFD</li> </ul>	<p>analysis to be performed by an authorised laboratory subcontracted by the PE</p> <p><i>Resources:</i> In-house resources</p>		Included in AESR to Lenders	
3.9	<p><b>Undertake monitoring of influent and effluent</b> during the operation phase, as follows:</p> <ul style="list-style-type: none"> <li>monitor the quality of wastewater influent in line with national requirements (twice per month), for the parameters: quantity and quality of the inlet wastewater BOD, COD, SS, pH, NH<sub>4</sub>- N, NO<sub>2</sub>-N, NO<sub>3</sub>-N, N-total, P - total, heavy metals, organic matter, turbidity etc.;</li> <li>monitor the quality of WWTP effluent at the discharge point, in line with national requirements (at least once a month or more frequently at special request), for the parameters : quantity and quality of the inlet wastewater BOD, COD, SS, pH, NH<sub>4</sub>- N, NO<sub>2</sub>-N, NO<sub>3</sub>-N, N-total, P - total, heavy metals, organic matters turbidity etc.</li> </ul>	<ul style="list-style-type: none"> <li>Compliance with national, EBRD and EU requirements</li> </ul>	<ul style="list-style-type: none"> <li>Law on Environmental Protection</li> <li>Law on Water</li> <li>EBRD PR3</li> <li>WFD</li> </ul>	<p><i>Responsibility:</i> PE for monitoring of influent</p> <p>Laboratory analysis to be performed by an authorised laboratory subcontracted by the PE</p> <p><i>Resources:</i> In-house resources</p>	During operation phase	<p>Evidence of monitoring reports</p> <p>Included in AESR to EBRD</p>	
3.10	<p>At least once a year, undertake laboratory testing of sludge, ash residues from the incineration process, and sand from the fluidized bed cover to determine the category of waste and provide instructions for safe disposal or re-use. In case hazardous waste fractions are identified, engage an authorised company for management of hazardous waste to undertake final disposal.</p> <p>Undertake first analysis during the test period of WWTP operation, i.e. during the first 6 months</p> <p>Undertake laboratory analysis of heavy metals (Hg, As, Ni, Cr, Pb, Cd, Fe, Zn)</p>	<ul style="list-style-type: none"> <li>Compliance with local legislation and EBRD requirements</li> </ul>	<ul style="list-style-type: none"> <li>Law on Waste Management</li> <li>EBRD PR 3</li> </ul>	<p><i>Responsibility:</i> PE</p> <p>Laboratory to conduct analyses</p> <p><i>Resources:</i> In-house resources</p>	First analysis during the test period of WWTP operation, i.e. during the first 6 months	<p>Report of conducted laboratory test.</p> <p>Included in AESR to Lenders</p>	
3.11	Undertake regular inspection (at least twice a year) and	<ul style="list-style-type: none"> <li>Compliance with</li> </ul>	<ul style="list-style-type: none"> <li>Law on</li> </ul>	<p><i>Responsibility:</i></p>	During the	Report on conducted regular	

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	maintenance of the siphon to prevent clogging or stoppage of the sewage flow, or leakage of the sewage.	national, EBRD and EU requirements	Environment <ul style="list-style-type: none"> <li>• Law on Water</li> <li>• WFD</li> <li>• EBRD PR3</li> </ul>	PE  <i>Resources:</i> In-house resources	operation phase  At least twice a year for periodical inspection  If detected, repair the defect immediately	inspection  Included in AESR to Lenders	
<b>PR 4</b>	<b>Health and Safety</b>						
4.1	<p>The PE to ensure that the Main includes:</p> <ul style="list-style-type: none"> <li>• a Plan for Environmental Protection and Protection Against Fires and Explosions is prepared, covering both the construction and operation phase.</li> <li>• consideration of all seismic related models and calculations for seismic stability. Seismic design of the facility must fulfil both Eurocodes and national design criteria.</li> </ul> <p>The PE to ensure that the legally required geotechnical investigations are performed prior to Main Design development.</p>	<ul style="list-style-type: none"> <li>• Protection against natural hazards</li> </ul>	<ul style="list-style-type: none"> <li>• Law on Construction</li> <li>• EBRD PR 4</li> </ul>	<i>Responsibility:</i> PE  <i>Resources:</i> In-house resources	Prior to and during development of Main Design	Main Design includes a Plan for Environmental Protection and Protection Against Fires and Explosions, and calculations for seismic stability  Geotechnical investigations performed  Included in AESR to Lenders	
4.2	<p>The PE needs to ensure that the <b>Tender Documents and construction contract meet the EIB procurement requirements.</b></p> <p>The PE to include in Tender Documents a <b>requirement that the quarries and borrow pits that will supply the construction material must have valid permits</b>, in order to ensure that construction materials come from authorised sources.</p>	<ul style="list-style-type: none"> <li>• Ensuring safety and quality of used construction materials</li> <li>• Minimising risks associated with the Project supply chain</li> </ul>	<ul style="list-style-type: none"> <li>• EBRD PR 4</li> </ul>	<i>Responsibility:</i> PE  <i>Resources:</i> In-house resources	Prior to start of construction works	Tender Documents meet EIB procurement requirements  Tender Documents include the requirement that the quarries and borrow pits that will supply construction materials have valid permits	
4.3	<p><b>For the construction phase</b>, the PE to require from Contractor to develop, as part of the CESMP:</p> <ul style="list-style-type: none"> <li>• an <b>OHS Plan</b> (covering OHS measures defined in the ESIA for the construction phase )</li> <li>• a <b>Traffic Management Plan</b></li> </ul> <p>Monitor Contractor’s compliance.</p>	<ul style="list-style-type: none"> <li>• Safe working environment and improved HS performance of contractors</li> <li>• Ensuring road and traffic safety</li> </ul>	<ul style="list-style-type: none"> <li>• Law on Construction</li> <li>• Regulation on Minimum OHS Requirements in Temporary Mobile Sites</li> <li>• Law on Road Traffic Safety</li> <li>• EBRD PR 4</li> </ul>	<i>Responsibility:</i> PE to supervise, Contractor to implement  <i>Resources:</i> Contractor’s resources	Prior to start of construction works	CESMP developed prior to construction and includes an OHS Plan and Traffic Management Plan.  Formal contractor monitoring procedure implemented and audited to confirm compliance.	

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4.4	<p><b>For the operation phase</b>, the PE to ensure that the <b>OESMP</b> includes:</p> <ul style="list-style-type: none"> <li>• <b>health and safety measures</b> as defined in the ESIA for the operation phase</li> <li>• an <b>Emergency Preparedness and Response Plan</b> (with a Hazards Management and Spill Prevention Plan)</li> </ul>	<ul style="list-style-type: none"> <li>• Safe working environment and improved HS performance of contractors</li> <li>• Adequate emergency response</li> </ul>	<ul style="list-style-type: none"> <li>• EBRD PR 4</li> </ul>	<p><i>Responsibility:</i> PE</p> <p><i>Resources:</i> In-house or external consultant support</p>	Prior to start of WWTP operation	<p><i>Operation phase:</i> OESMP includes health and safety measures, as well as Emergency Preparedness and Response Plan (with a Hazards Management and Spill Prevention Plan)</p> <p>Documented Emergency Preparedness and Response Plan</p> <p>Included in AESR to Lenders</p>	
<b>PR 5</b>	<b>Land Acquisition, Involuntary Resettlement and Economic Displacement</b>						
5.1	<p>Ensure that any land acquisition of private property for needs of constructing the WWTP or any temporary impacts on private assets will be compensated at full replacement cost in line with EBRD 5</p> <p>Notify the tenant currently using the land (<i>Fakultetsko Zemjodelsko Stopanstvo Trubarevo AD</i>) in advance about the planned acquisition to enable sufficient time to seek other land to lease and harvesting of any crops before land is taken</p>	<ul style="list-style-type: none"> <li>• Ensuring that land acquisition is addressed as required under PR 5</li> </ul>	<ul style="list-style-type: none"> <li>• EBRD PR 5</li> </ul>	<p><i>Responsibility:</i> PE /City</p> <p><i>Resources:</i> City budget</p>	Prior to land entry	Included in AESR to Lenders	
<b>PR 6</b>	<b>Biodiversity and Living Natural Resources</b>						
6.1	Ensure that a <b>buffer area</b> of at least 50 m around Ostrovo is foreseen in the Main Design	<ul style="list-style-type: none"> <li>• Compliance with national, EBRD and EU requirements</li> </ul>	<ul style="list-style-type: none"> <li>• EBRD PR6</li> <li>• <i>Law on Environment</i></li> <li>• <i>Law on Nature Protection</i></li> <li>• Birds Directive</li> <li>• Habitat Directive</li> </ul>	<p><i>Responsibility:</i> PE to supervise, designer to implement</p> <p><i>Resources:</i> Designer's resources</p>	During development of the tender documentation for the Main Design	<p>Included requirements in the tender documentation</p> <p>Included in AESR to Lenders</p>	
6.2	<p>Prior to construction works, require from Contractor to engage a professional biologist/ecologist to <b>inspect the area designated for construction activities</b> at the:</p> <ul style="list-style-type: none"> <li>• location of the WWTP site, to inspect this area in terms of presence of species, with a focus on on-ground nests of <i>Merops apiaster</i>, and take measures accordingly in line with biodiversity protection practices</li> <li>• location along the Vardar River required for</li> </ul>	<ul style="list-style-type: none"> <li>• Compliance with national, EBRD and EU requirements</li> </ul>	<ul style="list-style-type: none"> <li>• EBRD PR6</li> <li>• <i>Law on Environment</i></li> <li>• <i>Law on Nature Protection</i></li> <li>• Birds Directive</li> <li>• Habitat Directive</li> </ul>	<p><i>Responsibility:</i> PE to supervise, Contractor to implement</p> <p><i>Resources:</i> Contractor's resources</p>	Prior to an during construction	<p>Evidence of the survey report</p> <p>Included in AESR to Lenders</p>	

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	<p>construction of flood protections, to inspect this area in terms of animals or nests in order to prevent any fatalities to animals that may be hidden in riparian vegetation. Special attention should be given to species <i>Phalacrocorax pygmaeus</i> (Pygmy cormorant) - Annex I of the Birds Directive; <i>Larus minutus</i> (Little gull) - Annex I of the Birds Directive and <i>Streptopelia turtur</i> (European turtle dove, VU)</p>						
6.3	<p>Require from Contractor to include in <b>CESMP</b> general mitigation measures for <b>biodiversity protection</b>:</p> <ul style="list-style-type: none"> <li>• fencing of the site to prevent intrusions of fauna species</li> <li>• avoid any disturbance of areas outside the area required for construction</li> <li>• reduce the possibility of formation of shelters for small animals during the construction phase by clearing of unused construction material</li> <li>• avoid any movements of mechanisation in the Vardar River to prevent damage to aquatic life</li> </ul> <p>Monitor Contractor's compliance.</p>	<ul style="list-style-type: none"> <li>• Compliance with national, EBRD and EU requirements</li> </ul>	<ul style="list-style-type: none"> <li>• EBRD PR6</li> <li>• <i>Law on Environment</i></li> <li>• <i>Law on Nature Protection</i></li> <li>• Birds Directive</li> <li>• Habitat Directive</li> </ul>	<p><i>Responsibility:</i> PE to supervise, Contractor to implement</p> <p><i>Resources:</i> Contractor's resources</p>	Prior to construction	<p>Evidence of CESMP with biodiversity protection measures</p> <p>Included in AESR to Lenders</p>	
6.4	<p>Include in <b>OESMP</b> the following measures for <b>biodiversity protection</b>:</p> <ul style="list-style-type: none"> <li>• undertake good maintenance practices to prevent fires and/or explosion that could disturb the species at Ostrovo</li> <li>• periodically check outdoor areas for presence of fauna species as defined in the ESIA</li> <li>• undertake trainings of WWTP workers on species that could be found in Ostrovo to avoid unintentional disturbances of species</li> <li>• prohibit any construction / operation / maintenance activities in order to preserve the edge area of Ostrovo for possible terrestrial fauna species such as birds, reptiles and small mammals.</li> </ul>	<ul style="list-style-type: none"> <li>• Compliance with national, EBRD and EU requirements</li> </ul>	<ul style="list-style-type: none"> <li>• EBRD PR6</li> <li>• <i>Law on Environment</i></li> <li>• <i>Law on Nature Protection</i></li> <li>• Birds Directive</li> <li>• Habitat Directive</li> </ul>	<p><i>Responsibility:</i> PE</p> <p><i>Resources:</i> In-house resources</p>	Prior to operation	<p>Evidence of OESMP with biodiversity protection measures</p> <p>Included in AESR to Lenders</p>	
6.5	<p>Compensate for cleared vegetation along both river banks and undertake re-plantation of the same / larger area, in cooperation with relevant authorities</p>	<ul style="list-style-type: none"> <li>• Compliance with national, EBRD and EU requirements</li> </ul>	<ul style="list-style-type: none"> <li>• EBRD PR6</li> <li>• <i>Law on Environment</i></li> <li>• <i>Law on Nature Protection</i></li> <li>• Birds Directive</li> <li>• Habitat Directive</li> </ul>	<p><i>Responsibility:</i> PE</p> <p><i>Resources:</i> In-house resources</p>	During the operation phase (first 5 years)	Included in AESR to Lenders	

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<b>PR 8</b>	<b>Cultural Heritage</b>						
8.1	<p>The PE to <b>develop Chance Find Procedure</b> for managing chance finds, defined as physical cultural heritage encountered unexpectedly during project implementation, share with Contractor to implement during construction works, and ensure relevant staff and Contractor is trained in its requirements.</p> <p>The provisions of Chance Find Procedure need to include:</p> <ul style="list-style-type: none"> <li>• Notification of relevant authorities of found objects/sites;</li> <li>• Alerting project personnel to the possibility of chance finds being discovered;</li> <li>• Fencing-off the area of finds to avoid any further disturbance or destruction.</li> </ul>	<ul style="list-style-type: none"> <li>• Compliance with EBRD requirements</li> <li>• Minimising risks to unknown cultural heritage</li> </ul>	<ul style="list-style-type: none"> <li>• Law on Protection of Cultural Heritage</li> <li>• EBRD PR 8 – Cultural Heritage</li> </ul>	<p><i>Responsibility:</i> PE</p> <p><i>Resources:</i> In-house or external consultant support</p>	Prior to construction (preparation of procedure) and during construction phase (implementation of procedure)	<p>Chance Find Procedure developed</p> <p>Training (which may be part of induction) recorded</p> <p>Included in AESR to Lenders</p>	
<b>PR 10</b>	<b>Information Disclosure and Stakeholder Engagement</b>						
10.1	<p>The PE to <b>implement and update the Stakeholder Engagement Plan (SEP)</b> as needed, to ensure that all stakeholders are identified, that sufficient information about issues and impacts arising from the Project and proposed mitigation measures are disclosed in a timely manner and that all stakeholders are consulted in a meaningful and culturally appropriate way throughout project implementation.</p>	<ul style="list-style-type: none"> <li>• Compliance with the EBRD’s requirements</li> <li>• Management of risks and impacts on communities affected by the Project</li> </ul>	<ul style="list-style-type: none"> <li>• EBRD PR10 - Information disclosure and stakeholder engagement</li> <li>• UNECE Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters</li> </ul>	<p><i>Responsibility:</i> PE</p> <p><i>Resources:</i> In-house resources</p>	Continuously	Monitoring reports on the results of the stakeholder engagement process as defined in SEP	
10.2	<p>Implement a project grievance mechanism and inform the affected communities about the grievance process including specific communication in the course of community engagement activities. Ensure that Contractor implements the grievance management provisions defined in SEP, by including such provisions in the tender documentation and contracts signed with the contractors. Contractors (including security personnel) to be trained on grievance mechanism.</p>	<ul style="list-style-type: none"> <li>• Compliance with the EBRD’s requirements</li> <li>• Assurance of timely &amp; effective resolution of complaints.</li> </ul>	<ul style="list-style-type: none"> <li>• EBRD PR10 - Information disclosure and stakeholder engagement</li> </ul>	<p><i>Responsibility:</i> PE/Contractors</p>	Continuously	Monitoring the effective functioning of the grievance procedure as outlined in the project SEP. Grievance management provisions related to Contractors included in tender documentation and contracts signed with the	

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						contractors	