DOCUMENT OF THE EUROPEAN BANK FOR RECONSTRUCTION AND DEVELOPMENT

Approved by the Board of Directors on 7 May 2025¹

KAZAKHSTAN

KARAGANDA WWTP MODERNISATION

[Redacted in line with the EBRD's Access to Information Policy]

[Information considered confidential has been removed from this document in accordance with the EBRD's Access to Information Policy (AIP). Such removed information is considered confidential because it falls under one of the provisions of Section III, paragraph 2 of the AIP]

¹ As per section 1.4.8 of EBRD's Directive on Access to Information (2024), the Bank shall disclose Board reports for State Sector Projects within 30 calendar days of approval of the relevant Project by the Board of Directors. Confidential information has been removed from the Board report.

For the avoidance of any doubt, the information set out here was accurate as at the date of preparation of this document, prior to consideration and approval of the project.

PUBLIC

PUBLIC

TABLE OF CONTENTS

TAB	LE O	F CONTENTS	3
ABB	REV	IATIONS	4
CUR	REN	CY CONVERSIONS	4
PRE	SIDE	NT'S RECOMMENDATION	5
BOA	RD D	DECISION SHEET	6
ADD	DITIO	NAL SUMMARY TERMS FACTSHEET	6
1.	STR	ATEGIC FIT AND KEY ISSUES	9
	1.1	STRATEGIC CONTEXT	9
	1.2	TRANSITION IMPACT	10
	1.3	ADDITIONALITY	11
	1.4	SOUND BANKING - KEY RISKS	12
2.	MEA	ASURING / MONITORING SUCCESS	12
3.	KEY	PARTIES	13
	3.1	BORROWER	13
	3.2	GUARANTOR	14
4.	MAI	RKET/REGULATORY CONTEXT	15
5.	FINA	ANCIAL / ECONOMIC ANALYSIS	15
	5.1	FINANCIAL PROJECTIONS	15
	5.2	SENSITIVITY ANALYSIS	15
	5.3	PROJECTED PROFITABILITY FOR THE BANK	15
6.	OTH	IER KEY CONSIDERATIONS	16
	6.1	ENVIRONMENT	16
	6.2	INTEGRITY	17
	6.3	OTHER ISSUES	18
ANN	EXE	S TO OPERATION REPORT	19
ANN	EX 1	- PROJECT IMPLEMENTATION	20
ANN	IEX 2	- PROJECT DESCRIPTION & ECONOMIC ANALYSIS	21
ANN	IEX 3	- GREEN ASSESSMENT	22

ABBREVIATIONS

AD	Anaerobic Digestion
AESR	Annual Environmental and Social Report
BAT	Best Available Technology
CAPEX	Capital Expenditure
CSO	Civil Society Organisation
CHP	Combined Heat and Power
COGS	Cost of Goods Sold
СР	Condition Precedent
D&B	Design and Build
DSCR	Debt Service Coverage Ratio
E&S	Environmental and Social
ECEPP	EBRD Client Electronic Procurement Portal
EIRR	Economic Internal Rate of Return
EOAP	Equal Opportunities Action Plan
EPFA	Enhanced Partnership Framework Agreement
ESAP	Environmental and Social Action Plan
ESIA	Environmental and Social Impact Assessment
ESDD	Environmental and Social Due Diligence
ESMP	Environmental and Social Management Plan
ETI	Expected Transition Impact
E&S	Environmental and Social
FS	Feasibility Study
GEI	Gender and Economic Inclusion
GET	Green Economy Transition
GHG	Greenhouse Gas
IFI	International Financial Institute
JTCF	EBRD-Kazakhstan Joint Technical Cooperation Fund
LTM	Lender's Technical Monitor
MIC	Ministry of Industry and Construction
OPEX	Operational Expenses
PIS	Project Implementation Support
PIU	Project Implementation Unit
PP&R	Procurement Policies and Rules
PR	Performance Requirements
SDG	Sustainable Development Goal
SEP	Stakeholder Engagement Plan
SSF	EBRD Shareholder Special Fund
TC	Technical Cooperation
TI	Transition Impact
TONIA	Tenge Over Night Index Average
VAT	Value Added Tax
WW	Wastewater
WWTP	Wastewater Treatment Plant

CURRENCY CONVERSIONS

(as of 14 January 2025) EUR 1 = KZT 541

PRESIDENT'S RECOMMENDATION

This recommendation and the attached report concerning an operation in favour of Karaganda Su LLP (the "Company"), a state-owned water supply and wastewater management utility incorporated in Kazakhstan, are submitted for consideration by the Board of Directors.

The facility will consist of a loan of up to KZT 50.3 billion (EUR 93 million equivalent) to the Company under a sovereign guarantee from the Republic of Kazakhstan.

The operation will enable the Company to modernise wastewater treatment infrastructure in the city of Karaganda. The expected transition impact stems from the introduction of an advanced green technology yielding significant environmental, climate adaptation, and mitigation benefits (*Green TI quality*). These include returning treated water to environment, enhancing local economy's resilience in the water-scarce region and reducing reliance on external greenhouse gas (GHG)-intensive electricity sources.

The pre-signing technical cooperation (TC) support was financed by the EBRD-Kazakhstan Joint TC Fund (JTCF) and by the EBRD Shareholder Special Fund (SSF). The post-signing TC will include the Lender's Technical Monitor to be funded by the SSF.

I am satisfied that the operation is consistent with the Bank's Strategy for Kazakhstan by "promoting low-carbon growth and energy efficiency" through investment in waste management, and with the Green Economy Transition approach 2021-2025 qualifying for 100 per cent GET. It is also aligned with (i) the Infrastructure Sector Strategy aiming to "promote efficient, safe, reliable and sustainable infrastructure through a transition to market-oriented, resilient and inclusive infrastructure systems, with a focus on the green development of economies"; (ii) the Strategy for the Promotion of Gender Equality; (iii) the Agreement Establishing the Bank and (iv) the United Nations Sustainable Development Goals.

I recommend that the Board approve the proposed loan and the SSF grant for the postsigning TC substantially on the terms of the attached Report.

Odile Renaud-Basso

KAZAKHSTAN – KARAGANDA WWTP MODERNISATION - DTM 54047						
Transaction / Board Decision	Board approval ² is sought for a sovereign guaranteed loan of up to KZT 50.3 billion (EUR 93 million equivalent) in favour of Karaganda Su LLP (the "Company") for the modernisation of wastewater treatment infrastructure (the "Project") in the city of Karaganda (the "City")					
Client	The Company, which is fully state-owned, is the sole provider of water supply and					
	wastewater management services in the City. [REDACTED]					
Main	The Project is essential to reaching the national and EU environmental requirements as					
Elements of	well as to increasing the climate resilience of the area it serves.					
the	<u>Transition impact</u> stems from the 100 per cent GET derived from a mix of benefits					
Proposal	delivered across climate mitigation, climate adaptation, and environmental finance.					
	<u>Gender Smart</u> : Gender additionality will be achieved through a development and implementation of the Equal Opportunities Action Plan (EOAP) and delivering a technical skills training programme, ensuring 50 per cent female participation among approximately 100 employees. Additionality:					
	 long-term financing municipal infrastructure projects is not available from commercial banks; and the Bank's conditionalities e.g. Procurement Policies & Rules (PP&R), EOAP and Environmental and Social Action Plan (ESAP). 					
	- the loan will be guaranteed by the Republic of Kazakhstan [REDACTED]					
Key Risks Strategic	<u>Borrower's risk</u> is mitigated by subsidies, phased tariffs increases and ultimately by the full recourse to the state through a sovereign guarantee. <u>Sovereign exposure risk</u> . Kazakhstan's public debt is relatively low and sustainable with current sovereign credit ratings investment grade (BBB-/Stable by S&P, Baa1/Stable by Moody's, BBB/Stable by Fitch). <u>Project implementation risk:</u> mitigated by the involvement of a project implementation and technical supervision consultants and Lender's Technical Monitor (LTM). The Bank's PP&R will apply to all contracts. The Project is consistent with the Infrastructure Sector Strategy, the Bank's Country					
Fit	Strategy for Kazakhstan, the Bank's Green Economy Transition Approach 2021-2025,					
Summary	Strategy for the Promotion of Gender Equality and with the UN Sustainable					
	Development Goals.					
ADDITIONAL SUMMARY TERMS FACTSHEET						
EBRD Transaction	A sovereign guaranteed loan of up to KZT 50.3 billion (EUR 93 million equivalent) (the "Loan") to the Company. Karaganda Region (the "Region") will provide a co- financing of KZT 6 billion (EUR 11 million equivalent) to cover the VAT.					
Existing	Exposure to the Company: None					
Exposure	Sovereign exposure to Kazakhstan: EUR 823 million [REDACTED].					
Maturity /	The Loan tenor is 15 years [REDACTED].					
kepayment						

BOARD DECISION SHEET

 $^{^2}$ Article 27 of the AEB provides the basis for this decision.

Potential AMI	None.
eligible	
financing	
Use of	The Loan will finance (i) payments under the Design and Build (D&B) contract for
Proceeds	the development of a new Wastewater Treatment Plant (WWTP) with waste-to-
	energy capabilities in the City; (ii) construction supervision services; and (iii) the
	front-end fee payment.
	[REDACTED]
Investment	[REDACTED]
Plan	
Financing	[REDACTED]
Plan	
Key Parties	• The Company as the Borrower;
Involved	• The Republic of Kazakhstan as the Guarantor;
	• The Ministry of Industry & Construction (MIC) and the Region as counterparts
	under the Tripartite Agreement;
	• The Region and the Company as counterparts under the Subsidy Agreement.
Conditions to	[REDACTED]
effectiveness	
Conditions to	[REDACTED]
disbursement	
Key	[REDACTED]
Covenants	
Security /	• Sovereign guarantee.
Guarantees	
Other	Grant Agreement(s) for Technical Cooperation (TC).
material	
agreements	
Associated	A. Technical Cooperation
Donor	<u>Pre-signing:</u>
Funded TC	TCI: EBRD Feasibility Study and Environmental Social Impact Assessment
and Blended	Category A (FS, ESIA) for WWIP projects in five cities (including the Project);
Concessional	EUR 1,172,000 was financed by the SSF under the EBRD infrastructure Project
Finance	Preparation Facility.
	IC2: Local Feasibility Study (Local FS) for the purposes of the sovereigh
	74.000 was financed by the SSF.
	TC3: Project Implementation Support (PIS) to assist the Company with the
	advanced procurement of D&B contract overall Project administration FSAP and
	EOAP implementation: FUR 300 000 was financed by the ITCF
	Lorn Implementation, Dorc 500,000 was infanced by the stort.
	Post-signing:
	TC 4: Lender's Technical Monitor (LTM) for monitoring the implementation of
	up to four WWTP modernisation projects. This includes (i) monitoring performance
	of the PIS consultants and the contractors. (ii) reviewing correctness of the progress
	of works and amounts stated in interim performance certificates, and (iii) identifying
	potential issues and timely reporting of issues to the Bank. [REDACTED].

[REDACTED]
B. Blended Concessional Finance: None.

INVESTMENT PROPOSAL SUMMARY

1. STRATEGIC FIT AND KEY ISSUES

1.1 STRATEGIC CONTEXT

[REDACTED] Recognizing the need for substantial improvements, the Government initiated in 2019 a countrywide WWTPs Modernization Program aimed to upgrade 68 facilities across the country. In March 2024, the Bank signed its first operation under this Program for the benefit of the city of Aktobe. [REDACTED]

The Project aims to establish a modern waste-to-energy WWTP in the City with the population of c.a. 500,000, intended as a replacement of the current WWTP built in 1969. The current facility remains operational, but structurally deteriorated to a point where its rehabilitation is no longer economically feasible. The plant equally struggles with the evolving complexity of WW, leading to untreated sludge and increased GHG emissions (methane). It fails to meet the regulations and puts further stress on the already limited freshwater resources.

The Project introduces a novel approach to constructing facilities using eco-friendly technologies in Kazakhstan. The new WWTP will be implemented in line with the EU standards. Its primary objective revolves around introduction of advanced biological treatment of WW involving an anaerobic digestion (AD) and a combined heat and power (CHP) units for efficient sludge treatment and biogas production. With the on-site use of biogas treatment technology and electricity generation, the Project will result in a CO2 emissions reduction [REDACTED]. Further dewatering of stabilized sludge will produce a final material suitable for agricultural use, contributing to circular economy principles. Once implemented, the WWTP will be able to return the treated effluent to environment, addressing the region's water scarcity and climate-related risks. For further details, see Annex 2 (*Project Description & Economic Analysis*) and Annex 3 (*Green Assessment*).

Furthermore, the Project combines design and construction into a single turnkey contract to maximize private sector expertise for efficient completion and transfer of knowledge, including enhancing the technical capabilities of female employees for modern, automated WWTP operations. The Project builds on the lessons learned under the previous EBRD projects by incorporating the Government's commitments for tariffs increases combined with subsidies provision along with a sovereign guarantee. Such support will enable the Company to attract the required financing and handle operating costs while investing in essential infrastructure.

The Project is consistent with the *Green Economy Transition (GET) approach 2021-2025* and is aligned with the *Infrastructure Sector Strategy*, the *Country Strategy for Kazakhstan, the Strategy for the Promotion of Gender Equality* and *the Equality of Opportunity Strategy*. The Project contributes to United Nations Sustainable Development Goals SDG No5 Gender Equality, SDG No6 Clean Waters and Sanitation, SDG No9 Industry, Innovation and Infrastructure, SDG No11 Sustainable Cities and Communities, SDG No12 Responsible Consumption and Production, and SDG No17 Partnerships for the SDGs.

1.2 TRANSITION IMPACT

benefit-to-cost ratio which exceeds one.

The Project is presented under GET Direct Track. The TI is based on the Project's commitment to green technology targeting environmental protection and climate change objectives. [REDACTED]

Prima	ary Quality: Green	
No	Objective	Details
1.1	The percentage of EBRD use of proceeds that supports a green economy transition and therefore qualifies as	<u>Environmental advantages</u> : the Project entails the improvement of WW treatment and treated effluent quality and aims to alleviate pressure on freshwater resources while minimizing soil, groundwater, and surface water contamination, thus protecting ecosystems and public health.
	GET finance exceeds 60 per cent.	<u>Climate change adaptation benefits</u> : returning treated WW effluent to the ecosystem will displace fresh water abstraction and benefit local industries and communities dependent on water, enhancing their resilience to climate change impacts in the water scarce region.
		<u>Climate change mitigation benefits</u> : the treatment of WW in a growing agglomeration will mitigate direct GHG emissions significantly. The CHP unit that will produce heat and electricity from biogas generated via the AD facility will further contribute to climate mitigation efforts.
1.2	The Project introduces one of the first three of its kind green products or technologies that are innovative at the national or regional level.	The Project, as one of the initial implementations of the AD technology in Kazakhstan, will modernize the current sludge treatment practices by converting the wasted treatment sludge into a renewable energy source and producing nutrient-rich digestate for fertilization, promoting a circular economy. Its success will pioneer the adoption of environmentally sustainable technologies among other municipal utilities in Kazakhstan, demonstrating their feasibility and effectiveness amid concerns regarding high costs and harsh winter conditions.
1.3	The Project has a good climate resilience	The Project demonstrates a good climate resilience benefit/cost ratio by achieving significant water savings relevant to Kazakhstan's annual

The Project is "gender additional" through the development and implementation of the EOAP to advance female employees' technical skills. [REDACTED] Delivery risks include the ability of the Company to ensure timely implementation. Close collaboration with the Company and the state stakeholders will be applied to address the TI objectives.

freshwater abstraction vis a vis the Project's investments.

1.3 ADDITIONALITY

Identified triggers

No triggers identified.

Additionality sources

Financing Structure -

EBRD offers financing that is not available in the market from commercial sources on reasonable **terms and conditions**, e.g. a longer grace period. Such financing is necessary to structure the project. **Financing Structure -**

EBRD offers a **tenor**, which is longer than available to the client in the market on reasonable terms and conditions.

Standard-setting: helping projects and clients achieve higher standards –

Client seeks/makes use of EBRD expertise on higher environmental standards, above 'business as usual' (e.g. adoption of emissions standards, climate-related ISO standards etc.).

Gender SMART:

Client seeks/makes use of EBRD expertise for the adoption of gender standards and/or equal opportunities action plans.

Standard-setting: helping projects and clients achieve higher standards –

Client seeks/makes use of EBRD expertise on best international **procurement** standards.

Knowledge, innovation, and capacity building

EBRD provides expertise, innovation, knowledge and/or capabilities that are material to the timely realisation of the project's objectives, including support to **strengthen the capacity of the client**.

Description

N/A.

Evidence of additionality sources

Long-term and large volume financing required for municipal infrastructure projects in Kazakhstan continues to be available predominantly from the IFIs.

The Bank provides a long-term financing with a tenor of 15 years [REDACTED]. This is not available in Kazakhstan from local commercial banks to municipal companies for the investment of this nature.

The Bank requires high environmental and social standards, which go beyond local requirements. The ESAP, agreed with the Company, will ensure the compliance and implementation of best practice.

Women currently make up 37 per cent of the Company's workforce, reflecting female workforce share in the sector. Women are overrepresented in administrative and sales roles, and remain underrepresented in executive, mechanics, and technical positions.

To promote equal opportunities and enhance women's participation in key roles, through the PIU, the Project will assist the Company in i) developing and implementing the EOAP with a support focus on actions to women's representation in technical and leadership roles, and ii) designing and delivering a training programme focused on technical skills needed to operate the new equipment and facilities. The training will be offered to approximately 100 employees, with women representing 50 per cent participants.

Procurement of works and services under the Project will be carried out in accordance with EBRD's PP&R, which go beyond local requirements.

The Company's implementation capacity will be enhanced through a dedicated Project implementation support TC. The Bank will apply its experience in the WW sector, including

WWTPs modernisation, gained across the countries of operation.

Risks Probabilit **Comments** y / Effect Medium / Borrower's The Company's debt service capacity depends on (i) implementation of Medium the Tripartite Agreement and the Subsidy Agreement, both regulating risk provision of state subsidies to the Company to secure the debt service, and (ii) timely increase of WW tariffs [REDACTED]. The signing of both agreements, in a form satisfactory to the Bank, is a CP to effectiveness of the Loan. [REDACTED] The ultimate mitigant is in a recourse to the sovereign via the guarantee. The risk of implementation delays will be mitigated by an experienced Project Medium / implementatio High D&B contractor and loan funded PIS for construction supervision, enhancement of reporting standards, and the implementation of the EOAP n risk and ESAP. The LTM support provides an extra layer of oversight and risk mitigation. Sovereign Low / The Republic of Kazakhstan continues to maintain a strong fiscal position Medium supported by a low debt burden and investment-grade credit ratings. risk

2. MEASURING / MONITORING SUCCESS

TI indicators, primary Quality: Green

SOUND BANKING - KEY RISKS

1.4

No.	Monitoring indicator	Details	Baseline	Target	Due date (after signing)
1.1	WW treated	Ex-post measurement of	[REDACTED]	[REDACTED]	[REDACTED]
	(m3/day)	the annual volume of WW treated (effluent quality EU-compliant).			
1.2	CO2 emissions reduced (tonnes/year)	Amount of GHG emissions reduced (Scope 1 and Scope2).	[REDACTED]	[REDACTED]	[REDACTED]
1.3	New or updated technology introduced	AD technology adopted as part of the new WWTP.	[REDACTED]	[REDACTED]	[REDACTED]

Additional Indicators

Indicator type	Monitoring indicator	Details	Baseline	Target	Due date	TC
Advisory	Project	ESIA approved.	[REDAC	[REDA	[RED	[RE
& Policy	preparation		TED]	CTED]	ACTE	DA
Indicators	product				D]	CTE
	approved					D]
Advisory	Project	Both the (bankable) Feasibility	[REDAC	[REDA	[RED	[RE
& Policy	preparation	Study (FS) and Local (statutory)	TED]	CTED]	ACTE	DA
Indicators	product	FS are approved.			D]	CTE
	-					D]

Indicator type	Monitoring indicator	Details	Baseline	Target	Due date	TC
	approved: FS approved					
Advisory	Project	LTM will support with	[REDAC	[REDA	[RED	[RE
& Policy	implementation	(i) monitoring performance of the	TED]	CTED]	ACTE	DA
Indicators	support	PIS consultant and the contractor,			D]	CTE
	completed:	(ii) reviewing correctness of the				D]
	Compliance	progress of works and amounts				
	with all	stated in interim performance				
	financing	certificates, and (iii) identifying				
	requirements	potential issues and timely				
	(procurement)	reporting of issues to the Bank.				
Gender	Number of	Training focused on the technical	[REDAC	[REDA	[RED	[RE
SMART	women	skills required for the operation of	TED]	CTED]	ACTE	DA
	enhancing their	the new equipment and			D]	CTE
	skills as a	facilities. The training will be				D]
	result of	delivered for approximately 100				
	training.	employees, and 50 per cent of				
		them will be women.				
Gender	Practices of the	The Company will develop and	[REDAC	[REDA	[RED	[RE
SMART	relevant	introduce the EOAP with a focus	TED]	CTED]	ACTE	DA
	stakeholder	on actions to support women's			D]	CTE
	improved	representation in technical and				D]
	(equal	leadership roles				
	opportunity					
	practices of the					
	client)					

3. KEY PARTIES

3.1 BORROWER

The Company provides water supply and WW services in the City³ and its vicinity. The average WW volume treated by the WWTP is c.a 95,000 m³/day.

The Company has experience in implementing largescale construction projects funded by mid-term investment tariffs plans agreed under the Tariffs in Exchange for Investments Program and Government's concessional budget loans provided under the Nurly Zhol State Program. The Company's tariffs are already among the highest in the country, reflecting complex geographical relief of the City, a legacy water and WW network in need of investments the significant WW needs of large-scale industrial facilities located in and around the City. Additional costs are associated with the length of water supply transportation infrastructure - potable water is supplied by the Satpayev Canal that sources water from the Irtysh River located in distance of over 458 km. Nevertheless, the households tariffs are relatively low because of cross-subsidisation by industrial and commercial customers. The collection ratio is near 100 per cent.

³ Located approximately 230 km south-east of Kazakhstan's capital Astana. It is the fifth most populous city in Kazakhstan behind Almaty, Astana, Shymkent and Aktobe.

[REDACTED]

3.2 GUARANTOR

The Republic of Kazakhstan continues to maintain a strong fiscal position with moderate sovereign debt of 22.8 per cent of GDP (c.a. EUR 66 billion) as well as investment-grade credit ratings. Combined official foreign exchange reserves of the National Bank and assets held by the National Oil Fund amount to approximately 38.5 per cent of GDP (c.a. EUR 112 billion), providing a significant buffer against negative shocks.

4. MARKET/REGULATORY CONTEXT

Similar to other utilities, the Company's operations are regulated by: (i) the Committee for Regulation of Natural Monopolies (the "Regulator"), (ii) MIC; and (iii) regional authorities.

The Regulator sets tariffs based on justified cost-based principal and affordable profit margin of up to 10 per cent, designating extra tariff increases for pre-agreed investment purposes. If the agreed expenditures fall below the amounts allocated in the tariffs, the Regulator can apply fines in a form compensatory tariff for customer refunds. While the law permits full cost recovery, tariffs have been historically capped during periods of high inflation in 2018- 2022 to maintain affordability. Currently, the Company implements a capital intensive investment programme approved by Regulator under the Tariffs in Exchange to Investments Program covering the period of 2021-2025.

The MIC is in charge of the urban water and WW sector policy including *inter alia* the implementation of the WWTP Modernisation Program. In order to attract IFIs' financing, in 2023, the MIC introduced the Subsidy Rules allowing the utilities service debt until tariffs reach full cost recovery levels. The MIC, in coordination with regional administrations, is responsible for timely budgeting and allocation of tariff subsidies to the utilities.

Regional authorities revise and support utilities' investment programs, exercise overall control over services quality and co-finance maintenance capex programmes.

The support of all three sector stakeholders is essential for the success of the Project implementation and sustainable operations of the Company and the new WWTP. This is to be accomplished through the Tripartite Agreement signing.

5. FINANCIAL / ECONOMIC ANALYSIS

5.1 **FINANCIAL PROJECTIONS**

[REDACTED]

5.2 SENSITIVITY ANALYSIS

[REDACTED]

5.3 **PROJECTED PROFITABILITY FOR THE BANK**

6. OTHER KEY CONSIDERATIONS

6.1 ENVIRONMENT

Categorised A (ESP 2019). The Project involves construction of a new WWTP with the capacity of 500,000 population equivalent (P.E.) to replace the existing poorly performing WW treatment and sludge management facilities. The sludge treatment complex will be part of the plant and will include AD facilities, which will generate biogas, and facilities for production of heat and electricity from this biogas. The overall impacts of the proposed investment are assessed to be positive. The Project will result in environmental and social (E&S) benefits, including eliminating odour, reducing GHG emissions, enhancing WW treatment efficiency to meet the national and the EU requirements, providing an EU-compliant solution for sludge management and disposal in line with the EU BAT requirements for such facilities and the EU Taxonomy, reducing environmental harm and public health risks from the current level of WW treatment and unsustainable practice of sludge disposal in the open lagoons. The Project is expected to contribute to the reduction of pollution in the Sokur River, Intumak reservoir and Nura River as the treatment process is designed for biological nutrient removal.

The E&S due diligence involved review of the FS reports including preliminary design, a scoping visit, meetings with residents and other relevant stakeholders, preparation of a comprehensive ESIA package by an independent consultant in line with the EBRD Performance Requirements (PR), and disclosure of ESIA package for 120 days for public review and comment (the package was disclosed on 29 February 2024). The ESIA disclosure package includes (i) ESIA report, including Environmental and Social Management Plan (ESMP), (ii) Non-Technical Summary (NTS), (iii) Stakeholder Engagement Plan (SEP), and (iv) ESAP. All documents have been disclosed in English, Kazakh and Russian on the Company's website and on the Bank's website. ESIA studies included socio-economic impact assessment in the Project area and region, analysis of alternatives, noise assessment, air dispersion modelling, sludge management options, biodiversity, and climate change impact assessment, as well as assessment of the cumulative impacts. Stakeholder engagement activities took place before, during and after ESIA disclosure period. The Project has also been subject to national Environmental Impact Assessment process in December 2023, including public hearings, and received a positive conclusion of the State Ecological Expertise. The EBRD requirement of 120-day ESIA disclosure period has been completed, and during the public consultation and disclosure several public comments have been received primarily related to Project design alternatives and public consultation. The Project received attention from local and international civil society organisations (CSOs) that are keen to maximise benefits of this investment for the local population. A separate Public Consultation Report addressing all received comments has been prepared and will be disclosed prior to submission of the Project to the Board.

The Company does not have a corporate level Environmental Policy but has a high-level Occupational Health and Safety policy in place and some elements of E&S management planning via Operational Control Programs required in regulations and permits to meet the national requirements. However, overall E&S capacity to implement the Project in line with EBRD PRs is currently limited, and the Company will require further strengthening of its environmental and occupational health and safety through developing and implementing Environmental and Social Management System (ESMS) and procedures in line with international standards. The due diligence also confirmed that the Company has appropriate human resources procedures in place but needs to further develop a written HR policy, including coverage of gender equality and equal opportunities, prevention of gender-based violence and harassment in the workplace for both employees and contractors. Worker grievance mechanism also needs formalising, and any future optimisation of staffing, should it be required, will need to include preparation of an adequate Retrenchment Plan in line with PR2.

The site for the new WWTP is adjacent to the existing one and is situated to the south-west from the city with the closest residential buildings located at the distance of over 500 m. Through improved quality of WW treatment and better sludge management, the Project will enable significant odour reduction in the vicinity of the WWTP, which is the main concern expressed by the residents. Air dispersion modelling results indicate that the resultant estimated pollution concentrations will remain within the permissible limits within the sanitary protection zone for the new WWTP site. The analysis of different alternatives for sludge management and disposal concluded that the proposed solution combining biogas production facilities (anaerobic digester) and land application will provide an optimal solution. The Company will also be required to develop a plan for closure and rehabilitation of the existing sludge lagoons located in the old WWTP site area to prevent this major source of odour and pollution in the future. The Project area is potentially susceptible to increased water stress and drought, and the Project will support better climate resilience of the area through improving quality of treated effluent from the new WWTP as compared to the current situation and hence reducing pressure on the local water resources.

The Project involves no involuntary resettlement of the local communities and no economic displacement. The new WWTP construction will require 12.75ha state-owned land plot extension adjacent to the existing facility. Relocation of several small parts of the existing low-voltage overhead lines that are currently crossing the WWTP site will be required to the area along the perimeter of the new WWTP within the acquired land plot. The overhead lines relocation component will be financed from the municipal budget and implemented by the regional electric company that manages the power grid and therefore was assessed as an associated facility of the proposed Project.

The Project will have typical construction phase impacts that can be adequately managed through implementation of a construction phase ESMP. A traffic and transportation management plan and emergency response plan will also be required for managing health and safety impacts during construction and operation. There are no protected or sensitive areas in the vicinity of the Project, and the proposed site is not rich in biodiversity. The project area has been surveyed and no protected cultural heritage sites were identified within its footprint.

The Project is structured to comply with the Bank's PRs, including relevant national and the EU environmental requirements. The project ESAP and the ESMP have been prepared to address the findings of ESDD, improve E&S performance and implement the Project with due precautions and mitigation measures during construction and operation phases. The Company will also implement SEP and community grievance mechanism and develop and implement a robust E&S monitoring plan during Project implementation. ESAP has been agreed with the Company and will be attached to the legal agreements.

The Project will benefit from substantial TC assistance to support the implementation of the ESAP and SEP, including through PIS and LTM assistance. The Bank will monitor the Project's performance through annual E&S reporting.

6.2 INTEGRITY

In conjunction with OCCO, updated integrity due diligence was undertaken on the Company, its shareholders, senior management and other relevant parties. A review of the Company carried out by the team did not identify any integrity issues but presence of PEPs, which is justified by municipal/state ownership of the Company. The Bank has not identified any information suggesting conflicts of interest, indications of unfair benefits or preferential treatment due to their political roles, or indications that their source of wealth is linked to their PEP status, or any instances of abuse of political positions among these individuals.

All actions required by applicable EBRD procedures relevant to the prevention of money laundering, terrorist financing and other integrity issues have been taken with respect to the Project, and the Project files contain the integrity checklists and other required documentation which have been properly and accurately completed to proceed with the Project.

6.3 OTHER ISSUES

ANNEXES TO OPERATION REPORT

- ANNEX 1 PROJECT IMPLEMENTATION
- ANNEX 2 PROJECT DESCRIPTION & ECONOMIC ANALYSIS
- ANNEX 3 GREEN ASSESSMENT

ANNEX 1 – PROJECT IMPLEMENTATION

Procurement classification – *Sovereign*

[REDACTED]

The Client has no previous experience in implementing EBRD financed projects. To mitigate procurement risks, the Client is to be supported by an experienced Procurement Implementation Support (PIS) consultant to assist with Project management, procurement and supervision of works. The consultant will also make sure that the latest industry technologies and best practices are applied. In addition, the LTM (to cover several WWTP projects financed by the Bank under the Programme) will assist the Bank in monitoring the Project implementation.

Contracts risk assessment – Moderate High:

The Project encompasses a contract for the design and built of WWTP (FIDIC Yellow Book) to be procured through an open competitive single-stage procurement procedure. In accordance with Article 3.17 of the Bank's PPRs, contracts of this nature and magnitude shall normally be procured under a multi-stage procurement strategy. To mitigate the implementation risks, the strategy and suitability of the proposed single-stage procurement approach will be verified and confirmed by the PIS supporting the Client in project in procurement, implementation and supervision.

Project implementation arrangements:

The Client will establish a PIU acceptable to the Bank which will be responsible for the procurement of goods, works and services and contract administration under the Project. The Client will appoint a qualified project manager, who will be responsible for timely and efficient Project implementation. The Project implementation and design and built contract supervision will be further supported by the PIS.

ANNEX 2 – PROJECT DESCRIPTION & ECONOMIC ANALYSIS

Project Description: The new WWTP will be built east of the current facility, extending into a 12.75 ha area adjacent to the existing site. Key features of the new WWTP (per the Government approved Local FS) include:

Wastewater Treatment Process:

- Activated Sludge Treatment with Modified University of Cape Town Process: The treatment plant uses a process called activated sludge, which is a way to clean wastewater by using bacteria to break down pollutants removing carbon (organic matter) and nutrients like nitrogen and phosphorus. This process can handle 100,000 cubic meters of wastewater per day and ensures the water quality meets European Union and local standards.
- Ultraviolet Disinfection: After the wastewater is treated by the bacteria, it is passed through a ultraviolet disinfection system. This uses ultraviolet light to kill any remaining harmful germs and bacteria. After this, the treated water is sent to bio ponds in the existing treatment facility. These bio ponds help clean the water even more by removing tiny particles and leftover carbon, making the water safe to be released back into the environment according to strict local rules.

Sludge Treatment and Biogas Production:

• Anaerobic Digesters: The process also creates sludge (leftover solids from the wastewater treatment), and to manage this, the plant uses anaerobic digesters. These digesters break down the sludge without oxygen, turning it into biogas—a type of gas that can be used for energy. The plant expects to produce about 22,000 cubic meters of biogas per day, which will be used to generate energy. The digesters also create about 100 tons of treated sludge per day, which is then dried and processed to be used in agriculture (like a natural fertilizer).

Energy Generation:

• CHP: The biogas produced by the anaerobic digesters is used in a CHP facility. This system turns the biogas into both electricity and heat. The plant expects to generate about 7,689 MWh of electricity per year, which covers about 45 per cent of the energy needed for the plant's operations. The heat produced is used to keep the temperature in the digesters at the right level for breaking down the sludge. Any extra heat can be used to warm up buildings on-site.

The Project considers the ecological sensitivity of the Sokur River, the final destination for treated effluents. The Sokur River, characterized by its limited dilution capacity and affected by human activities, is classified as class 5 in water quality, indicating the poorest quality and underscoring the urgent need for effective environmental management and remediation.

ANNEX 3 – GREEN ASSESSMENT

Introduction

- The Project entails design and build of a WWTP including activated sludge technology, AD and CHP facility.
- The Project is assessed as aligned with the goals of the Paris Agreement based on the 'direct finance' methodology.
- The Project qualifies for **100 per cent GET** climate (adaptation and mitigation) and environment (sustainable use and protection of water and marine resources) finance.
- Climate-related financial risk (PC and CT score) is considered low.

Paris alignment assessment

The Project is assessed as aligned with the adaptation goals of Paris Agreement as it satisfies all three steps of the assessment (*BB2 aligned*).

GET attribution

- The Project is attributed climate (mitigation and adaptation) and environment (sustainable use and protection of water and marine resources) GET finance.
- The main GET impact expected out of the investment are:
 - <u>Climate change mitigation</u>: The improved WWTP sludge handling will substantially reduce the GHG emissions associated with WW treatment, compared to the current situation. The CHP unit that will produce heat and electricity from biogas generated via the AD facility will further contribute climate change mitigation compared to the baseline.
 - <u>Climate change adaptation</u>: Significant volumes of treated WW will be returned to the wider system thanks to the rehabilitated and expanded WWTP. This will lead to an increase in water availability for applicable uses (e.g., irrigation) and therefore enable climate resilience of the wider system against a local background of water stress and drought. Using reclaimed WW to redress the water scarcity issue is an express objective of this transaction.
 - <u>Environment Sustainable use and protection of water and marine resources:</u> The existing WWTP effluents do not fully meet EU and national effluent requirements, and raw sludge is dried and treated in sludge ponds without prior stabilization. The Project involves the construction of a new WWTP with an average influent WW capacity of 100,000 m3/day (GET outputs are based on the average figure), and a maximum daily capacity of 130,000 m3/day for the city of Karaganda. The most significant impact of the Project will be improvements in effluent quality to EU and national standards, and the sludge treatment will be much improved with the introduction of AD to the advanced WW treatment process. Both aspects are also expected to significantly reduce or eliminate current odour problems.

Conclusion: The Project is 100 per cent GET.