



**THE WORLD BANK**  
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SEISMIC RESILIENCE AND ENERGY EFFICIENCY  
IN PUBLIC BUILDINGS PROJECT  
(SREEPB PROJECT)

BOĞAZIÇI UNIVERSITY  
SARITEPE (KİLYOS) CAMPUS

ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

SEPTEMBER

2023



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## Abbreviations

BU	Bogazici University
BP	Bank Procedure
CİMER	Presidency's Communication Center
E&S	Environmental and Social
EA	Environmental Assessment
EIA	Environmental Impact Assessment
ESF	Environmental and Social Framework
EHS	Environment, Health, and Safety
ESS	Environmental and Social Standards
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
MoEUCC	Ministry of Environment, Urbanization, and Climate Change
WB	World Bank
dBA	Noise Reduction and Control
dBC	Noise Rating Measure
LOTO	Lock Out-Tag Out
SPP	Solar Power Plant
ILO	International Labor Organization
M&E	Monitoring and Evaluation
ITU	Istanbul Technical University
OHS	Occupational Health and Safety
SREEPB	Seismic Resilience Energy Efficiency Public Buildings
PPE	Personal Protective Equipment
Consultant	Tümaş & ATLASCert® & Hill Joint Venture
PIU	Project Implementation Unit
PV	Photovoltaic Panel
SGI	Social Security Institution
GM	Grievance Mechanism
GDCA	General Directorate of Construction Affairs

# Executive Summary

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Seismic Resilience and Energy Efficiency in Public Buildings Project (SREEPB) focuses on seismic strengthening and energy efficiency in public buildings such as higher education buildings, dormitories, social service institutions, hospitals, and government offices that are at high seismic risk and have low energy efficiency. This project, with reference number WB/CS-DESSUP-01, encompasses 32 structures on 11 campuses, including Bogazici University (BU), Marmara University, Istanbul Technical University (ITU), Istanbul University, Sakarya Government Office, and two Kocaeli student dormitories.

This document provides information about the structural strengthening and energy efficiency improvement works focused on the School of Foreign Languages (School of Foreign Languages - SFL) A and B Blocks, Social Facility, and the 1st Student Dormitory buildings located within the BU Saritepe (Kilyos) Campus. It also covers the national and international regulations applicable to these works and outlines the necessary measures to be taken during the works to maintain or eliminate adverse environmental and social impacts to an acceptable level, as well as measures related to occupational health and safety.

Furthermore, this Environmental and Social Management Plan (ESMP) provides information about stakeholder engagement activities to be conducted within the scope of the project and the establishment of a Grievance Mechanism (GM). It also outlines the roles and responsibilities of relevant parties involved in the project.

# Introduction

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This Environmental and Social Management Plan (ESMP) has been prepared within the framework of the Seismic Resilience and Energy Efficiency in Public Buildings (SREEPB) Project. It aims to outline the measures necessary to mitigate or eliminate the potential adverse environmental and social impacts and risks that may arise from structural strengthening and energy efficiency-focused renovation activities in three buildings consisting of eight blocks located within Bogazici University Saritepe (Kilyos) Campus in Gümüşdere Mahallesi, Sarıyer/İstanbul.

First and foremost, this ESMP has been prepared in accordance with Turkish legislation and, in addition, aligns with the policies, standards, and measures of the World Bank (WB). It clearly outlines who will implement the measures, when, how frequently, and in what manner during the various stages of project implementation.

# 1. General Project and Project Area Information

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## 1.1 Project Description

### 1.1.1. General Information and Objectives

The general purpose of the Seismic Resilience and Energy Efficiency in Public Buildings (SREEPB) Project; is to strengthen public buildings (educational buildings, dormitories, hospitals and administrative buildings) that are inefficient in terms of energy use and have a high earthquake risk, against earthquakes and to ensure energy efficiency.

The aim of the project is to determine the behavior of the ground and structural systems of existing public buildings with different uses against earthquakes and to eliminate the risks by structurally strengthening them, as well as to make improvements in terms of energy efficiency, to reduce energy consumption and CO2 emissions, to monitor and control energy consumption, to close the current deficit due to energy, and to develop the sector and raise awareness by creating a model for making all public buildings in Türkiye energy efficient after the project. SREEPB Project ensures that existing buildings are strengthened against earthquakes and made more efficient, as well as increasing social awareness about earthquakes and energy efficiency.

Structural strengthening works include building load-bearing system improvements and additions, as well as activities such as grouting and micro piling related to ground reinforcement (*limited only to the floors of the buildings in scope*). Studies focused on energy efficiency include facade and roof insulation, replacement of facade components such as windows and doors, mechanical system revisions, air conditioning system replacements, ventilation system revisions and replacements, integration of building energy monitoring and automation systems into the existing electrical system, electricity generation through solar panel installation. It covers issues such as.

Within the scope of the Environmental and Social Standards defined in the World Bank's Environmental and Social Framework (ESF), the SREEPB Project must ensure that the activities to be carried out will not create irreversible negative environmental and social impacts and risks, and that the possible impacts/risks are temporary and reversible. The Environmental Risk Rating is accepted as "Moderate" level since it is at a moderate level in terms of size and quality and the sub-project sites are not in sensitive areas in terms of environmental, social risks and impacts. They are also not expected to have serious adverse effects on human health and the environment.

All of the buildings within the scope of the sub-project subject to this ESMP are located in an isolated area within the BU Sartepe (Kilyos) Campus. Apart from the university, other buildings/structures or the district are not directly affected by the project activities in question. In addition, the buildings within the campus that are currently empty will be decommissioned during construction activities. Therefore, there is no conflict between the project activity schedule and daily activities.

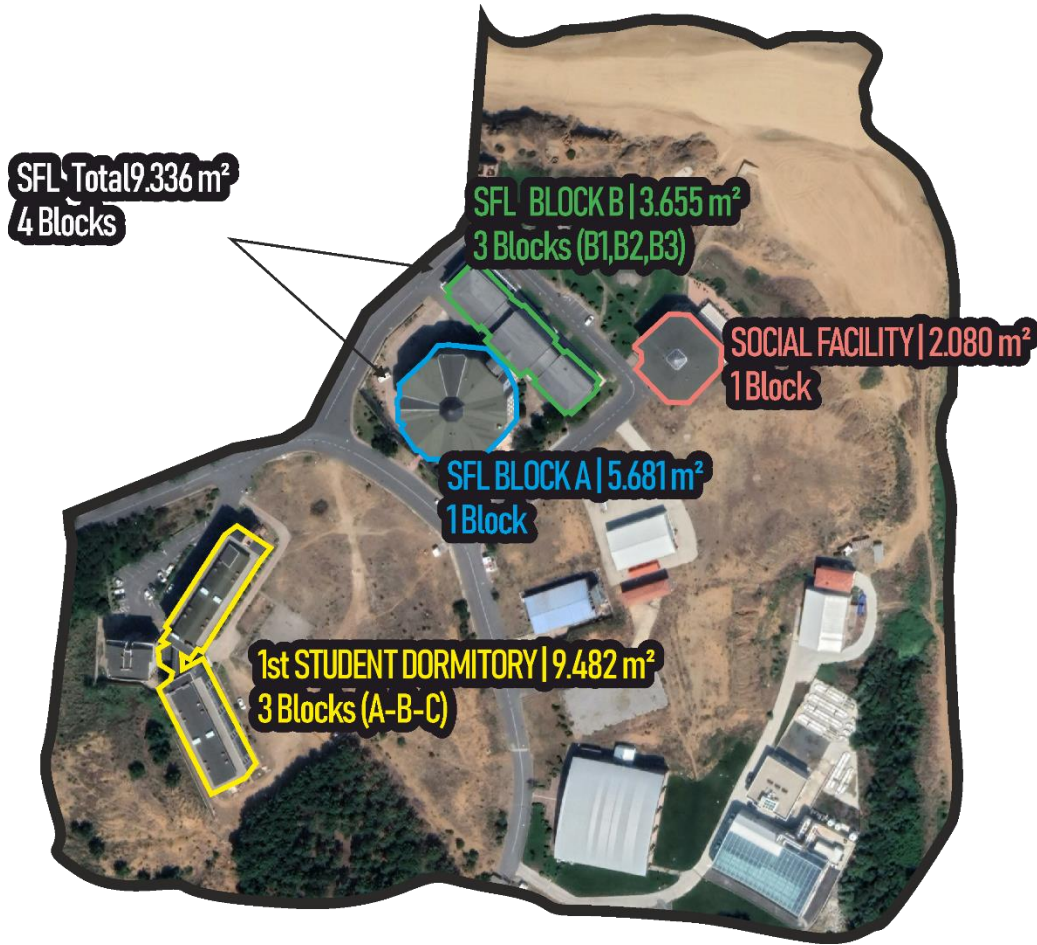
This ESMP (Environmental and Social Management Plan) has been prepared as a guidance document for the SREEPB Project to eliminate or, if not entirely possible, reduce to an acceptable level its environmental impacts such as waste generation (hazardous and non-hazardous), air and water pollution, as well as its impacts and risks on public health, safety, and occupational health and safety (OHS), in compliance with the requirements of the World Bank (WB) and relevant national legislation.

The project will be carried out by the Ministry of Environment, Urbanization, and Climate Change (MoEUCC) through the General Directorate of Construction Affairs (GDCA) with funding from the WB. GDCA will be responsible for the overall implementation, control, management, and coordination of the project. The preparation of the ESMP (Environmental and Social Management Plan) and its control during implementation will be the responsibility of the consulting firm, while the on-site

implementation of the ESMP will be the responsibility of the contractor. Following meetings with the beneficiary institution, Boğaziçi University, buildings with Earthquake Performance Reports were evaluated. Considering their location, use, and project selection criteria, it was decided to prioritize three (3) buildings located within the Saritepe (Kilyos) Campus in the Sarıyer district. These three buildings consist of eight blocks in total.

### 1.1.2 Project Information

Within the scope of the project, the satellite image of the buildings located in Saritepe Kilyos Campus and detailed information about the buildings are provided in Figure 1 and Table 1, respectively.



**Figure 1: BUILDINGS INCLUDED IN THE SCOPE OF THE SARITEPE (KİLYOS) CAMPUS PROJECT**

**Table 1: GENERAL INFORMATION ABOUT BUILDINGS**

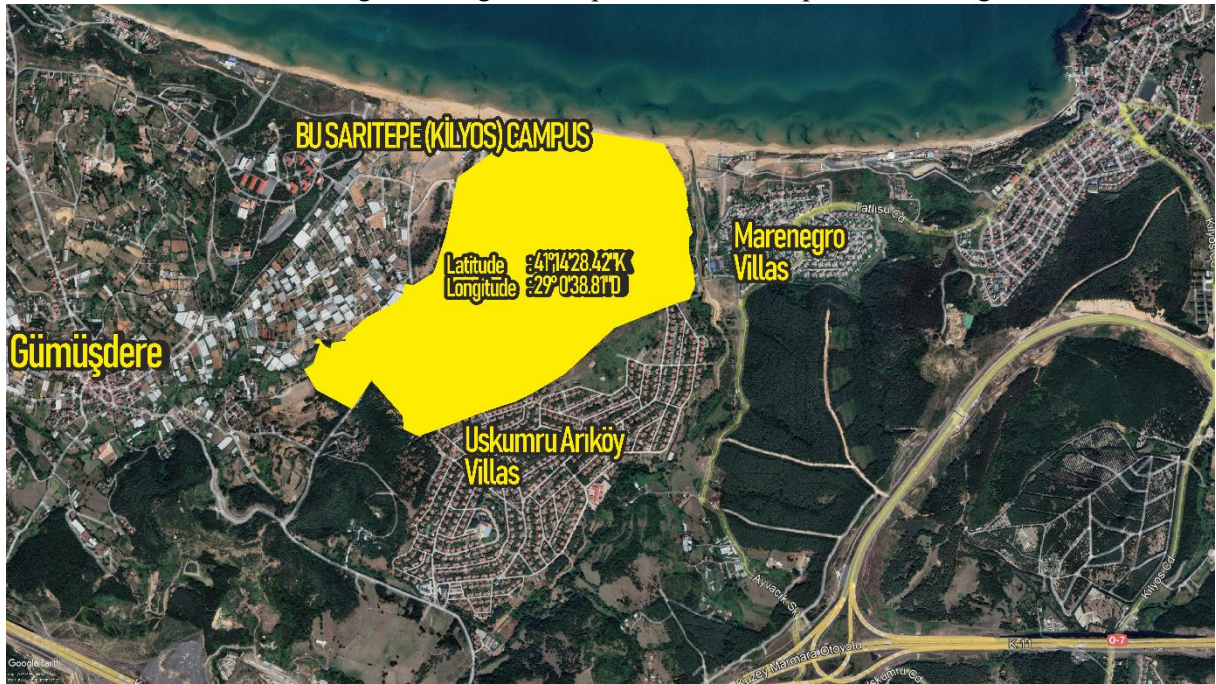
<b>CAMPUS NAME</b>	Bogazici University Saritepe (Kilyos) Campus
<b>BUILDING NAMES (included in the project)</b>	<ul style="list-style-type: none"> <li>• 1<sup>st</sup> Student Dormitory – (9482m<sup>2</sup>)</li> <li>• Dormitory and Social Facility (2080m<sup>2</sup>)</li> <li>• School of Foreign Languages (SFL) A &amp; B BLOCK (9336m<sup>2</sup>)</li> </ul>
<b>PROVINCE</b>	İSTANBUL
<b>DISTRICT</b>	SARIYER
<b>NUMBER OF USERS</b>	~4,500 people
<b>BUILDING INFORMATION</b>	



<b>CONSTRUCTION AREA</b>	~20.900,00m <sup>2</sup>
<b>THE PLANNED WORKS TO BE CARRIED OUT IN ALL BUILDINGS INCLUDED IN THE PROJECT</b>	
<b>STRUCTURAL REINFORCEMENT</b>	<ul style="list-style-type: none"> <li>• Building ground reinforcement (Micro Pile)</li> <li>• Existing load-bearing system reinforcement</li> <li>• Additional load-bearing system manufacturing</li> <li>• Floor, ceiling, wall and door renovations due to structural strengthening activities</li> </ul>
<b>ENERGY EFFICIENCY</b>	<ul style="list-style-type: none"> <li>• Facade and roof thermal insulation</li> <li>• Door replacements</li> <li>• Circulation system engine/pump replacements</li> <li>• Non-insulated installation elements, thermal insulation installation for heat exchangers</li> <li>• Central boiler replacements</li> <li>• Additional heat pump facility (will be integrated into the existing mechanical installation to meet/support the need for internal air conditioning)</li> <li>• Lighting element replacements (one-to-one replacements will be carried out, electrical installation intervention (line, column line replacement, etc.) is out of the question)</li> <li>• Self-consumption-oriented solar power plant facility (on the roof) (to be integrated into the existing supply line)</li> <li>• Energy monitoring and automation system facility (to be integrated into the existing electrical system)</li> </ul>
<b>DURATION AND SEASON OF ACTIVITIES</b>	
All the activities to be carried out within the scope of the project will be completed between the fourth quarter of 2023 and the third quarter of 2024. The contractor is obligated to complete the work on the buildings within the planned timeframe as specified in the Job Description. Additionally, the Contractor will inform all stakeholders clearly and in advance about the construction activities' schedule before commencing any construction work.	
<b>EXPECTED NUMBER OF WORKERS</b>	
The total estimated number of workers in the buildings is expected to be an average of 90 personnel per day.	

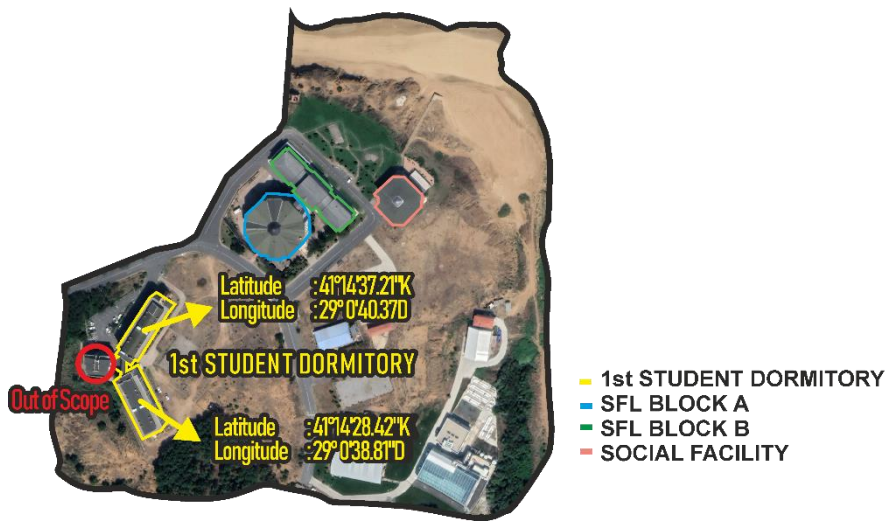
### 1.1.3 Locations of Campus & Buildings

The satellite image showing the campus boundaries is presented in Figure 2.



**Figure 2: CAMPUS BORDERS AND COORDINATES**

Coordinates and approach limits of the buildings within the scope of the project are given in Figure 3-4-5-6.



**Figure 3: 1. STUDENT DORMITORY BLOCK COORDINATES & OUT OF SCOPE BLOCK**

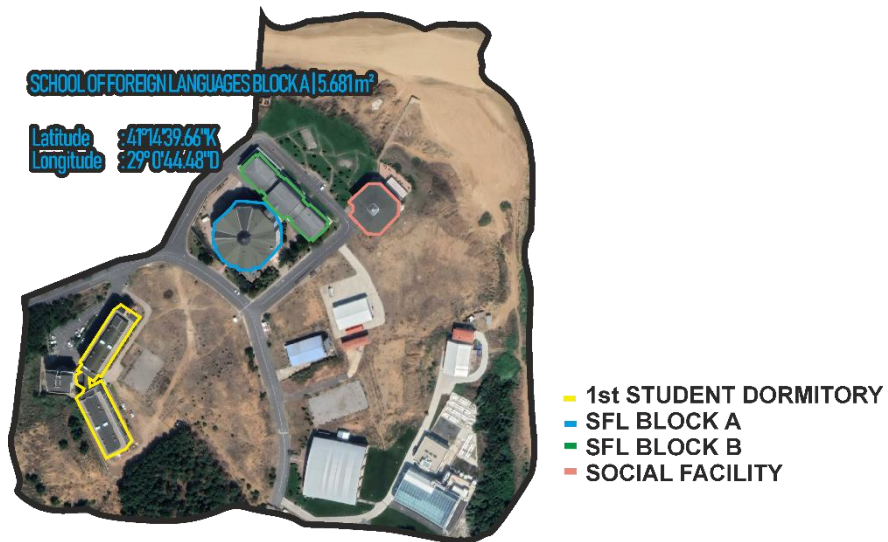


Figure 4: SFL A BLOCK COORDINATES

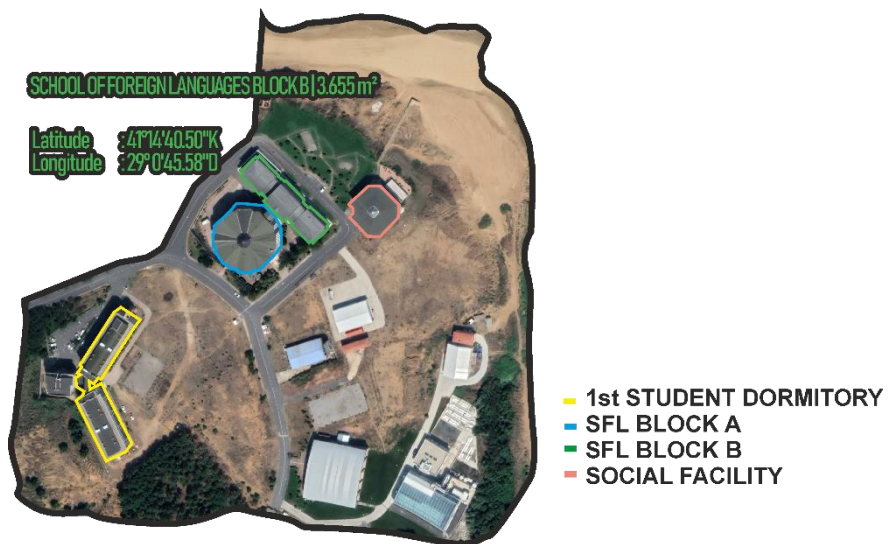


Figure 5: SFL B BLOCK COORDINATES

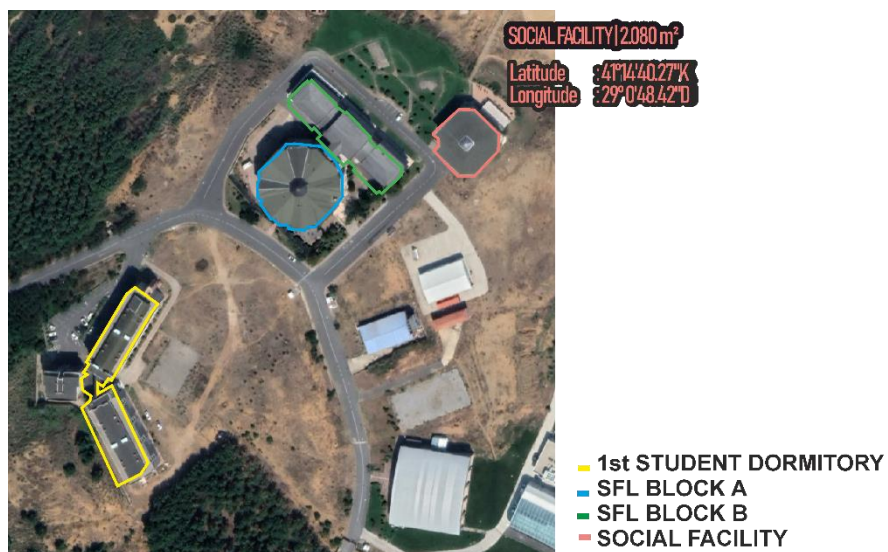
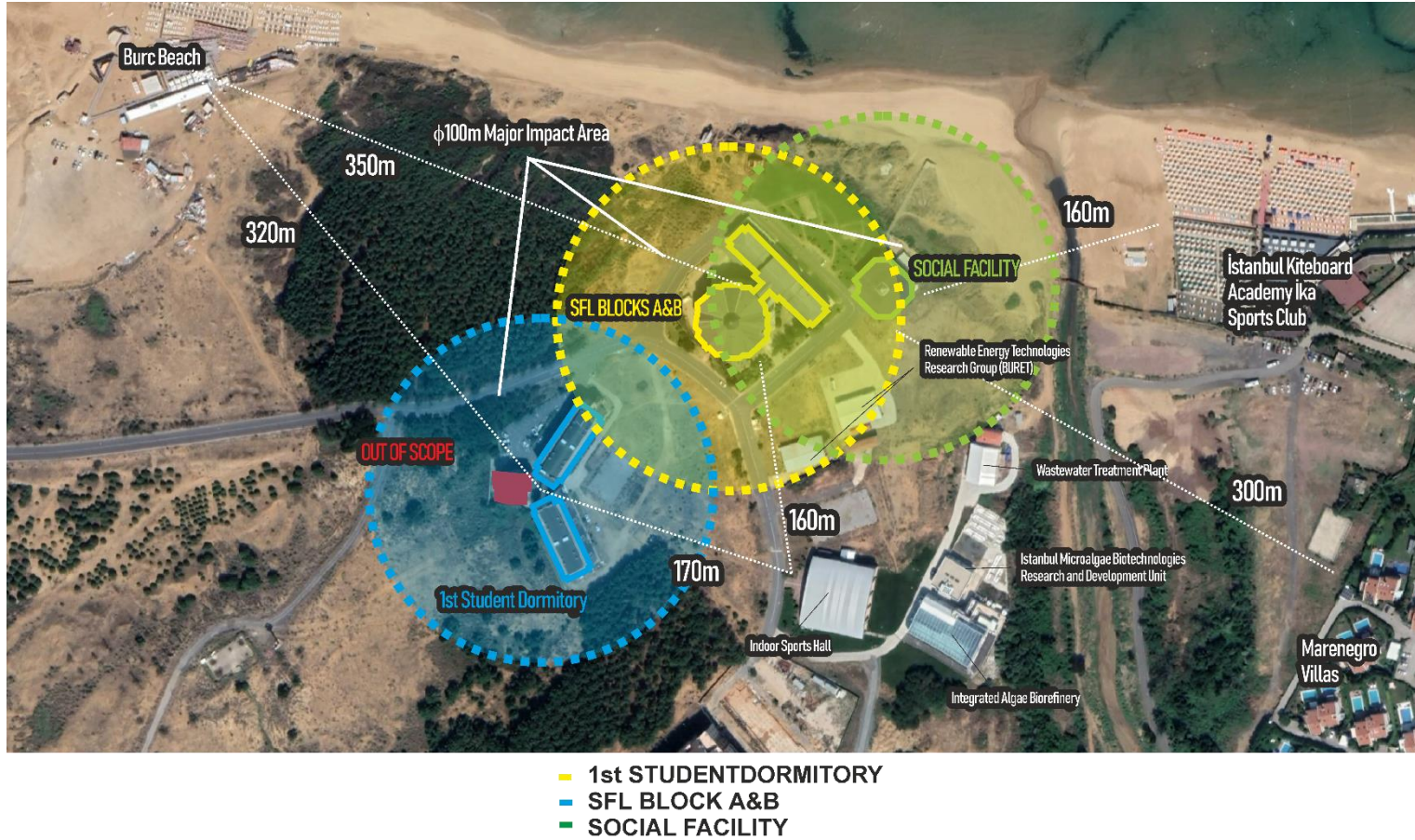


Figure 6: SOCIAL FACILITY COORDINATES

In the context of soil improvement works required for strengthening in the structures covered by the project, an approximate impact area (distance it can affect when moving) of about 100 meters has been envisaged, taking into account the movements of drilling machines, and it has been incorporated into the satellite image in Figure 7. Additionally, potential adverse effects during building strengthening construction, such as noise and dust generation, increased traffic, parking space constraints, and visual impacts affecting surrounding buildings, have been limited to a distance of 160 meters. The major impact area is also shown in Figure 7.



**Figure 7: APPROACH DISTANCES AND MAJOR AREA OF IMPACT OF THE BUILDINGS INCLUDED IN THE SCOPE OF THE PROJECT**

Solid models of the buildings within the scope of the project are given in Annex I.

## 2. Compliance with Legal Framework and World Bank Environmental and Social Framework (ESF)

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### 2.1 National Regulation

The ESMP has been primarily prepared in accordance with the legislation of the Republic of Türkiye. The fundamental framework of Türkiye's environmental legislation is the Environmental Law (Law No. 2872), which was first Published in the Official Gazette dated August 11, 1983, and last revised in the Official Gazette dated June 15, 2022, with issue number 31867. This law is supported by regulations. Below are the regulations primarily utilized/ to be utilized for the assessment and prevention of environmental impacts within the scope of this project.

1. Waste Management Regulation was published in the Official Gazette dated 2 April 2015 and numbered 29314.
2. Regulation on the Control of Packaging Wastes was published in the Official Gazette dated 26 June 2021 and numbered 31523.
3. Regulation on the Control of Excavation Soil, Construction and Demolition Wastes was published in the Official Gazette dated 18.03.2004 and numbered 25406, and an amendment was made in the Official Gazette numbered 31623 dated 09 October 2021.
4. Air Quality Assessment and Management Regulation was published in the Official Gazette dated 06 June 2008 and numbered 26898.
5. Regulation on the Prevention of Risks of Exposure to Biological Agents was published in the Official Gazette dated 15 June 2013 and numbered 28678.
6. Zero Waste Regulation was published in the Official Gazette No. 30829 dated 12 July 2019 and an amendment was made in the Official Gazette No. 31623 dated 09 October 2021.
7. Regulation on Control of Soil Pollution and Contaminated Sites by Point Sources was published in the Official Gazette No. 27605 dated 8 June 2010 and was last revised in the Official Gazette No. 28704 dated 11 July 2013.
8. Water Pollution Control Regulation was published in the Official Gazette dated 31 December 2004 and numbered 25687, and was last amended in the Official Gazette numbered 32046 dated 17 December 2022.
9. Environmental Noise Control Regulation was published in the Official Gazette No. 32029 dated 30 November 2022.
10. The Regulation on Noise Emission in the Environment Created by Equipment Used in Open Areas was published in the Official Gazette No. 26392 dated 30 December 2006 and an amendment was made in the Official Gazette No. 30088 dated 06 June 2017.

Within the scope of the project, activities related to Occupational Health and Safety, taking into account the primary impacts, will be carried out in compliance with the legislation, including the Labor Law No. 4857 published in the Official Gazette dated June 10, 2003, with issue number 25134, and the Occupational Health and Safety Law No. 6331 Published in the Official Gazette dated June 30, 2012, with issue number 6331, along with related regulations. Below are the regulations that will be primarily utilized.

1. The Regulation on Health and Safety Measures in Working with Asbestos was published in the Official Gazette No. 28539 dated 25 January 2013 and an amendment was made in the Official Gazette No. 28884 dated 16 January 2014,
2. Manual Handling Regulation was published in the Official Gazette No. 28717 dated 24 July 2013.
3. Regulation on Occupational Health and Safety in Temporary or Fixed-Term Works was published in the Official Gazette No. 28744 dated 23 August 2013.
4. Regulation on Health and Safety Measures in Working with Chemical Substances was published in the Official Gazette No. 28733 dated 12 August 2013.

5. Regulation on the Use of Personal Protective Equipment in Workplaces was published in the Official Gazette dated 02 July 2013 and numbered 28695.
6. Health and Safety Signs Regulation was published in the Official Gazette No. 28762 dated 11 September 2013.
7. The Regulation on the Vocational Training of Those to be Employed in Hazardous and Very Hazardous Class Jobs was published in the Official Gazette dated 13 July 2013 and numbered 28706, and an amendment was made in the Official Gazette dated 11 May 2017 and numbered 30063.
8. Dust Fighting Regulation was published in the Official Gazette dated 5 November 2013 and numbered 28812.
9. Regulation on Occupational Health and Safety in Construction Works was published in the Official Gazette No. 28786 dated 5 October 2013 and an amendment was made in the Official Gazette No. 30642 dated 31 December 2018.
10. Regulation on the Protection of Employees from Noise-Related Risks was published in the Official Gazette No. 28721 dated 28 July 2013.
11. The Regulation on the Procedures and Principles of Occupational Health and Safety Training of Employees was published in the Official Gazette No. 28648 dated 15 May 2013 and an amendment was made in the Official Gazette No. 30430 dated 24 May 2018.
12. The Regulation on Health and Safety Conditions in the Use of Work Equipment was published in the Official Gazette No. 28628 dated 25 April 2013 and an amendment was made in the Official Gazette No. 31754 dated 18 February 2022.
13. The Regulation on the Duties, Powers, Responsibilities and Training of Occupational Safety Experts was published in the Official Gazette dated 29 December 2012 and numbered 28512, and an amendment was made in the Official Gazette dated 6 July 2021 and numbered 31533.
14. Regulation on Occupational Hygiene Measurement, Test and Analysis Laboratories was published in the Official Gazette dated 24 January 2017 and numbered 29958.
15. Occupational Health and Safety Services Regulation was published in the Official Gazette No. 28512 dated 29 December 2012 and an amendment was made in the Official Gazette No. 31533 dated 6 July 2021.
16. Occupational Health and Safety Risk Assessment Regulation was published in the Official Gazette No. 28512 dated 29 December 2012.
17. The Regulation on Emergency Situations in Workplaces was published in the Official Gazette No. 28681 dated 18 June 2013 and an amendment was made in the Official Gazette No. 31615 dated 1 October 2021.
18. The Regulation on Suspension of Work in Workplaces was published in the Official Gazette No. 28603 dated 30 March 2013 and an amendment was made in the Official Gazette No. 29621 dated 11 February 2016.
19. The Regulation on the Duties, Powers, Responsibilities and Training of Workplace Physicians and Other Health Personnel was published in the Official Gazette dated 20 July 2013 and numbered 28713, and an amendment was made in the Official Gazette dated 6 July 2021 and numbered 31533.
20. Regulation on Health and Safety Measures in Working with Screened Vehicles was published in the Official Gazette No. 28620 dated 16 April 2013.
21. Regulation on the Protection of Employees from Vibration-Related Risks was published in the Official Gazette No. 28743 dated 22 August 2013.
22. Regulation on Supporting Occupational Health and Safety Services was published in the Official Gazette No. 28861 dated 24 December 2013.
23. Regulation on Occupational Health and Safety Boards was published in the Official Gazette No. 28532 dated 18 January 2013.
24. Regulation on Health and Safety Measures to be Taken in Workplace Buildings and Attachments was published in the Official Gazette No. 28710 dated 17 July 2013.
25. The Regulation on the Working Conditions of Pregnant or Breastfeeding Women, Breastfeeding Rooms and Child Care Dormitories was published in the Official Gazette No. 28737 dated 16

August 2013, and an amendment was made in the Official Gazette No. 30881 dated 7 September 2019.

26. The Regulation on the Working Conditions of Female Employees in Night Shifts was published in the Official Gazette No. 28717 dated 24 July 2013 and an amendment was made in the Official Gazette No. 30159 dated 19 August 2017.

To determine the basic insurance rights during the employment of all workers, the Social Security and General Health Insurance Law No. 5510 dated June 16, 2006, will be applied.

Additionally, the Environmental Impact Assessment (EIA) Regulation, under Article 10 of the Environmental Law, was first published in the Official Gazette dated February 7, 1993, with issue number 21489, and was last revised and published in the Official Gazette dated July 29, 2022, with issue number 31907. Since the construction activities will take place in publicly-owned existing buildings, the project is not subject to the EIA Regulation.

Significant social and environmental impacts resulting from the project are likely to affect sensitive receptors located near the project area. In this context, the careful management of ESMPs and OHS activities will be sufficient to reduce environmental and social impacts.

## **2.2 International Conventions**

1. European Union Council Directive 89/391/EEC dated 12/6/1989, concerning measures to improve the health and safety of workers at work.
2. International Labour Organization (ILO) Convention No. 155, concerning Occupational Safety and Health and the Working Environment.
3. International Labour Organization (ILO) Convention No. 161 concerning Occupational Health Services.
4. International Labour Organization (ILO) Convention No. 187 concerning the Promotional Framework for Occupational Safety and Health.
5. International Labour Organization (ILO) Convention No. 167 concerning Safety and Health in Construction.
6. United Nations Framework Convention on Climate Change.
7. Paris Agreement on Climate Change.
8. Long-Range Transboundary Air Pollution Convention.



## 2.3 World Bank Environmental and Social Framework (ESF) and Standards

The project will adhere to the national legislation as well as the World Bank Environmental and Social Framework <sup>1</sup> (ESF) and the relevant Environmental, Health, and Safety (EHS) Guidelines<sup>2</sup> at all stages.

The Environmental and Social Standards (ESS) summarized in Annex II are one of the components of the World Bank Environmental and Social Framework, and they define the requirements for the project owner in terms of identifying and assessing environmental and social risks and impacts associated with projects supported by the World Bank. The applicability of the World Bank Environmental and Social Standards to the SREEPB Project is summarized in Table 2.

**Table 2: THE APPLICABILITY OF THE WORLD BANK ENVIRONMENTAL AND SOCIAL STANDARDS TO THE PROJECT.**

Environmental and Social Standards	Applicability
ESS1: Assessment and Management of Environmental and Social Risks and Impacts	Yes
ESS2: Labor and Working Conditions	Yes
ESS3: Resource Efficiency and Pollution Prevention and Management	Yes
ESS4: Community Health and Safety	Yes
ESS5: Land Acquisition, Restrictions on Land Use, and Involuntary Resettlement	No <sup>3</sup>
ESS6: Biodiversity Conservation and Sustainable Management of Living Natural Resources	No <sup>4</sup>
ESS7: Indigenous Peoples/ Sub-Saharan African Historically Underserved Traditional Local Communities	No <sup>5</sup>
ESS8: Cultural Heritage	Yes
ESS9: Financial Intermediaries	No <sup>6</sup>
ESS10: Stakeholder Engagement and Information Disclosure	Yes

<sup>1</sup> <https://www.worldbank.org/en/projects-operations/environmental-and-social-framework>

<sup>2</sup> <https://www.ifc.org/en/insights-reports/2000/general-environmental-health-and-safety-guidelines#:~:text=The%20Environmental%2C%20Health%2C%20and%20Safety,and%20in%20IFC's%20Performance%20Standards>

<sup>3</sup> None of the activities carried out within the scope of this project will cause land acquisition, any restrictions on land use, or involuntary resettlement. All work will be conducted within existing buildings.

<sup>4</sup> There will be no interaction with natural resources and/or biodiversity elements as a result of any activity conducted within the scope of the project.


<sup>5</sup> There are no indigenous groups in Turkey that meet the definition provided in ESS7.

<sup>6</sup> Since there is no involvement of any financial intermediary institution in this project, ESS9 will not be applicable to this project.

### 3. Activities to be Conducted within the Scope of the Project

Summary Technical Information on the Structural strengthening and energy efficiency works to be conducted at Bogazici University Saritepe (Kilyos) Campus in Sarıyer/Istanbul is provided in Table 3 below. This ESMP will be accessible to all stakeholders at the construction sites and on the project website ([www.kamuguclendirme.csb.gov.tr](http://www.kamuguclendirme.csb.gov.tr)). In addition, in order for stakeholders to have sufficient information to review the document before the Stakeholder Engagement Meeting, it should be published on the websites of the project and Bogazici University 7 days before in advance. The Contractor will employ a full-time environmental and occupational health and safety (OHS) specialist within their organization, while the Construction Control Consultant company will employ an environmental, social, and OHS specialist. The Consultant will be responsible for recording and responding to environmental, social, and questions and comments from stakeholders, including the Contractor and the Ministry Project Implementation Unit.

**Table 3 SUMMARY INFORMATION ABOUT THE ACTIVITIES TO BE CONDUCTED**

FIELDWORK	
DEFINITION OF THE GEOGRAPHICAL, PHYSICAL, BIOLOGICAL, GEOLOGICAL, HYDROGRAPHIC, AND SOCIO-ECONOMIC CONTEXT	<p>As a result of the conducted soil survey, liquefaction risk has been identified. To mitigate this risk, the foundations of the buildings within the project scope will be strengthened through soil injection. During this process, impermeable piles will be driven into the ground at points close to the building facade (2-5m deep). After the piles are installed, concrete will be poured into voids in the foundation, allowing for the injection methodology to be applied at specific angles from designated points around the building. This will prevent the pressurized cement grout injection from spreading within the soil and reaching the surroundings, ensuring that it remains within the foundation base and fills voids while increasing the bearing capacity of the soil.</p> <p>It is not expected that this process will negatively impact underground biological diversity (species that nest underground) or plant roots (based on distance, depth, borehole width, concrete formula). In cases where trees are located near the drilling site, these trees will be relocated. The areas around the mentioned structures have been assessed in this context, and risky zones have been marked accordingly.</p>  <p><b>Figure 8 RISKY VEGETATION AROUND THE 1<sup>ST</sup> STUDENT DORMITORY BUILDING</b></p>



**Figure 9: RISKY VEGETATION AROUND SFLA BLOCK**

During the project activities, the surrounding area of the project site is soil. Necessary measures will be taken to prevent the contamination of soil with hazardous chemicals during the work in this area. Detailed precautions against potential adverse conditions are explained in Section 5. There are no foreseen transportation issues for accessing the project area, and all infrastructure facilities such as electricity, water, sewage, natural gas, and internet required for the work are accessible.


THE LOCATIONS AND DISTANCES OF THE NEAREST SENSITIVE RECEPTORS, SUCH AS HOSPITALS, HEALTHCARE FACILITIES, PUBLIC BUILDINGS, AND HOUSES

The project site is within the Bogazici University Saritepe Campus area. The construction processes of other buildings located outside the campus are not directly affected.

- The BU Renewable Energy Technologies Research Group (BURET) building located within the major impact area of SFL and the Social Facility, as well as the Residential building located next to the student dormitories and excluded from the project scope, are expected to be affected by the construction process. Potential issues such as noise, dust, vibration, and the spread of excavation waste outside the construction site may adversely affect the occupants/workers in these buildings. Detailed information about this matter and the measures to be taken can be found in Section 5 of the document.
- The measured distances from the buildings outside the university to the buildings within the project scope are as follows:
  - İstanbul Kiteboard Ac. İKA Spor Kl. - 160-200m
  - Marenegro Villas - 300-350m
  - Burc Beach - 320-350m

Given the proximity of İstanbul Kiteboard to the project area, there is a possibility that the project activities may have potential environmental and social impacts (such as dust, noise, public health, and safety, etc.) on İstanbul Kiteboard and its operations. Detailed measures to control, reduce, or eliminate potential environmental and social risks and impacts arising from project activities are provided in Section 5 of this document.

- The İstanbul Kiteboard Ac. İKA Sports Club, Marenegro Villas, and Burc Beach, which are located in close proximity to the project area, are considered sensitive receptors. Measures to ensure that these sensitive receptors are not adversely affected by potential environmental and social risks and impacts from the project are presented in Section 5 of this document. There are no other sensitive receptors in the immediate vicinity of the project site. The nearest full-fledged hospital to the project area is Sarıyer Hamidiye Etfal Research Hospital, located approximately 17 km away (16.4 km via 1st Avenue, 17.6 km via Kilyos Sarıyer road). Considering traffic conditions, travel by car is estimated to take approximately 30 minutes. This information will be considered when preparing occupational health and safety emergency action plans.

<p>TRAFFIC ACTION PLAN</p>	<p>The satellite image of Bogazici University Saritepe Campus is provided under the “1.1.3 Campus &amp; Building Locations” heading. When evaluating this satellite image, it is not expected to encounter any problems in the transportation of materials required for construction activities. Access roads and regulations are specified in the Traffic Action Plan.</p>  <p><b>Figure 10: TRAFFIC ACTION PLAN</b></p>
<p>SEWAGE SYSTEM, ELECTRICITY, WATER NETWORKS, ETC. INFRASTRUCTURE USED BY THE PROJECT</p>	<p>During the construction activities, the existing sewage, electricity, and water networks in the area will be utilized. Domestic waste will be disposed of through municipal services, and temporary storage areas will be established for other waste materials, which will then be disposed of by licensed companies. In the event of any specific infrastructure service requirements for the project (such as sewage line blockages resulting in overflow requiring septic truck services, prolonged power outages necessitating mobile generators, prolonged water shortages requiring water tanker services for dust control, etc.), the existing infrastructure facilities will be evaluated, and the necessary actions will be taken in accordance with relevant regulations.</p>

<p>NATIONAL LEGISLATION AND PERMITS APPLICABLE TO THE PROJECT ACTIVITY (EG. SPP INSTALLATION ETC.)</p>	<p>The existing building permits will be used for the unlicensed electricity generation application of the SPP facility.</p> <p>The documents to be obtained for Unlicensed Electricity Generation are not limited to the following:</p> <ul style="list-style-type: none"><li>• Documents required for the Call Letter from the Authorized Electricity Distribution Company,<ul style="list-style-type: none"><li>▪ Unlicensed generation connection application form,</li><li>▪ Non-fixed subscriber number,</li><li>▪ Receipt showing the application fee has been deposited into the account of the relevant network operator,</li><li>▪ Single Line Diagram showing the technical specifications of the facility to be installed,</li><li>▪ SPP Technical Evaluation Form prepared by the Directorate General of Renewable Energy, personnel program,</li><li>▪ Approved coordinated application diagram,</li><li>▪ Building occupancy permit in roof-type applications,</li></ul></li><li>• SPP Static Projects (Roof-Top SPP Plants) - University Approval</li><li>• "Connection Opinion" and "Connection Agreement Call Letter" to be obtained from the relevant distribution company</li><li>• System Basic Information Form</li><li>• Technical project and calculations</li><li>• Municipality Compliance Letter for SPP (According to the Zoning Regulation Legislation)</li></ul> <p>An application for the installation of photovoltaic panels under the "Regulation on Unlicensed Electricity Generation in the Electricity Market" has been initiated by the Consultant through the authorized energy distribution company.</p>
<p>STAKEHOLDER ENGAGEMENT PROCESS</p>	

<p><b>STAKEHOLDER ENGAGEMENT PROCESS</b></p>	<p>The first stakeholder engagement meeting regarding feasibility studies (determination of structural reinforcement needs, energy feasibility studies) conducted before the site assessment was held face-to-face on March 9, 2023. During this meeting, general information was provided about the technical details, objectives, and stages of the project (see Annex VII).</p> <p>Before the implementation of the prepared and approved projects, a stakeholder information meeting was conducted on September 20, 2023, with the aim of providing information on the technical, social, and environmental details of the project. During this meeting, detailed information was provided regarding the structural retrofitting and energy efficiency renovations to be carried out at the Kilyos Campus, and the anticipated environmental and social impacts were communicated. The beneficiary institution's management and technical units, building users, resident faculty members on the campus, experts from the consulting firm, and experts from the Project Implementation Unit (PIU), attended the meeting. However, student participation was not possible as academic activities at Bogazici University had not yet commenced. In total, 27 individuals participated in the meeting, as of 8 women and 19 men and including Social Specialist of the PIU, in-person. Additionally, online participation was facilitated for experts from the Project Implementation Unit, as Structural Engineering, Civil Engineering, Occupational Health and Safety, and Environmental Engineering (3 women and 1 man) (detailed information can be found in Annex VII).</p> <p>Before the information meeting, this ESMP was made accessible to stakeholders by being disclosed on both the project's and Bogazici University's websites for a period of 7 days. Furthermore, printed copies of this ESMP were made available for stakeholders in all buildings involved in the project for a minimum of 7 days. Details regarding the Grievance Mechanism established specifically for the project are provided in Section 4.</p>
<p><b>ISSUES AND CONCERNS RAISED BY BUILDING USERS</b></p>	<p>During the 1st stage stakeholder engagement meeting, building users were informed about the structural retrofitting and energy efficiency renovation process, and they were asked if they had any concerns, opinions, suggestions, or questions regarding these potential activities. However, as of the date this report was prepared, there has been no feedback from any stakeholders, either written or verbal, or through the project's Grievance Mechanism, related to the project.</p> <p>Whether students and other building users have any concerns about these studies was discussed during stakeholder engagement meetings and recorded in the meeting minutes. Stakeholder views, suggestions, and concerns are included in Annex VII. Based on the additional data obtained during these meetings, this document has been revised accordingly.</p>
<p><b>INSTITUTIONAL CAPACITY DEVELOPMENT</b></p>	

TRAINING	<p>Under the project, it is expected that the contractor's corporate capacity will improve as a result of the training provided by the Consultant to the Contractor's personnel. These training sessions are listed below:</p> <ul style="list-style-type: none"><li>• Environmental and Social Impacts</li><li>• Waste Management</li><li>• Response to Environmental Emergencies</li><li>• Energy Efficiency</li><li>• Stakeholder Engagement/Information Activities</li><li>• Grievance Mechanism (GM)</li><li>• Gender Equality/Gender-Based Violence/Sexual Exploitation/Sexual Abuse/Sexual Harassment</li><li>• Code of Conduct</li><li>• Preservation of Historical Heritage</li><li>• Implementation and Monitoring of the OHS Plan</li><li>• Tagging and Lockout Training</li><li>• Work Permit System Training</li></ul>
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## 4. Stakeholder Engagement and Grievance Mechanism (GM)

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Stakeholder Engagement is an inclusive process that will be carried out throughout the project's lifespan. It supports the establishment of strong, constructive, and responsive business relationships, which are vital for the successful management of environmental and social impacts and risks associated with the project. Stakeholder Engagement Meetings help manage stakeholder expectations that may affect the management of risks, potential disputes, and project delays by ensuring early, frequent, and open communication throughout the project. Therefore, prior to the site assessment (determination of structural strengthening needs, energy studies), stakeholder information meetings were organized regarding feasibility studies. These meetings provided general information about the project's reasons, objectives, and stages (see Annex VI and Annex VII). Before the prepared and approved projects are implemented, another stakeholder engagement meeting will be organized with the participation of the consulting firm, beneficiary institution management and technical units, building users, and PIU. This meeting will take place within 5 working days after the draft version of this ESMP is approved and published, with the aim of providing information on the technical, social, and environmental details of the project, answering any questions stakeholders may have, and collecting their opinions.

In order to ensure that all stakeholders are informed about how the project will be conducted on-site and to provide an opportunity for objections and suggestions, this ESMP has been displayed in the building where the work is being carried out for a period of seven (7) days. Additionally, Bogazici University will publish the approved ESMP on its website. Following the completion of the display period, a Stakeholder Engagement Meeting was held on September 20, 2023.

This ESMP, including information about the stakeholder engagement meeting that conveyed the activities conducted during the feasibility stage and those planned, will be available on the SREEPB Project's website (<https://kamuguclendirme.csb.gov.tr/>) throughout the project's .

Information regarding the stakeholder engagement meeting that conveyed the activities conducted during the feasibility stage and those planned is available in AnnexVI. Information about the meeting that conveyed the anticipated environmental and social impacts of the investment can be found in AnnexVII.

The Grievance Mechanism is designed to provide effective access to a procedure for those affected by the project or relevant parties. can be an indicator of stakeholder concerns and may increase if not identified and addressed. Identifying and responding to supports the development of positive relationships among project staff, local communities, and other stakeholders.

The Ministry of Environment, Urbanization, and Climate Change has established various alternative methods for institutional grievance and suggestion collection.

The Ministry of Environment, Urbanization, and Climate Change's Project Implementation Unit (PIU) has developed a transparent and comprehensive Grievance Mechanism (GM) specifically for the SREEPB Project to receive, evaluate, and resolve grievances, opinions, and suggestions that may arise during activities conducted in public buildings under the SREEPB Project, before the project implementation begins. The GM will assist all relevant stakeholders in conveying their, opinions, and suggestions regarding the planned activities to the relevant individuals and institutions, thereby enhancing their participation in the project. This mechanism also allows all project employees (PIU, Consultant, Contractor) to submit their /suggestions/opinions to the Ministry and the World Bank, either anonymously or with their identity disclosed. The responsibilities and roles of the Contractor, consultant firm, and PIU are detailed in the Stakeholder Engagement Framework of the Project ([https://webdosya.csb.gov.tr/db/kamuguclendirme/menu/sreepb-p175894\\_paydas-katilim-cercevesi-mayis-final\\_20210521122305.pdf](https://webdosya.csb.gov.tr/db/kamuguclendirme/menu/sreepb-p175894_paydas-katilim-cercevesi-mayis-final_20210521122305.pdf)). Additionally, all parties involved in the project are obligated to



implement the Environmental and Social Management Plan, Stakeholder Engagement Framework, and Labor Management Procedure of the Project.

Within the scope of the SREEPB Project, will be addressed at multiple levels:

- a) At the contractor level;
- b) At the consultant level;
- c) At the Provincial Directorates of the MoEUCC level.
- d) At the national level, at the MoEUCC Project Implementation Unit (PIU).

**a) Contractor Level:** If the contractor cannot resolve / concerns / views / recommendations related to construction work under the SREEPB Project, they are obliged to forward these applications to the relevant individuals/institutions in accordance with the Mechanism Procedure of the project. Contractors are also required to report their records, including both resolved and unresolved /concerns/views/recommendations, to the Consultant on a weekly basis. Contractors must resolve grievances within a maximum of 15 calendar days.

**b) Consultant Level:** /concerns/views/recommendations that cannot be addressed at the contractor level will be handled by the social specialist of the Consultant Firm, who serves as the Construction Controller. The Project Manager, following the Resolution Mechanism Procedure, will prepare a situation report, reminding the contractor of their responsibilities and ensuring that necessary corrective actions are taken to resolve the issue.

The Consultant will assure all personnel involved in the project that they can use the GM, and that using it will not affect the renewal of their contracts in the future. If the Project Manager cannot resolve /concerns/views/recommendations, they are obliged to refer them to the Ministry of Environment, Urbanization, and Climate Change. The Consultant firm is responsible for resolving within a maximum of 15 calendar days.

The Consultant will also report both direct grievances/concerns/views/recommendations they receive and those conveyed by the contractor to the Ministry of Environment, Urbanization, and Climate Change on a weekly basis.

**c) Provincial Directorate of Environment, Urbanization, and Climate Change Level:** To the extent possible, the Provincial Directorate of Environment, Urbanization, and Climate Change will be responsible for handling /concerns/views/recommendations received regarding activities carried out within the scope of the SREEPB Project.

Provincial directorates will also promptly forward all grievances/ concerns / views / recommendations received, whether or not they resolve them, to the Authority.

**d) MoEUCC:** Within the scope of the SREEPB Project, MoEUCC is responsible for collecting, recording, and resolving all grievances/concerns/views/recommendations expressed by stakeholders through the levels mentioned above. MoEUCC is responsible for resolving the collected grievances/concerns/views/recommendations within 15 calendar days and informing the complainant about the results. However, in cases requiring detailed investigation, this period can be extended to 30 calendar days.

For related to gender-based violence, sexual abuse, and harassment, it is recommended to use the web-based grievance system provided in Annex III for the sake of confidentiality. To ensure confidentiality, authorized personnel will have access to this web-based grievance system.

The Ministry of Environment, Urbanization, and Climate Change has established various alternative methods for institutional grievance and suggestion collection.

These channels for submitting grievances and suggestions to the authorities, including the Directorate of Communications (DOC), are provided below:

**Table 4: GM COMMUNICATION CHANNELS**

Call Center	: ALO 181
Phone	: 0312 586 4858
E-mail	: <a href="mailto:yigmkadev@csb.gov.tr">yigmkadev@csb.gov.tr</a>
Grievance	: <a href="https://kadevoneri.csb.gov.tr/oneri.jsp">https://kadevoneri.csb.gov.tr/oneri.jsp</a>   Suggestion and grievance boxes installed in buildings

The communication channels for the GM include wall posters in all buildings (posted on walls where suggestion and boxes are located) and the distribution of project brochures to raise awareness. Additionally, all project personnel are responsible for informing stakeholders in their surroundings about the suggestion and grievance mechanisms. They will be provided with information on this matter before the project commences. Further details on this issue are explained in the Stakeholder Engagement Framework (SEF) ([https://webdosya.csb.gov.tr/db/kamuguclendirme/menu/sreepb-p175894\\_paydas-katilim-cercevesi-mayis-final\\_20210521122305.pdf](https://webdosya.csb.gov.tr/db/kamuguclendirme/menu/sreepb-p175894_paydas-katilim-cercevesi-mayis-final_20210521122305.pdf)).

The Construction Contractor is responsible for receiving, recording, and resolving, opinions, and suggestions during the renovation of public buildings. Every contractor appointed to carry out construction work will establish a system to receive and record, opinions, and suggestions related to construction activities from building management, employees, visitors, and beneficiaries. The contractor will record grievances, opinions, and suggestions using the Grievance and Suggestion Form and the Grievance Closure Form provided in Appendices V and VI. Verbal, opinions, and suggestions will be recorded by the responsible personnel of the contractor by filling out the Grievance and Suggestion Form. The contractor is obliged to send the recorded grievances to the Project Manager every week. The Project Manager is responsible for reporting the received, suggestions, and requests to the MoEUCC on a weekly basis.

Records related to grievances, opinions, and suggestions will be regularly shared by MoEUCC with the World Bank (WB). Additionally, individuals or communities who believe they have been adversely affected by projects supported by the WB can submit their grievances through the project-level Grievance Mechanism (GM) available or directly to MoEUCC, or through the WB's Grievance Redress Service (GRS) at (<https://www.worldbank.org/en/projects-operations/products-and-services/grievance-redress-service>).

Stakeholders affected by the project can also submit their grievances to the WB Inspection Panel. This panel determines whether individuals or communities who file grievances have been or could be harmed as a result of a violation of one or more of the WB's performance criteria. The Panel can directly communicate its concerns about received grievances to the WB, at which point the WB has the opportunity to respond to the grievances. For information on how to submit grievances to the WB Inspection Panel, please visit [www.inspectionpanel.org](http://www.inspectionpanel.org).

## 5. Environmental and Social Risks & Effects and Measures to be Taken

Table 5 LIST OF ENVIRONMENTAL & SOCIAL EFFECTS AND MEASURES TO BE TAKEN

IMPLEMENTATION / CONSTRUCTION PHASE	RISK & IMPACTS	MEASURES	RESPONSIBILITY
Renovation and Retrofitting Works for Seismic Resilience and Energy Efficiency Improvement in Public Buildings	<p><b>a) OHS</b></p> <p>Potential adverse safety and health impacts for workers, the local population, and employees may arise due to the following factors:</p> <p>- Potential injuries that workers may be exposed to due to factors such as working at heights, working with hazardous materials, and using electrical tools;</p>	<ul style="list-style-type: none"> <li>Local construction and environmental regulatory authorities and communities will be informed about the activities to be undertaken.</li> <li>The public will be informed through stakeholder participation, in the media, and/or through appropriate notifications in public places.</li> <li>All necessary permits, as required by law, will be obtained for construction and/or improvement.</li> <li>Regular site inspections will be conducted by the Project Implementation Unit (PIU) and the Consultant to ensure that all construction activities are carried out in compliance with national laws and regulations and the requirements of the World Bank standards.</li> <li>Detailed information and analyses related to occupational health and safety are included in the Occupational Health and Safety Plan prepared for the same campus.</li> </ul>	<p>Project Implementation Unit (PIU)</p> <p>Consultant</p>
		<ul style="list-style-type: none"> <li>The Contractor shall immediately inform the MoEUCC in the event of a significant incident. MoEUCC will report all types of significant incidents (such as accidents, leaks, deaths, etc.) to the World Bank within 48 hours and will submit an incident</li> </ul>	<p>Consultant</p> <p>PIU</p> <p>Contractor</p>

	<p>-Failure to comply with national and defined international occupational health and safety requirements in the workplace;</p>	<p>investigation report along with a corrective action plan to the World Bank within 30 business days.</p> <ul style="list-style-type: none"> <li>• Regular site inspections will be conducted by the PIU and the Consultant to ensure that all construction activities are carried out in compliance with national laws and regulations and the requirements of the World Bank standards.</li> <li>• Health and safety measures and environmental measures related to the restructuring of the public building will be detailed in the project-specific Waste Management Plan and Occupational Health and Safety Management Plan.</li> <li>• The Contractor company will prepare its own OHS plan for the work it will carry out, taking into account the Occupational Health and Safety (OHS) Plan prepared by the Consultant.</li> </ul>	<p>Consultant          PIU          Contractor</p>
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		<ul style="list-style-type: none"><li>• Before construction work begins, a Risk Assessment study will be conducted for all tasks to be performed. Relevant procedures and plans, including Risk Assessment, safety procedures, training, monitoring, case investigation, and reporting, as well as Emergency Plans, will be included in Health and Safety Plans (Health and Safety Plans, prepared by audit consultants and developed by contractors by adding site-specific risk assessments, procedures, instructions), (including Asbestos Work Requirements and Precautions presented in Annex-8 of the ESMF (<a href="https://webdosya.csb.gov.tr/kamuguclendirme/menu/SREEPB-p175894_csync_finall100521--mayis_20210510070430.pdf">https://webdosya.csb.gov.tr/kamuguclendirme/menu/SREEPB-p175894_csync_finall100521--mayis_20210510070430.pdf</a>)) such as the Asbestos-Containing Structure Dismantling Procedure.</li><li>• Proper signage will be used on construction sites to inform workers of basic rules and regulations they should follow.</li><li>• Occupational Health and Safety (OHS) training will be provided to employees, identifying potential risks related to the work site and tasks, and weekly and monthly site safety meetings will be conducted.</li><li>• The contractor formally acknowledges that all work will be carried out in a safe and disciplined manner to minimize the impact on local community and the environment as designed.</li><li>• The contractor will appoint personnel/responsible/experts with relevant certification and experience in occupational health and safety.</li><li>• The contractor will provide personal protective equipment (PPE) (such as helmets, masks, safety glasses, safety harnesses, and safety boots, when required) in accordance with international best practices and Turkish legislation to ensure a safe working environment for workers before construction activities commence.</li><li>• Suitable rest areas for employees to rest during breaks will be provided by the contractor in consultation with building</li></ul>	Consultant Contractor
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		<p>management (<i>number of employees, break times</i>) and with their permission and approval.</p> <ul style="list-style-type: none"><li>• Dining areas for employees will be established in areas designated by the building technical units under the written permission and approval of the University administration.</li><li>• Changing rooms (lockable) for employees will be provided within the buildings with the written permission and approval of the University administration. These areas will be determined by building technical staff, and the use of areas outside of these designated spaces will be strictly prohibited. Employees will be informed by the contractor not to keep valuable items in these areas, and the University administration will not be responsible for any theft or similar incidents that may occur in these areas. This information will also be posted on warning signs.</li><li>• Toilet facilities for employees will be provided from building infrastructure with the written permission and approval of the University administration. In cases where existing infrastructure cannot be used, WC containers will be arranged by the contractor for the use of workers and will contain all necessary hygiene materials. However:<ul style="list-style-type: none"><li>▪ Employees will be able to use the toilets allowed/allocated for them in the building. The contractor will inform their employees about which toilets are allowed/allocated based on the number of employees. Monitoring and control regarding this restriction will be the responsibility of the contractor.</li><li>▪ The contractor will educate their employees on the proper use of these toilets in compliance with hygiene rules, and if any misuse is detected, the cleaning responsibility will be on the contractor.</li><li>▪ The contractor will provide all necessary materials for hygiene that employees may need.</li></ul></li></ul>	
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		<ul style="list-style-type: none"><li>• The contractor will provide work uniforms that display the project name to easily distinguish the employees.</li><li>• Employees are strictly prohibited from engaging in discussions with building technical units and campus users for any reason. In case of any problems related to individual or activities, employees will immediately report three situation to their supervisor (Responsible supervisor's contact information will be provided to all employees by the contractor). The contractor will document and report such situations to the consultant. Any decision/action related to this process will be carried out in accordance with the knowledge and approval of the building management.</li><li>• If necessary, approval from the building management will be obtained for night work. All activities will be conducted in accordance with both the Occupational Health and Safety Law (Official Gazette dated June 30, 2012, and numbered 28339) and the relevant regulations, as well as the Environmental, Health, and Safety (EHS) Guidelines of the World Bank Group (WBG).</li><li>• In the event of an outbreak or pandemic/infectious disease, guidance, guidelines, and recommendations provided by the Ministry of Health, the Ministry of Labor and Social Security, and the World Health Organization will be followed. Relevant measures for both employees and workplaces will be taken for occupational health and safety.</li><li>• Unauthorized third parties will be prevented from entering the construction site. The names of the personnel to be employed in the construction site, along with their required training certificates, will be submitted to the consultant in a list format. Employees with appropriate training and personal protective equipment will enter the construction site with ID cards.</li><li>• Individuals under the age of 18 will not be allowed to enter the construction site.</li></ul>	
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		<ul style="list-style-type: none"><li>• Smoking areas within the construction site will be determined by the contractor.</li><li>• Food, beverage, break/rest, toilet, and restroom needs will be provided in areas designated by the technical units within the building where work will be conducted. This matter will be under the knowledge of university administrations. Employees working on the project will not leave the designated areas.</li><li>• Hygiene materials necessary for workers will be provided by the contractor. Sewerage infrastructure in the region will be used for wastewater. Packaged water (in plastic bottles, glass bottles, etc.) will be provided to the workers as drinking water.</li><li>• Clean potable water will be provided through the existing building's infrastructure. Consumption of this water as drinking water will be prohibited. The contractor will provide personal protective equipment (PPE) in compliance with Turkish regulations, including international best practices and health and safety measures related to pandemics provided by the Ministry of Health and the Ministry of Labor and Social Security. This includes monitoring and controlling the use of PPE (<i>such as always wearing helmets, using respiratory protective equipment when necessary, protective eyewear, full-body safety harnesses, and foot protection, etc.</i>).</li><li>• PPE and working clothes will be stored separately from employees' personal clothing, and closed dressing rooms will be established within the building for this purpose.</li><li>• In case of work accidents resulting in lost workdays, accident investigations will be conducted and reported.</li><li>• Workers who will work at heights (such as façade insulation, roof insulation, roof-mounted PV applications, etc.) will receive theoretical and practical training on working at heights. The health report of individuals working at heights will indicate their suitability</li></ul>	
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		<p>for working at heights, as determined by the workplace physician. Before work commences, a plan for working at heights will be prepared, and work permits will be obtained. Work at heights will be carried out under the supervision of competent personnel and occupational safety experts. Fall protection systems and working at height equipment will be selected in accordance with relevant regulations, and their maintenance, inspection, and repair will be performed by trained personnel.</p> <ul style="list-style-type: none"> <li>• All work equipment to be used will undergo regular inspections and maintenance as required, their compliance with standards and CE markings will be verified, and relevant records will be maintained. Otherwise, the equipment will not be allowed into the work area. Employees responsible for using the equipment will receive job-specific training.</li> <li>• Maintenance forms for field equipment will be provided, regular maintenance and repairs will be carried out, and individuals responsible for maintenance and repairs will be designated.</li> <li>• When new equipment and innovations are introduced in the work process, risk assessments will be updated, and all personnel will be informed and trained on any changes.</li> <li>• Prior to entering the site, all lifting equipment, pressure vessels, and boilers will undergo periodic inspections, and access approval will be granted after inspection by the consultant.</li> <li>• All machinery, equipment (including scaffolding), and hand tools entering the site will be checked for compliance with TSE standards and CE certification. Entry approval will be granted by the consultant after verification. Planning for material procurement, shipping processes, and storage areas will be ensured.</li> <li>• For every ten (10) workers working in the same building, the contractor will have one (1) employee with a First Aid Certificate, and if the number of workers is less than 10, at least one (1) first aider</li> </ul>	
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		<p>will be present. Each team working in different buildings will be evaluated separately.</p> <ul style="list-style-type: none"><li>• Procedures for working with hazardous chemicals and the creation of storage areas for materials will be established. Chemical substances will be brought to the site after checking their safety data sheets.</li><li>• Workers without vocational competency certificates will not be employed.</li><li>• All employees will start work only after completing basic OHS training and orientation. Training will be updated as required by regulations.</li><li>• Renovation areas inside and outside the buildings will be marked with warning tapes. Sufficient warning signs will be installed to restrict access to these areas.</li><li>• Visitors will not be allowed to approach renovation areas. However, in necessary cases, building technical staff with expertise will be allowed to enter these areas under the supervision of authorized employees to monitor the process, take necessary safety measures, and use appropriate personal protective equipment (PPE). Training documents will be prepared for those entering the site under the supervision of authorized employees, and they will receive training before entering the site.</li><li>• A construction method and risk assessment will be conducted for every activity to be carried out in the field.</li><li>• An work permit system will be established for hazardous activities such as night work, working at heights, excavation work, welding work, etc.</li><li>• A lockout-tagout system will be established for work on energized lines, such as maintenance and repair work involving hazardous voltage. Employees will receive special training on this system.</li></ul>	
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		<ul style="list-style-type: none"><li>• A discipline enforcement system for OHS non-compliance in the field will be established, and all employees will receive training on this matter.</li><li>• Construction activities are primarily scheduled during daylight hours. However, if night work is required, the entire work area, access paths, and hazardous areas shall be well lit.</li><li>• Procedures will be prepared for situations that may occur during construction activities and require emergency response, such as fires, earthquakes, chemical spills, etc., to ensure control of public and environmental health. These procedures will be shared with all employees.</li><li>• If there will be a disruption in electrical, water, or natural gas supply, whether short or long-term, due to construction activities, the necessary security measures will be taken, and building users will be informed of the interruption well in advance.</li><li>• Employee health screenings, entry documents (personnel files), training documents, PPE delivery records, approved logbooks, and all other documents and records required by OHS regulations will be kept in the workplace. All these documents will be ready for presentation during inspections by the Consultant and the Ministry.</li><li>• An organizational chart outlining roles, responsibilities, and contact information for OHS will be created under the OHS heading.</li><li>• In case of changes to public building entrances during construction, appropriate structures for disabled users will be provided.</li><li>• The OHS Plan to be prepared will also address public health, and a person and position responsible for communication with building users and the local community will be defined in the plan.</li><li>• Records of all activities and incidents (<i>meetings, inspections, supervision, training, accidents, fires, etc.</i>) conducted during the construction phases will be kept.</li></ul>	
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		<ul style="list-style-type: none"><li>• In accordance with the SREEPB Project Labor Management Procedure and covering all contractors and subcontractors:</li><li>• In compliance with the specific Labor Management Procedure for the project, a written and signed social policy/commitment statement will be created, stating that the contractor will not engage in forced or compulsory labor, employ child labor or uninsured workers, discriminate among workers (<i>age, gender, religion, language, race, etc.</i>), use force, mistreat, bully, insult, or demean workers. This document will also emphasize the need for all contractor employees to pay attention to these matters in their relationships and communications with each other.</li><li>• Measures will be taken to prevent the spread of infectious diseases (<i>including sexually transmitted diseases and infections such as HIV</i>) and non-infectious diseases resulting from the performance of construction works. In this context, especially considering that vulnerable and fragile community groups are at different levels of risk, preventive and mitigating measures will be taken. Measures will be implemented to prevent the transmission of infectious diseases and reduce their impact, which may arise from temporary or permanent labor mobility related to the contract.</li></ul>	
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<p>Renovation and Retrofitting Works for Seismic Resilience and Energy Efficiency Improvement in Public Buildings</p>	<p><b>b) OHS</b></p> <p>Possible adverse health effects on workers, facility users, children, and the general public due to asbestos fiber and dust emissions during the removal, transportation, and final disposal of asbestos layers</p>	<ul style="list-style-type: none"> <li>• The project site will be illuminated throughout the night.</li> <li>• No waste will be disposed of in the surrounding area, and this area will be kept clean. Waste must be collected and removed from the construction site.</li> <li>• Any broken glass during the process will be immediately cleaned.</li> <li>• Work areas will be separated from inhabited areas of the building using physical barriers.</li> <li>• The cleaning schedule of the building will be supplemented to remove the extra dust and dirt generated by the demolition work; Dangerous materials will be handled in accordance with safety guidelines for storage, transportation, and distribution to minimize misuse, leaks, and accidental exposure.</li> <li>• Old windows and doors will be temporarily stored in a secure location designed to prevent unauthorized access.</li> <li>• Regular maintenance will be conducted on vehicles to minimize the risk of accidents due to equipment failure or early breakdowns.</li> <li>• Both training sessions and incidents (such as fatalities, lost-time accidents, leaks, fires, etc.) will be documented.</li> <li>• In the event of a significant incident, the contractor will immediately inform the MoEUCC. The MoEUCC will report any significant incident (such as accidents, leaks, fatalities, etc.) to the World Bank within 48 hours and submit an incident investigation report, along with a corrective action plan, to the World Bank within 30 working days.</li> </ul>	<p>Contractor</p>
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	<p><i>c) Safety</i></p>	<ul style="list-style-type: none"><li>• The contractor will be responsible for the safety of all personnel and individuals within the construction site from the moment construction work commences.</li><li>• In the event of any damage occurring during construction work, the Contractor will compensate for all damages incurred by the Beneficiary Institution, Employer, and/or third parties.</li><li>• During the works, the safety regulations of the Ministry of Labor and Social Security of the Republic of Türkiye and the rules of the Ministry of Health will be taken into consideration. The relevant regulations will be used as a general reference during the construction.</li><li>• The Contractor will have qualified personnel specifically responsible for safety and protection against accidents on the site. This person will be responsible for the Contractor's entire workforce and labor, as well as the Project Manager, the employer's personnel on the site, equipment, offices, and other facilities. This individual will possess the necessary qualifications for the job, have the authority to give instructions, and be capable of taking all necessary measures to prevent accidents. The Contractor will establish a dedicated team for this purpose.</li><li>• The Contractor will take all necessary safety precautions to ensure that the materials and equipment to be used in the spaces where construction will take place are not damaged.</li><li>• A security team consisting of an adequate number of guards will cooperate with the City Security Forces and strictly follow all rules and instructions received from them. The Contractor will have at least one night guard for the construction site.</li><li>• The scrap parts of machinery, equipment, and systems that have been replaced will be delivered to the building management without causing any damage.</li></ul>	<p>Contractor</p>
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		<ul style="list-style-type: none"> <li>These machine, equipment, and system parts will be transported by the contractor to the area requested by the building management (inside the building and/or within the campus). The transportation and delivery process will be documented with a delivery report. As of the date when this report is signed by both parties, the responsibility for the scrap parts will belong to the building management.</li> </ul>	
Renovation and Retrofitting Works for Seismic Resilience and Energy Efficiency Improvement in Public Buildings	<p><b>d) Waste Management</b></p> <p>Various waste streams and improper waste management may lead to potential adverse environmental and health effects (improper waste management can result in direct and indirect pollution of water and soil and can affect air quality).</p>	<p><b><u>General Information</u></b></p> <ul style="list-style-type: none"> <li>The PIU and the consultant will monitor the implementation of environmental and social impact mitigation measures as specified in the Environmental and Social Management Plan through site inspections.</li> <li>Regular site inspections will be conducted by the PIU and the Consultant to ensure that all construction activities are carried out in compliance with national laws and regulations as well as the requirements of the World Bank's ESF.</li> </ul>	PIU Consultant
		<ul style="list-style-type: none"> <li>The Waste Management Plan will be prepared by the consultant as specified in Annex 9 of the Environmental and Social Management Framework.<sup>7</sup></li> <li>Waste collection and disposal methods and areas for all types of waste expected to be generated from renovation, demolition, and construction activities will be defined within site-specific Waste Management Plans.</li> <li>Daily visual site inspections will be conducted by the consultant to monitor the implementation of impact mitigation measures.</li> </ul>	Consultant

<sup>7</sup> [https://webdosya.csb.gov.tr/WB/kamuguclendirme/menu/SREEPB-p175894\\_csync\\_final100521--mayis\\_20210510070430.pdf](https://webdosya.csb.gov.tr/WB/kamuguclendirme/menu/SREEPB-p175894_csync_final100521--mayis_20210510070430.pdf)

		<ul style="list-style-type: none"> <li>• During construction activities, all types of waste will be separated at the source and transported to temporary waste storage areas selected in accordance with project and legal requirements, as informed by the beneficiary institution. (The temporary storage period is limited to 6 months.)</li> <li>• The temporary storage areas will be designated by the contractor in consultation with the University Administration, and the consultant will be informed of these areas.</li> <li>• If a protocol is signed between the contractor and the beneficiary institution, the existing waste management system can be used. However, through the protocol, the contractor will be responsible for covering the costs associated with their own waste.</li> <li>• The contractor will, if possible, reuse and recycle appropriate and feasible materials (except asbestos).</li> <li>• Documentation related to waste disposal and recycling will be regularly maintained. An Waste Record Information Form will be prepared for the purpose of keeping these records.</li> <li>• Hazardous wastes will be sent to licensed disposal facilities using the Integrated Environmental Information System through the online waste management application of the Ministry of Environment, Urbanization and Climate Change.</li> <li>• During construction activities, when vehicle tires need to be replaced, old tires will be disposed of through businesses engaged in tire distribution and sales, as well as licensed transport vehicles.</li> </ul> <p><b><u>Excavation, and Drilling Wastes:</u></b></p> <ul style="list-style-type: none"> <li>• During drilling, the stones, rocks, and similar materials extracted will be stored at the same location as construction and demolition wastes. If such wastes arise during drilling, especially if they can be reused as infrastructure materials, they will be given priority for recycling.</li> </ul>	<p>Contractor</p>
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		<ul style="list-style-type: none"><li>• Temporary mud ponds will be created to prevent the dispersion of the liquid mud generated during drilling. These ponds will be closed and restored to their original state after the drilling process.</li><li>• In the event of designated materials resulting from dismantling activities, a document will be obtained from the building management confirming the delivery of the materials.</li><li>• The collection of construction/demolition wastes and their priority recycling, especially for use as infrastructure materials, will be addressed. Excavation wastes will be sent to the relevant municipal waste storage facility. A formal letter from the Municipality stating that the wastes will be accepted at the site will be obtained and submitted to the Administration.</li></ul> <p><b><u>Waste Batteries and Accumulators:</u></b></p> <ul style="list-style-type: none"><li>• Waste batteries and accumulators will be transported to authorized disposal facilities for waste batteries and accumulators within the municipal boundaries through authorized transportation companies.</li></ul> <p><b><u>Hazardous Wastes:</u></b></p> <ul style="list-style-type: none"><li>• If hazardous waste is temporarily stored on the project site, it will be kept in secure, leak-proof, safe containers that comply with internationally accepted standards. These containers will be labeled as hazardous waste, and information such as the waste code, quantity, content, characteristics, storage conditions, and storage date of the stored substance will be indicated on the containers. Hazardous substances can be temporarily stored for a maximum of 6 months. (Temporary storage areas will be determined by the contractor in accordance with the regulations and will be reported to the University Administration after obtaining permission.)</li><li>• Containers storing hazardous materials and waste oils will be placed in impermeable concrete areas to prevent spillage and leakage into the soil.</li></ul>	
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		<ul style="list-style-type: none"><li>• Harmful substances such as paints with toxic content, solvent, or lead-based chemicals will not be used.</li><li>• The management of hazardous waste will be carried out in accordance with the Waste Management Regulation.</li><li>• Possible hazardous chemical substances and wastes that may occur on the construction site will be sent to licensed disposal facilities using the online program Integrated Environmental Information System (E-ÇBS) of the Ministry of Environment, Urbanization, and Climate Change.</li><li>• Spill containment and leakage absorbent pad kits will be readily available in the work areas. All personnel in charge will undergo training on protection and emergency response related to hazardous chemical spills and leaks.</li><li>• In the event of medium and large-scale environmental accidents, an accident investigation will be conducted and reported.</li><li>• Used fluorescent lamps removed during renovation/construction work will be disposed of at licensed facilities. The necessary documents for transportation and disposal of the material will be kept at the construction site and will be presented to the MoEUCC and the World Bank upon request.</li></ul> <p><b><u>Domestic Waste:</u></b></p> <ul style="list-style-type: none"><li>• Domestic wastes will be separated at the source (plastic, glass, paper, etc.) and efforts will be made to recycle materials that can be recycled. Employees will receive training on proper waste separation.</li><li>• Waste that cannot be recycled will be collected in sealed sanitary waste bins, and it will be sent to the sanitary landfills through the Sariyer Municipality's solid waste collection system.</li></ul> <p><b><u>Asbestos:</u></b></p>	
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		<ul style="list-style-type: none"><li>• If asbestos is present on the project site, it will be clearly marked as a hazardous material.</li><li>• In the case of asbestos being present on the project site, it will be properly stored and sealed to minimize its impact.</li><li>• When asbestos removal is necessary, a wetting agent will be used to keep asbestos dust to a minimum before the removal.</li><li>• All procedures related to asbestos are outlined in Annex 8 of the <u>Environmental and Social Management Framework</u> document. (The contractor will act in accordance with the content of this document.)</li><li>• If asbestos material needs to be temporarily stored, the waste should be kept in secure containers and properly labeled. Security measures will be taken to prevent unauthorized removal from the site.</li><li>• Removed asbestos will not be reused and will be disposed of in accordance with national regulations and sent to licensed facilities. Necessary documents for transportation and disposal of the material will be kept at the construction site and will be presented to the MoEUCC and the World Bank if requested.</li><li>• Paints containing toxic components, solvents, or lead-based paints will not be used.</li></ul>	
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Renovation and Retrofitting Works for Seismic Resilience and Energy Efficiency Improvement in Public Buildings	<b>e) Pollution Prevention</b> Demolition and construction activities can lead to pollution on construction sites	<ul style="list-style-type: none"> <li>Site-Specific Pollution Prevention Plans, if necessary, will be reviewed and approved by the PIU.</li> <li>Regular site inspections will be conducted by the PIU and the Consultant to ensure that all construction activities are carried out in compliance with national laws and regulations as well as the requirements of the World Bank ESF.</li> </ul>	PIU Consultant Contractor
		<ul style="list-style-type: none"> <li>Air quality related to dust generation is addressed in the "g. Air Quality/Emission" section of this document.</li> <li>Hazardous substances will be secured in the designated storage area to prevent spillage and tipping.</li> <li>Containers for partially used chemical materials will have lids and will be tightly closed when not in use.</li> <li>Disposal of residual (leftover) concrete from concrete mixers will not be allowed in the construction site, its surroundings, or access roads to the construction sites. Concrete mixer drivers will be trained on this matter.</li> <li>In case of any hazardous substance or hazardous waste leakage, leakage prevention methods will be applied to limit the exposure area.</li> <li>Leak kits will be placed at appropriate points on construction sites.</li> <li>In the event of any leakage, workers who will respond to such incidents will be identified and trained in emergency response to leaks.</li> <li>Training records will be maintained at construction sites.</li> </ul>	Contractor
Renovation and Strengthening Works for Seismic	<b>f) Noise</b> The presence of workers on the construction site,	<ul style="list-style-type: none"> <li>All construction activities will be regularly inspected by PIU and the Consultant to ensure compliance with national laws, regulations, and World Bank ESF requirements.</li> </ul>	PIU Consultant

<p>Resilience and Energy Efficiency Improvement in Public Buildings</p>	<p>renovation/construction activities, and the movement of transportation vehicles will increase noise and vibration levels.</p>	<ul style="list-style-type: none"> <li>• Noise during demolition and construction will be limited to the restricted periods specified in the permit.</li> <li>• During activities, the motor covers of generators, air compressors, and other electrical and mechanical devices will be kept closed, and the equipment will be placed as far away from residential areas as possible.</li> <li>• During construction, the motor covers of generators, air compressors, and other mechanical equipment used in the works will be kept closed, and the equipment will be placed as far away as possible from student areas and other buildings on the campus that are not part of the project but are located on the campus. The use of plastic wedges is mandatory for all equipment to prevent excessive noise due to vibration. This should be taken into account when selecting equipment.</li> <li>• Impulse noise that may occur as a result of construction site activities will not exceed 100 dBC in terms of LC Max noise indicator, as specified in the Environmental Noise Control Regulation. From a health and safety perspective, the World Health Organization (WHO) has set exposure levels to noise at 70 dB within a 24-hour period and 85 dB for a 1-hour period to prevent hearing impairment. Additionally, the World Bank Environmental, Health, and Safety Guidelines Table 1.7.1 specifies that noise levels should not exceed 55 dB between 07:00-22:00 hours and 45 dB between 22:00-07:00 hours for residential/educational institutions and government buildings (<a href="https://www.ifc.org/content/dam/ifc/doc/2023/ifc-general-ehs-guidelines.pdf">https://www.ifc.org/content/dam/ifc/doc/2023/ifc-general-ehs-guidelines.pdf</a>). This will be taken into consideration during site inspections. In addition, if grievances about noise are received, noise levels will be determined based on measurements conducted by accredited laboratories. Site assessments will be conducted according to the Environmental Noise Guidelines for the WHO European Region.</li> <li>• If there is an increase in noise levels during the construction phase, measures will be taken to ensure that construction machines are not operated simultaneously.</li> <li>• Measures such as using new model vehicles as much as possible will be taken to minimize noise levels.</li> </ul>	<p>Contractor</p>
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		<ul style="list-style-type: none"><li>• The risk of being affected by work near the construction site is not present for the local population residing in the vicinity of the construction site. All activities will take place within the isolated campus area.</li><li>• The use of unnecessary horns and sirens on vehicles transporting machinery, equipment, materials, and personnel for the project is prohibited. This rule applies both inside and outside the campus. Contact numbers will be provided on vehicles to address and resolve any grievances related to such matters.</li></ul>	
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<p>Renovation and Retrofitting Works for Seismic Resilience and Energy Efficiency Improvement in Public Buildings</p>	<p><b>g) Air Quality/Emission:</b></p>	<ul style="list-style-type: none"> <li>• Demolition debris will be kept in a controlled area, and water will be sprayed to reduce dust from the debris. (Water will be provided from the campus infrastructure. In case of prolonged water interruptions, water tankers may be used for supply.)</li> <li>• During demolition activities, measures to prevent air quality issues will be outlined in a Demolition and Construction Environmental Method Statement, prepared by the contractors and approved by the PIU.</li> <li>• Dust generated during pneumatic excavation will be suppressed by continuous water spraying and/or the installation of dust curtain enclosures at the construction site.</li> <li>• In case of rubble waste generation, a rubble chute will be used after the first floor.</li> <li>• The surrounding environment (sidewalks, roads) will be cleared of debris to minimize dust.</li> <li>• Open burning of construction materials/waste substances will not be allowed at the construction site.</li> <li>• Construction vehicles at the construction site will not be idled for an excessive period.</li> <li>• When material needs to be transported, truck tops will be covered. The speed limit for such vehicles within the campus is set at 20 km/h.</li> <li>• All vehicles to be used will have exhaust emission permits, and regular maintenance will be conducted on all vehicles or monitored for maintenance.</li> </ul>	<p>Consultant          Contractor</p>
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<p>Renovation and Retrofitting Works for Seismic Resilience and Energy Efficiency Improvement in Public Buildings</p>	<p><b>h) Water Quality</b>          Uncontrolled disposal of wastewater/waste generated at the construction site can affect the coastline.</p> <p><b>i) Soil Quality</b>          The mixing of hazardous substances and waste into the soil</p>	<ul style="list-style-type: none"> <li>• Suitable erosion and sediment control measures such as straw bales and/or silt fences will be implemented at the construction site to prevent sediments from leaving the site and causing turbidity in the sea.</li> <li>• Storage or disposal of waste generated on site will be minimized. Temporary or final waste disposal near or in flowing water bodies will be strictly prohibited to prevent potential adverse impacts on surface waters.</li> <li>• Construction vehicles and machinery will be washed only in areas where runoff will not pollute natural surface water bodies.</li> <li>• The waste management practices mentioned in previous sections should be conducted in a disciplined manner.</li> <li>• All hazardous chemicals, including contaminated waste, will be stored in temporary storage areas that meet leak-proof requirements.</li> <li>• Prior to the use of chemicals, MSDS will be checked by OHS specialists and workplace physicians, and users will be informed.</li> <li>• Silt pads will be available at the site to address point source pollution (e.g., spilled paint, vehicle leaks), and all workers will receive spill and leak training. These training sessions will be reinforced through practical exercises. At least one spill and leak kit will be available for each building and each mobile construction machine.</li> </ul>	<p>Consultant          Contractor</p>
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<p>Renovation and Retrofitting Works for Seismic Resilience and Energy Efficiency Improvement in Public Buildings</p>	<p><b>j) <i>Required Resources</i></b></p>	<ul style="list-style-type: none"> <li>Contractors will obtain the necessary permits from building authorities to use water from the public network for construction activities. In case of any issues with obtaining permits, water will be brought to the construction sites using tankers.</li> <li>Concrete will be sourced from locally licensed ready-mix concrete facilities.</li> <li>Permission will be sought from beneficiaries to use electricity for construction activities. In case permission cannot be obtained, electricity will be provided through generators procured by the Contractor. Records of electricity, fuel, and water consumption for construction activities, including generators, will be kept on the construction sites.</li> </ul>	<p>Contractor</p>
		<ul style="list-style-type: none"> <li>Regular on-site inspections will be conducted by the PIU and the Consultant to ensure that all construction activities are carried out in compliance with national laws, regulations, and the requirements of the World Bank standards.</li> </ul>	<p>PIU Consultant</p>
<p>Renovation and Retrofitting Works for Seismic Resilience and Energy Efficiency Improvement in Public Buildings</p>	<p><b><i>Community Health and Safety/Traffic and Pedestrian Safety</i></b></p>	<ul style="list-style-type: none"> <li>Regular on-site inspections will be conducted by the PIU (Project Implementation Unit) and the Consultant to ensure that all construction activities are carried out in compliance with national laws, regulations, and the requirements of the World Bank standards.</li> <li>The PIU will review and approve the site-specific Community Safety and Traffic Management Plan prepared in accordance with the Occupational Health and Safety Plan.</li> <li>The Contractor will develop a Traffic Action Plan (Figure 13), taking into account the needs of people with disabilities, as prepared by the Consultant.</li> <li>In accordance with national regulations and the World Bank ESF, the Contractor will ensure the proper securing of the construction site and the regulation of construction-related traffic.</li> </ul>	<p>Consultant Contractor</p>

		<ul style="list-style-type: none"> <li>• Signboards, warning signs, barriers, and traffic guidance will be clearly visible at the construction site, and the public will be alerted to all possible dangers.</li> <li>• Traffic management systems and personnel training will be provided, especially for access to the construction site and heavy traffic near the construction site. Safe crossings and passages for pedestrians will be provided at intersections with construction traffic.</li> <li>• Adjustments to working hours will be made based on local traffic patterns, such as avoiding heavy transport activities during peak hours or times when livestock is being transported.</li> <li>• Trained and visible personnel will actively manage traffic on the construction site to ensure the safe and comfortable passage of the public if necessary.</li> </ul>	
		<ul style="list-style-type: none"> <li>• Construction sites will be surrounded by health and safety signs to prevent potential accidents.</li> <li>• If there will be a disruption of electricity, water, or natural gas supply due to construction activities in the short or long term, advance notice will be provided to the building technical units, and approval will be sought.</li> <li>• Construction sites will be separated and secured with warning/caution tapes to ensure safety.</li> <li>• All types of vehicles operating during construction will be required to adhere to the specified speed limit.</li> </ul>	<p>Consultant Contractor</p>
		<ul style="list-style-type: none"> <li>• The perimeter and vicinity of the project site will be organized with traffic signs and warning signs (as specified in the Traffic Action Plan).</li> <li>• Visibility of the project site will be ensured.</li> <li>• Pedestrian paths and vehicle thoroughfares within the site will be separated from each other. These paths will be incorporated into the traffic plan.</li> </ul>	<p>Consultant Contractor</p>

		<ul style="list-style-type: none"><li>• Local community, building visitors, and users will be informed about potential hazards and risks through warning signs and informational meetings.</li><li>• Users and other stakeholders will be informed about the measures to be taken in case of any outbreak, including the precautions taken, through appropriate media and printed materials and signs in accessible areas for the public (including work areas).</li><li>• Pedestrian paths and vehicle thoroughfares within the site will be separated from each other. These paths will be incorporated into the traffic plan.</li><li>• Activities that will affect regional traffic will be planned considering peak traffic hours as much as possible. All drivers involved in the project will be informed about road safety, speed limits, traffic rules to be followed during the project, and conditions to be observed.</li><li>• The weights of all vehicles used in the project will not exceed the limits specified in the relevant legislation.</li><li>• In the event of hazardous chemical or waste storage on the site, the transfer of these wastes will be carried out by licensed carriers in a manner that does not pose a threat to public health.</li><li>• Special loads will use routes prepared in agreement with the relevant authorities. The specified routes will be programmed to prevent traffic congestion on the roads and will be published in advance to prevent possible inconvenience.</li><li>• All traffic organization will be discussed and planned in coordination with the relevant authorities.</li></ul>	
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Operational phase impacts and risks	<p><b>a) Waste Management</b></p> <p>Improper waste management with various waste streams can lead to possible adverse environmental and health effects (inadequate waste management can result in direct and indirect pollution in water and soil and can affect air quality).</p>	<p>a. Waste streams will be collected separately, stored, and disposed of through licensed companies in accordance with national regulatory requirements.</p>	Relevant beneficiary institution
Operational phase impacts and risks	<p><b>b) OHS risks</b></p> <p>Maintenance and repair activities related to the proper functioning of the building can pose occupational health and safety (OHS) risks for workers.</p>	<p>a. Relevant OHS risks will be reduced through the provisions specified in national legislation.</p> <p>b. Regular preventive measures and maintenance precautions for the proper functioning of the building (regular inspections and maintenance for any leaks on the roof, windows, doors, etc.).</p> <p>c. Keeping records related to the Main Design Project and relevant project documents for easy maintenance and renovation of any part of the building.</p>	Relevant beneficiary institution

<p>Throughout the project lifecycle</p>	<p><b><i>Stakeholder Feedback (Suggestion, Grievance, Opinion)</i></b></p>	<ul style="list-style-type: none"> <li>Grievances/opinion/suggestions related to construction activities will be collected at the site level by the responsible employee of the Construction Contractor through the forms provided in Annex III and Annex IV. These grievances will be recorded and submitted to the administration. Grievances will be closed using the Grievance Closure Form provided in Annex V.</li> <li>The site supervisor of the Contractor will be provided with training on the operation of the Grievances and Resolution Mechanism by the Social Specialist of the Consultant firm.</li> <li>Corrective actions will be taken within 15 working days for grievances/opinions/suggestions collected under the project, and if the resolution period exceeds 15 days (the resolution period will not exceed 30 calendar days), this matter should be agreed upon between the Contractor/PIU and the complainant. At the end of the process, the applicant will be informed that the request has been closed.</li> <li>In cases of gender-based violence, sexual abuse, and harassment, proceedings will be conducted in accordance with the principle of confidentiality, taking into account the possibility of retaliation.</li> <li>In the event of encountering a sexual abuse crime, legal action (reporting the situation to law enforcement authorities, referral to the relevant public institution) will be initiated immediately with the consent and knowledge of the survivor of this crime. In the event of such a situation, the PIU Social Specialist will be informed on the same day.</li> <li>The Contractor will follow the GM Procedure of the SREEPB Project in all activities related to GM.</li> <li>All personnel working within the SREEPB Project (PIU, Consultant Firm, Contractors) can report their grievances/views/suggestions to the Administration and/or the World Bank following the process in GM outlined in the Labour Management Procedure for SREEPB Project.</li> </ul>	<p>PIU          Consultant          Contractor</p>
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		<ul style="list-style-type: none"><li>• The Contractor will announce the contact information specified in this report for the collection of suggestions and grievances using information boards allocated to the outside and inside of the buildings (at least one for each floor).</li><li>• All data related to building operation parameters, annual electricity production simulation results, and other relevant information will be shared with the BU Renewable Energy Technologies Research Group located on the campus. It is recommended that this group disseminates the data from this exemplary study within the university and shares it with relevant technical staff and students.</li><li>• The principles for receiving feedback are explained under the "4. Stakeholder Engagement and Grievance Mechanisms" title of this document.</li></ul>	
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## 6. Environmental and Social Monitoring Plan

**Table 6: ENVIRONMENTAL AND SOCIAL MONITORING PLAN**

<b>What</b> <i>parameters will be monitored?</i>	<b>Where</b> <i>parameters will be monitored?</i>	<b>How</b> <i>parameters will be monitored?</i>	<b>When</b> <i>parameters will be monitored (measurement frequency)?</i>	<b>Why</b> <i>parameters will be monitored?</i>	<b>Responsibility</b>
<b>Renovation and Strengthening Works Site Preparation Activities</b>					
Community Health and Safety Management and Implemented Protective Measures	Around the project site	Visual Inspections Site Inspection	At the beginning of the renovation/reinforcement works (first day) Every working day throughout the project activities	To minimize health and safety risks and mechanical injuries to local communities	<ul style="list-style-type: none"> <li>• Contractor</li> <li>• Consultant</li> </ul>

<b>What</b> <i>parameters will be monitored?</i>	<b>Where</b> <i>parameters will be monitored?</i>	<b>How</b> <i>parameters will be monitored?</i>	<b>When</b> <i>parameters will be monitored (measurement frequency)?</i>	<b>Why</b> <i>parameters will be monitored?</i>	<b>Responsibility</b>
Occupational Health and Safety (OHS) protection measures for construction site workers	Project site and buildings near the project site	Visual Inspections Site Inspection	Every working day throughout the project activities	Minimizing occupational health and safety risks for workers, especially those involved in removing asbestos-containing roof covers, through the provision of protective equipment and clothing. Compliance with the Occupational Health and Safety Law, relevant regulations, notifications, directives, and other regulations.	<ul style="list-style-type: none"> <li>• Contractor</li> <li>• Consultant</li> </ul>
To avoid and minimize safety and health risks for individuals affected by the project	In the building and at the project site	Visual Inspections	At the beginning of the renovation/strengthening work and continuously every working day	Preventing Post Activation Potential (PAP) injury due to inhalation of asbestos fibers or other construction dust.	<ul style="list-style-type: none"> <li>• Contractor</li> <li>• Consultant</li> </ul>
The start and completion time of Renewal/Strengthening works, especially the removal time of existing parts containing asbestos	At the project site	Site Inspection Review of document records Visual Inspections	Every day (In case asbestos is detected)	To avoid environmental, health, and safety risks Compliance with the Regulation on Health and Safety Measures in Asbestos Work	<ul style="list-style-type: none"> <li>• Contractor</li> <li>• Consultant</li> <li>• Asbestos Removal Specialist</li> </ul>



<b>What</b> <i>parameters will be monitored?</i>	<b>Where</b> <i>parameters will be monitored?</i>	<b>How</b> <i>parameters will be monitored?</i>	<b>When</b> <i>parameters will be monitored (measurement frequency)?</i>	<b>Why</b> <i>parameters will be monitored?</i>	<b>Responsibility</b>
<b>Renovation and Strengthening Construction Works</b>					
Occupational Health and Safety (OHS) Protection Measures for Site Workers ( <i>Working at Heights, Working with Hazardous Materials, Working with Rotating Equipment, Working with Electrical Devices, etc.</i> )	Project site  Buildings near the project site	Verification of Relevant OHS Certifications and Documents for Trained Workers  Visual Inspections for the Use of Protective Equipment  Implementation of the OHS Plan and Site-Specific Health and Safety Instructions  Site Inspections  Record Verification	Before starting demolition work  Every working day throughout the project activities	Minimizing risks to workers' occupational health and safety  Compliance with the Occupational Health and Safety Law, relevant regulations, communiqués, circulars and other regulations	<ul style="list-style-type: none"> <li>• Contractor</li> <li>• Consultant</li> </ul>

<b>What</b> <i>parameters will be monitored?</i>	<b>Where</b> <i>parameters will be monitored?</i>	<b>How</b> <i>parameters will be monitored?</i>	<b>When</b> <i>parameters will be monitored (measurement frequency)?</i>	<b>Why</b> <i>parameters will be monitored?</i>	<b>Responsibility</b>
Employment and working conditions	Project site	Final OHS Plan Review Site Inspection Grievance Mechanism (Feedback)	Every working day during the project activities	Compliance with the Occupational Health and Safety Law, relevant regulations, communiqués, circulars and other regulations	<ul style="list-style-type: none"> <li>• Contractor</li> <li>• Consultant</li> </ul>
Health and Safety records	Project site	Health and Safety construction site documentation control	Weekly	Ensuring that necessary Occupational Health and Safety records are kept at construction sites	<ul style="list-style-type: none"> <li>• Contractor</li> <li>• Consultant</li> </ul>
Air Quality	Project sites, across access roads Project site Buildings near the project site	Site Inspection Measurements to be carried out in case of grievance	Every working day throughout the project activities	Minimizing dust generation to avoid negative impact on local communities and the environment •Air Quality Assessment and Management Regulation	<ul style="list-style-type: none"> <li>• Contractor</li> <li>• Consultant</li> </ul>

<b>What</b> <i>parameters will be monitored?</i>	<b>Where</b> <i>parameters will be monitored?</i>	<b>How</b> <i>parameters will be monitored?</i>	<b>When</b> <i>parameters will be monitored (measurement frequency)?</i>	<b>Why</b> <i>parameters will be monitored?</i>	<b>Responsibility</b>
Noise	Project site  Buildings near the project site	Visual control of the implementation of established noise abatement measures, including declarations of methods followed  Monitoring at the nearest building receiver points with a noise measuring device  Site inspections  Measurements to be carried out in case of grievance	Every working day during construction activities	Minimizing noise to avoid negative impact on local communities and the environment  Compliance with Environmental Noise Control Regulation	<ul style="list-style-type: none"> <li>• Contractor</li> <li>• Consultant</li> </ul>
Waste Management	Project site	Waste Records  Site Inspection  Visual Inspections	Every working day during construction activities	Prevent pollution to protect construction workers, beneficiaries' employees, local communities and the environment	<ul style="list-style-type: none"> <li>• Contractor</li> <li>• Consultant</li> </ul>

<b>What</b> <i>parameters will be monitored?</i>	<b>Where</b> <i>parameters will be monitored?</i>	<b>How</b> <i>parameters will be monitored?</i>	<b>When</b> <i>parameters will be monitored (measurement frequency)?</i>	<b>Why</b> <i>parameters will be monitored?</i>	<b>Responsibility</b>
Domestic Wastes	Project site	Waste Records Site Inspection	Throughout the project lifecycle/Daily	<ul style="list-style-type: none"> <li>Regulation on Control of Packaging Wastes</li> <li>Waste Management Regulation</li> </ul>	<ul style="list-style-type: none"> <li>Contractor</li> </ul>
Hazardous Wastes	Project site	Waste Records Site Inspection Visual Inspections	Throughout the project lifecycle/Daily	Separating hazardous waste (adhesive, paint, insulation material, packaging waste) from non-hazardous waste and biodegradable waste	<ul style="list-style-type: none"> <li>Contractor</li> <li>Consultant</li> </ul>
Identifying asbestos-containing waste, packaging it properly, labeling it as hazardous waste	At project construction sites Before starting removal/dismantling work	Identification of asbestos-containing waste according to the waste list Site inspection Review of document records	Throughout the project lifecycle/Daily In case of detection	<ul style="list-style-type: none"> <li>Regulation on Health and Safety Measures in Working with Asbestos</li> </ul>	<ul style="list-style-type: none"> <li>Consultant</li> </ul>
Proper temporary storage, packaging and labeling of the extracted waste	Project site	Waste Records Site Inspection Visual Inspections	Throughout the project lifecycle/Daily	<p>To minimize injuries, To prevent environmental pollution, Ensuring that inventory is kept properly.</p> <ul style="list-style-type: none"> <li>Waste Management Regulation</li> </ul>	<ul style="list-style-type: none"> <li>Contractor</li> <li>Consultant</li> </ul>

<b>What</b> <i>parameters will be monitored?</i>	<b>Where</b> <i>parameters will be monitored?</i>	<b>How</b> <i>parameters will be monitored?</i>	<b>When</b> <i>parameters will be monitored (measurement frequency)?</i>	<b>Why</b> <i>parameters will be monitored?</i>	<b>Responsibility</b>
Excavation and Construction Waste	Project site	Visual inspection Transport records Site inspection	After the removal of all parts of the buildings containing hazardous materials Throughout the project lifecycle/daily	Ensuring that construction debris is disposed of in accordance with applicable national regulations and the Project's Demolition plan • Regulation on the Control of Excavation Soil, Construction and Demolition Waste	<ul style="list-style-type: none"> <li>• Contractor</li> <li>• Consultant</li> </ul>
Soil Pollution	Project sites, external storage areas and access roads	Training records check (spill, leak training) Chemical absorbent kit control (Field, mobile work machines) Site Inspection	Throughout the project lifecycle/daily	Protection of soil and groundwater quality. • Regulation on Soil Pollution Control and Contaminated Sites by Point Sources, • Water Pollution Control Regulation • Regulation on the Protection of Groundwater Against Pollution and Deterioration	<ul style="list-style-type: none"> <li>• Contractor</li> <li>• Consultant</li> </ul>
Vehicle and Pedestrian Safety	Project sites and access roads	Visual inspection Using appropriate signs and signals Site inspection	Daily	Protecting construction workers, their beneficiaries' employees, and local communities from injuries and deaths related to traffic accidents.	<ul style="list-style-type: none"> <li>• Contractor</li> <li>• Consultant</li> </ul>

<b>What</b> <i>parameters will be monitored?</i>	<b>Where</b> <i>parameters will be monitored?</i>	<b>How</b> <i>parameters will be monitored?</i>	<b>When</b> <i>parameters will be monitored (measurement frequency)?</i>	<b>Why</b> <i>parameters will be monitored?</i>	<b>Responsibility</b>
Stakeholder engagement	Kilyos Campus	Number of Stakeholder Engagement Meeting participants (by gender distribution)  Promotional materials related to the project (announcement posters, webcasts, etc. control)	Daily	Fulfillment of grievance mechanism requirements.	<ul style="list-style-type: none"> <li>• PIU</li> <li>• Contractor</li> <li>• Consultant</li> </ul>

<p>Grievance Mechanism</p>	<p>Project site  Buildings near the project site</p>	<p>Grievance and Suggestion Forms  Grievance Close-out forms  Total number of grievances (pending/resolved and broken down by gender distribution)  Number of grievances received  Number of resolved grievances  Grievance Log  Availability of announcement posters regarding the Grievance Mechanism (GM)  Physical condition of suggestion and grievance boxes  Suggestion, condition of</p>	<p>Weekly (During the life of the project)</p>	<ul style="list-style-type: none"> <li>• Environmental Social Management Plan (ESMP)</li> <li>• Grievance Mechanism (GM)</li> <li>• Stakeholder Engagement Framework (SEF)</li> </ul> <p>Stakeholders who are directly or indirectly affected by the project can bring forward their grievances/opinions/suggestions regarding project activities, contribute to the project and benefit from the project at the highest level.</p>	<ul style="list-style-type: none"> <li>• Contractor</li> <li>• Consultant</li> <li>• PIU</li> </ul>
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<b>What</b> <i>parameters will be monitored?</i>	<b>Where</b> <i>parameters will be monitored?</i>	<b>How</b> <i>parameters will be monitored?</i>	<b>When</b> <i>parameters will be monitored (measurement frequency)?</i>	<b>Why</b> <i>parameters will be monitored?</i>	<b>Responsibility</b>
		grievance boxes locking mechanisms			
<b>Renovation/Retrofitting Works Operation Process</b>					
Waste streams	Renovated/Retrofitted buildings	Implementation of waste management requirements on site	Regularly (throughout the project lifecycle)	Ensuring proper collection and disposal of waste in accordance with national legal requirements	Bogazici University
Health and Safety	Renovated/Retrofitted buildings	Regular inspections and maintenance of the roof, windows, doors, leaks, etc.	Regularly (throughout the project lifecycle)	Ensuring the health and safety of building users	Bogazici University



## 7. Duties and Responsibilities

**Table 7 TASK DISTRIBUTION LIST**

<b>RESPONSIBLE PARTY</b>	<b>RESPONSIBILITY</b>
MoEUCC /PIU	<ul style="list-style-type: none"> <li>• Implementation and monitoring of the project, and utilization of funds.</li> <li>• Employment of at least one full-time Environmental, Social, and Occupational Health and Safety (OHS) expert.</li> <li>• Conducting necessary correspondence with official authorities and ensuring follow-ups.</li> <li>• Supervising and ensuring compliance of Environment and Social Management Plans (ESMPs) with both national regulations and WB policies specific to the project.</li> <li>• Presenting the prepared ESMPs to the WB after relevant checks.</li> <li>• Establishment of a Grievance Mechanism.</li> <li>• Organizing and conducting project informational meetings.</li> <li>• Employment of a suitable expert for the Environmental and Social Monitoring Program.</li> <li>• Guiding consultants and contractors.</li> <li>• Summarizing environmental and social issues related to project implementation in regular progress reports submitted to the WB.</li> <li>• Coordinating and liaising with WB's inspection missions regarding the evaluation of project implementation in terms of environmental and social mitigation policies.</li> <li>• Supervising the contractor's ESMP implementation and documenting necessary performance, suggestions, and future activities as part of the general project audit.</li> <li>• Ensuring the contractor corrects the application if ESMP is not followed and informing the WB about the issue.</li> <li>• Assisting the consultant if needed to obtain necessary permits throughout the project.</li> <li>• Reporting any significant events (such as accidents, leaks, deaths, etc.) to the World Bank within 48 hours and submitting an incident investigation report with a corrective action plan within 30 working days.</li> </ul>
CONSULTANT	<ul style="list-style-type: none"> <li>• Conducting a preliminary site assessment before the project starts.</li> <li>• Employing at least one full-time Environmental, Social, and OHS expert.</li> <li>• Preparation of project-specific ESMP and Occupational Health and Safety Plan.</li> <li>• Monitoring and evaluating activities defined as the responsibility of the contractor in ESMP and OHS Plan.</li> <li>• Operating the Grievance Mechanism established by the Ministry.</li> <li>• Providing feedback by preparing reports on the project and ESMP processes for MoEUCC.</li> <li>• Preparation of Traffic Management Plan.</li> <li>• Reviewing and approving construction methods prepared by the contractor.</li> <li>• Applying to the energy distribution company for the installation of photovoltaic panels (PV).</li> </ul>

	<ul style="list-style-type: none"> <li>• Conducting training sessions for the contractor (Environmental Effects, Waste Management, OHS Plan Implementation and Monitoring Training, Environmental Emergency Response, Energy Efficiency, Stakeholder Participation Information Activities, Code of Conduct, Grievance Resolution Mechanism, Gender-Based Violence/Sexual Exploitation/Sexual Abuse/Sexual Harassment, Lockout-Tagout (LOTO) Training, Work Permit System Training, Cultural Heritage Conservation).</li> </ul>
<p>CONTRACTOR</p>	<ul style="list-style-type: none"> <li>• Employing at least one full-time Environmental and OHS expert.</li> <li>• Appointing an experienced Environmental and OHS Officer for the comprehensive management and monitoring of the site-specific ESMP and OHS Plan.</li> <li>• Implementing laws, regulations, and rules related to ESMP and OHS Plan attached to the tender documents as defined by the Consultant.</li> <li>• Implementing relevant laws and regulations mentioned in the tender documents in an appropriate manner.</li> <li>• Updating ESMP and OHS Plan content in coordination with the Consultant during the implementation of ESMPs and OHS Plan in the field as necessary.</li> <li>• Operating the Grievance Resolution Mechanism in compliance with GM Procedure established by the Ministry.</li> <li>• Preparing sub-management plans related to ESMP if necessary (such as Waste Management Plan, Pollution Prevention Plan, Community Safety and Traffic Management Plan, Health and Safety Plan, Labor Management Plan, etc.) and site-specific construction/application methods.</li> <li>• Preparing the Random Finding Procedure if deemed necessary.</li> <li>• Preparing ESMP progress reports for MoEUCC.'s review.</li> <li>• Applying to the authorized energy distribution company and local gas distribution company depending on the works to be carried out.</li> <li>• Establishing the Employee Grievance Mechanism detailed in the Labor Management Procedure before any construction work starts and ensuring its transparent operation.</li> <li>• Preparing the Labour Management Plan specific to the project considering SREEPB Labor Management Procedures (LMP).</li> </ul>

## 8. Reporting

The details regarding the reporting requirements of the project are presented within the Environmental and Social Management Framework disclosed on the website of the SREEPB Project (<https://kamuguclendirme.csb.gov.tr>). A summary of this information is provided in Table 7.

**Table 8: REPORTING PROCESS REQUIREMENT LIST**

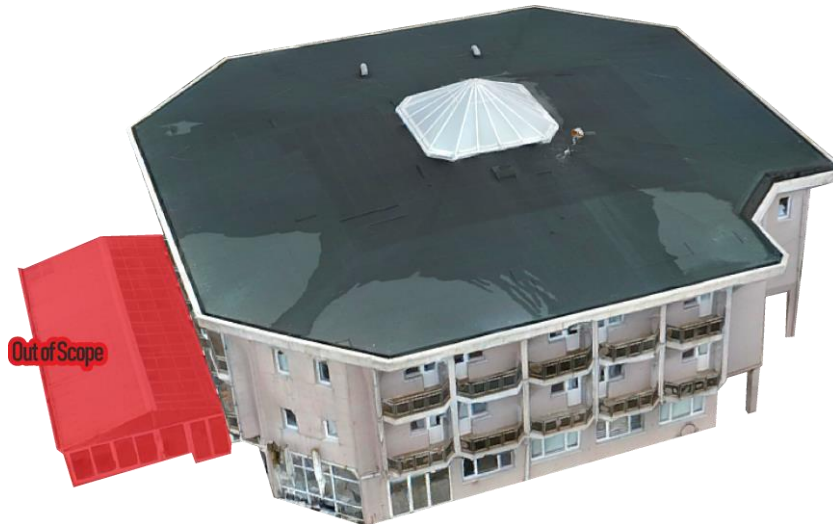
<b>RESPONSIBLE PARTY</b>	<b>REPORTING PROCESS REQUIREMENT</b>
MoEUCC /PIU	<ul style="list-style-type: none"><li>• Preparation of the 6-month Project Progress Report and submission to the World Bank (WB).</li><li>• Reporting any significant events such as accidents, leaks, deaths, etc., to the World Bank within 48 hours and submitting an incident investigation report along with a corrective action plan within 30 working days.</li><li>• Monthly updates to the WB about the functioning of the Grievance Resolution Mechanism.</li></ul>
CONSULTANT	<ul style="list-style-type: none"><li>• Preparation of end-of-implementation ESMP reports for the Administration's review.</li><li>• Monthly preparation of ESMP progress reports and submission to the Administration.</li><li>• Weekly preparation of GM reports and submission to the Administration.</li></ul>
CONTRACTOR	<ul style="list-style-type: none"><li>• Monthly preparation of ESMP progress reports and submission for approval by the Consultant.</li><li>• Weekly preparation of GM reports and submission to the Project Manager of the Consultant.</li><li>• Preparation of Incident/Accident and Root Cause Analysis Reports.</li><li>• Detailed content specifications are presented within the Environmental and Social Management Framework.</li></ul>

## Annex I: Solid Models of Buildings Considered within the Scope of the Project

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1<sup>st</sup> STUDENT DORMITORY



SOCIAL FACILITY



SFL BLOCK A&B

## Annex II: World Bank (WB) Environmental and Social Standard Summaries

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Summary explanations of the World Bank Environmental and Social Standards (ESS) are included in Table 1.

**Annex-1/Table 1: WORLD BANK ENVIRONMENTAL SOCIAL STANDARDS SUMMARY**

<b>ESS</b>	<b>SUBJECT</b>	<b>SUMMARY REQUIREMENT</b>
ESS1	Assessment and Management of Environmental and Social Risks and Impacts	<p>ESS1 aims to achieve environmental and social outcomes consistent with Environmental and Social Standards (ESS) by defining the responsibilities for assessing, managing, and monitoring environmental and social risks and impacts associated with a project supported by the World Bank through Investment Project Financing at every stage.</p> <p>Environmental and social assessments will be conducted based on current information/data to define and describe the project and all related aspects, identify the nature of risks, impacts, and characteristics of mitigation measures.</p> <p>The assessment will prioritize disadvantaged and/or vulnerable social groups, evaluate potential environmental and social risks and impacts of the project, examine project alternatives, and identify ways to improve project design and implementation to mitigate adverse environmental and social effects. The environmental and social assessment will also explore opportunities to enhance the positive impacts of the project.</p> <p>According to ESS1, stakeholder participation is an integral part of the assessment, following ESS10. Under ESS1, the Borrower will systematically identify, evaluate, and manage environmental and social risks and impacts throughout the project's lifecycle.</p>

ESS	SUBJECT	SUMMARY REQUIREMENT
ESS2	Labor and Working Conditions	<p>The objectives of ESS2 are as follows: (i) promote safety and health in the workplace; (ii) encourage fair treatment of project workers, prevent discrimination, and promote equal opportunities; (iii) protect workers, including vulnerable workers such as women, disabled individuals, children (according to ESS2 working age), migrant laborers, contracted workers, community workers, and primary supply workers, in an appropriate manner; (iv) prevent all forms of forced labor and child labor; (v) support the principles of organizing and collective bargaining freedom for project workers in a manner consistent with national law; and (vi) provide accessible means for project workers to raise workplace concerns. The applicability and scope of ESS2 depend on the type of employment relationship between the Borrower and project workers, as well as the environmental and social assessment described in ESS1. ESS2 requirements cover the development and implementation of a written Labor Management Procedure (LMP) that will be applicable to the project. These procedures will determine how project workers are managed in compliance with national law and the requirements of this ESS. They will also define (i) working conditions and employment, including non-discrimination and equal opportunity provisions, which will be monitored by project contractors following the procedures for labor management and behavior rules; (ii) protection of workers, including the prohibition of child labor and forced labor; (iii) the establishment and operation of a grievance mechanism for workers, including regulations for potential risks of Sexual Exploitation and Abuse/Sexual Harassment (SEA/SH), and (iv) occupational health and safety. Furthermore, it will encompass (v) contracted workers, (vi) community workers, and (vii) primary supply workers.</p>



ESS	SUBJECT	SUMMARY REQUIREMENT
ESS3	Resource Efficiency and Pollution Prevention and Management	ESS3 recognizes that economic activities and urbanization largely pollute the air, water, and soil and consume limited resources at local, regional, and global levels, threatening people, ecosystem services, and the environment. The current and projected atmospheric concentration of greenhouse gases (GHG) threatens the well-being of current and future generations. Additionally, technologies and practices to achieve more efficient and effective resource use, pollution prevention, and avoidance of greenhouse gas emissions have become more accessible and available. This ESS establishes the requirements for addressing resource efficiency and pollution prevention and management throughout the project life cycle, consistent with Good International Industry Practices. Risks and impacts related to relevant ESS3 requirements, including raw materials, water use, air pollution, hazardous substances, and hazardous waste, are assessed, and proposed mitigation measures are included in the ESMF and ESMP.
ESS4	Community Health and Safety	ESS4 acknowledges that project activities, equipment, and infrastructure can increase communities' exposure to risks and impacts. Additionally, communities already exposed to the effects of climate change may be further exposed to impacts due to project activities.  ESS4 addresses health, safety, and security risks and their impacts on communities affected by the project, with special attention to individuals who could be harmed due to their specific circumstances.
ESS5	Land Acquisition, Restrictions on Land Use, and Involuntary Resettlement <b>(This ESS is not applicable to the SREEPB Project)</b>	ESS5 recognizes that project-related land acquisition and restrictions on land use can have adverse effects on communities and individuals. Project-related land acquisition or restrictions on land use can lead to physical displacement (relocation, loss of housing or shelter), economic displacement (loss of livelihoods or access to assets resulting in loss of income sources), or both. The term "involuntary resettlement" refers to these effects when affected individuals or communities do not have the right to refuse land acquisition or restrictions on land use.

ESS	SUBJECT	SUMMARY REQUIREMENT
ESS6	Biodiversity Conservation and Sustainable Management of Living Natural Resources <b>(This ESS is not applicable to the SREEPB Project)</b>	The environmental and social assessment specified in ESS1 will consider direct, indirect, and cumulative effects on habitats and the biological diversity they support. This assessment will consider threats to biological diversity such as habitat loss, degradation and fragmentation, invasive alien species, overuse, hydrological changes, nutrient loading, pollution, and incidental capture, as well as the anticipated impacts of climate change. It will determine the importance of biodiversity or habitats based on their global, regional, or national vulnerabilities and irreplaceability. It will also consider different values placed on biodiversity and habitats by stakeholders affected by the project and other relevant stakeholders.
ESS7	Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities <b>(This ESS is not applicable to the SREEPB Project)</b>	This ESS acknowledges that Historically Underserved Indigenous Peoples/Sub-Saharan African Traditional Indigenous Communities have distinct identities and perspectives from mainstream groups in national societies and are often disadvantaged by traditional development models.
ESS8	Cultural Heritage	The Borrower will avoid impacts on cultural heritage. In situations where avoidance of impacts is not possible, the Borrower will identify and implement measures to address the impacts on cultural heritage in accordance with the hierarchy of mitigation. When appropriate, the Borrower will develop a Cultural Heritage Management Plan.
ESS9	Financial Intermediaries <b>(This ESS does not apply for the SREEPB Project)</b>	Financial intermediaries will establish and maintain an ESMS to identify, assess, manage, and continuously monitor the environmental and social risks and impacts of sub-projects.

ESS	SUBJECT	SUMMARY REQUIREMENT
ESS10	Stakeholder Participation and Information Disclosure	<p>This ESS recognizes the importance of open and transparent engagement between the Borrower and project stakeholders as a fundamental element of good international practice. Effective stakeholder engagement can enhance the environmental and social sustainability of projects, strengthen project acceptance, and significantly contribute to successful project design and implementation. The Client will engage with stakeholders throughout the project life cycle, starting this engagement at the earliest possible stage of the project development process and at a meaningful time for stakeholder input into project design. The nature, scope, and frequency of stakeholder engagement will be proportionate to both the nature and scale of the project and the potential risks and impacts. Stakeholder engagement is a comprehensive process conducted throughout the project life cycle. When properly designed and implemented, it supports the development of strong, constructive, and responsive relationships crucial for the successful management of the environmental and social risks of a project. Stakeholder engagement, initiated at an early stage of the project development process, is most effective and an integral part of the process of assessing, managing, and monitoring the environmental and social risks and impacts of the project. In consultation with the Bank, the Borrower will develop and implement a Stakeholder Engagement Plan (SEP) proportional to both the nature and scale of the project and the potential risks and impacts.</p>

## Annex III: Suggestion & Grievance Form (Internet)

The internet form visual, which can be accessed at <https://kadevoneri.csb.gov.tr/oneri.jsp>, is below.

Şikayet / Öneri Formu

 TÜRKİYE CUMHURİYETİ  
ÇEVRE, ŞEHİRCİLİK VE  
İKLİM DEĞİŞİKLİĞİ BAKANLIĞI

**KAMU BİNALARINDA DEPREM DAYANIMI ve ENERJİ  
VERİMLİLİĞİ PROJESİ (KADEV)**


ŞİKAYET / ÖNERİ FORMU

T C Kimlik Numaranız	
Adınız	
Soyadınız	
İl *	Seçiniz
Bina Adı *	
Şikayetiniz *	

Kaydet

# Annex IV: Suggestion & Grievance Form (Printed)

The Grievance/Suggestion Form in the Grievance Boxes is given below.

 <b>REPUBLIC OF TURKEY MINISTRY OF ENVIRONMENT, URBANIZATION AND CLIMATE CHANGE</b>	<b>SEISMIC RESILIENCE AND ENERGY EFFICIENCY IN PUBLIC BUILDINGS PROJECT (SREEPB PROJECT)</b>
	<b>GRIEVANCE / SUGGESTION FORM</b>
	<b>BOGAZICI UNIVERSITY</b>
ID Number	
Name	
Surname	
Province	İstanbul
Choose the building:	<input type="checkbox"/> Indoor Swimming Pool <input type="checkbox"/> New Geophysics Building <input type="checkbox"/> Indoor Sports Hall <input type="checkbox"/> Superdorm (Car park) <input type="checkbox"/> 1st Student Dormitory <input type="checkbox"/> SFL Block A <input type="checkbox"/> SFL Block B <input type="checkbox"/> Social Facility & Dormitory
Your grievance	
Your disability, if any:	<input type="checkbox"/> Blind <input type="checkbox"/> Deaf <input type="checkbox"/> Physically disabled <input type="checkbox"/> Other <input type="checkbox"/> None
For return:	<input type="checkbox"/> E-mail <input type="checkbox"/> Phone <input type="checkbox"/> Don't want
E-mail	
Phone	

# Annex V Grievance Closeout Form

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The Grievance Closeout Form is presented to your attention below.

Grievance Closing Number	
Description of immediate action required:	
Long-term action description (if necessary):	
Is compensation required?	<input type="checkbox"/> YES <input type="checkbox"/> NO
<b>Corrective Action and Decision Control</b>	
Stage of corrective action	Term and Responsible Institution
1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	

## COMPENSATION AND FINAL RATINGS

This section will be filled out and signed by the complainant after receiving the compensation fees and resolving the grievance.

Notes:


History:

Complainant:

# Annex VI Stakeholder Engagement Meeting Content & Records (Feasibility Studies)

Project Code  
WB/CS-DESSUP-01  
Date  
9.03.2023

Building Name  
BOĞAZIÇI UNIVERSITY NORTH CAMPUS  
Start | End Time  
14 : 00 | 15 : 00

START TIME	END TIME	ACTIVITY
14 : 00	14 : 10	Meeting kick-off speech (Moderator Birsen Bakır)
14 : 10	14 : 15	Within the framework of the Law on the Protection of Personal Data, general information was provided regarding the meeting recording and the processing of personal data. There are no participants who oppose the meeting recording. <ul style="list-style-type: none"><li>As of 14:15, the entire meeting was recorded in *.mp4 video format and *.m4a audio file format. In addition, meeting messages are recorded in *.txt format.</li></ul>
14 : 15	14 : 20	Information was given about the SREBPP project and its objectives. <b>Image 1 PRESENTATION FILE SHARED SECTIONS_01</b>  <p>The image shows a presentation slide for the KADIV project. The slide features the title 'KADIV KAMU BİNALARINDA DEPREM DAYANIKLI &amp; ENERJİ VERİMLİLİĞİ PROJESİ' (KADIV Public Buildings Earthquake Resilient &amp; Energy Efficiency Project). It includes logos for ATLASoft, TÜRKİYE KAMU İÇİŞLERİ BAKANLIĞI (T.C. Ministry of the Interior), and the World Bank Group. The slide also contains the text 'Finansmanı Dünya Bankası tarafından sağlanmakta, Hazine &amp; Maliye Bakanlığı garantisinde, Çevre, Şehircilik ve İklim Değişikliği Bakanlığı tarafından yürütülmektedir.' (Financing is provided by the World Bank, guaranteed by the Treasury and Ministry of Finance, and managed by the Ministry of Environment, Urbanization and Climate Change). Below the title, there are logos for the Ministry of Environment, Urbanization and Climate Change, the Ministry of the Interior, and the Ministry of Energy, Republic of Turkey. The slide also includes the URL 'https://kamuguclendirme.csb.gov.tr' and a target icon.</p> <p><b>PROJE HEDEFLERİ</b> Bu proje, kamu binalarında, afet direncini maksimum seviyeye çıkarma ve enerji tasarrufunu iyileştirmeye odaklanmıştır. Bu çerçevede binalar:</p> <ul style="list-style-type: none"><li>Yapısal olarak güçlendirilmesi,</li><li>Enerji performanslarının artırılması,</li><li>Yenide yenilenebilir &amp; sürdürülebilir enerji üretimi,</li><li>Enerji yönetim sisteminin teknik altyapı ile birlikte (Bina enerji takip ve kontrol sistemi, bina otomasyon sistemi vb.) kurulması ve etkinliğinin sağlanması,</li><li>Proje kapsamında, paydaşlar seviyesinde farkındalık sağlanması,</li></ul> <p>hedeflenmiştir.</p>

<p>14 : 20</p>	<p>14 : 24</p>	<ul style="list-style-type: none"> <li>▪ The general stages of the SREBPP project have been explained. Information was given about the plans and their contents to be prepared together with the project and tender documents.</li> <li>▪ <b>Environmental and Social Management Plan;</b> It has been explained that it will determine the environmental and social impacts of the project and include the risks and the actions to be taken to eliminate the risks.</li> <li>▪ <b>Occupational Health &amp; Safety Plan</b> It has been stated that the occupational health and safety risks related to the manufacturing stages will be determined and the measures to be taken for their elimination will be defined.</li> <li>▪ <b>Stakeholder Engagement Plan</b> was explained as the documents that will describe the stakeholders who will be directly or indirectly affected by the project and how much information these stakeholders will be informed about the project and project processes, and how feedbacks (suggestions, grievances, etc.) will be collected, examined and answered.</li> <li>▪ The importance of stakeholder engagement was mentioned. It was stated that the details of the communication will be announced at the end of the presentation.</li> </ul> <p><b>Image 2 PRESENTATION FILE SHARED SECTIONS_02</b></p>
<p>14 : 24</p>	<p>14 : 31</p>	<ul style="list-style-type: none"> <li>▪ It was explained that the tests and studies to be carried out for the soil survey to be carried out in order to determine the ground condition and these studies will be carried out according to the characteristics of each building.</li> <li>▪ It was stated what stakeholders and employees should do for occupational health and safety.</li> <li>▪ It has been explained that the professional competence of the employees will be questioned.</li> <li>▪ Possible environmental effects related to soil survey, precautions to be taken and considered in this regard were stated.</li> <li>▪ The possible social effects of the ground survey, the precautions to be taken and the things to be considered about it were explained.</li> </ul>



### Image 3 PRESENTATION FILE SHARED SECTIONS\_03



#### YAPISAL FIZIBILITE

##### ZEMİN ETÜDÜ:

Araştırma çukuru (her bir yapı için en az 1 adet), jeolojik semim (her bir yapı için en az 2), 30m derinlik sondaj (2-15 arası) ile zemin durumu belirlenecek ve raporlanacaktır. Her bir yapı için bu kapsamda gerçekleştirilecek test, sondaj sayıları belirlenmiştir ve bina teknik birimleri ile paylaşılmıştır.



#### YAPISAL FIZIBILITE

##### ZEMİN ETÜDÜ:

Bu kapsamda gerçekleştirilecek test ve numune sayıları aşağıdadır:

İSTENEN	YAPILARIN SAYISI	ORTA ORANLI DEĞER	LİMANIN SAYISI	İSTİSNA	YERLEŞİM SAĞIRI (DEĞERLERİ)	YERLEŞİM SAĞIRI (LİMANLARIN)
YAPILARIN SAYISI	1	1000	3	1	30	1
ORTA ORANLI DEĞER	1	1000	3	1	30	1
YAPILARIN SAYISI	1	1000	3	1	30	1
ORTA ORANLI DEĞER	1	1000	3	1	30	1
YAPILARIN SAYISI	1	1000	3	1	30	1
ORTA ORANLI DEĞER	1	1000	3	1	30	1
YAPILARIN SAYISI	1	1000	3	1	30	1
ORTA ORANLI DEĞER	1	1000	3	1	30	1
YAPILARIN SAYISI	1	1000	3	1	30	1
ORTA ORANLI DEĞER	1	1000	3	1	30	1
YAPILARIN SAYISI	1	1000	3	1	30	1
ORTA ORANLI DEĞER	1	1000	3	1	30	1
YAPILARIN SAYISI	1	1000	3	1	30	1
ORTA ORANLI DEĞER	1	1000	3	1	30	1



#### İŞ SAĞLIĞI GÜVENLİĞİ

Zemin etüdüne ilişkin risk analizi gerçekleştirilmiş, iş sağlığı ve güvenliği planları hazırlanmış ve çalışanlara aktarılmıştır. Paydaşlarımızın bu çalışmalara ilişkin dikkat etmesi gereken konular şunlardır:



- Kazık sondaj makinesi, kamyonu marfeti ile sondaj noktalarına kilitlenecek. Söz konusu kamyonların kullanımını, manevrasını sırasında kimse tarafından gürültüsü için zararlı faaliyetlerde bulunulmamalıdır.
- Sondaj kulesinin kaldırılması sırasında, kule etrafı içinde bina elemanlarını, açığa dolan vb. altyapıların önüne alınmalıdır.
- Sondaj işlemleri yapılırken 20m' den fazla yükseklikte çalışılmamalıdır. Bunun için çalışma sahası emniyet şerhli ile aydınlatılmalıdır.
- Sondaj işlemleri sırasında çevresel teknik kadrolardan oluşan eklenmemesi için yarım yürü maskesi kullanılmamalıdır.
- Sondaj işlemleri sırasında gürültü önlemleri olarak 95dB seviyelerine ulaşılmamalıdır. Bu nedenle çevresel bireylerin konsantrasyonlarının olumsuz yönde etkilenmesi muhtemeldir.

Çalışma sonrasında araştırma çukurları ve sondaj delikleri kapatılacaktır. Bu suretle toprak, çiyeme riskleri bertaraf edilmiş olacaktır.



#### İŞ SAĞLIĞI GÜVENLİĞİ - ÇALIŞANLAR

Çalışanların tamamı aşağıda belirtilen ve kendilerine teslim edilen kişisel koruyucu donanımları disiplinli şekilde kullanmaları yükümlüdür. Söz konusu donanımları uygun şekilde taşıyarak/kullanarak çalışmalara izin verilmeyecektir.



- Baret - TS EN 397 A1
- Kulak Tıkaçı - TS EN 352-2
- Koruyucu Gözlük - TS EN ISO 18221-3
- Çizelme Aracı ve Eldiven - TS EN ISO 24220
- El Ayakkabısı - TS EN ISO 20347
- Yarı Yüz Maskesi - TS EN 140
- Parçaları Tıpa Emniyet Kemer - TS EN 361 (Sadece Sondajda)



#### İŞ SAĞLIĞI GÜVENLİĞİ - ÇALIŞANLAR

Aeil durumlarda çalışanların toplanacağı bölgeler, deprem riski de dikkate alınarak belirlenmiş ve vaziyet planlarında gösterilmiştir.



#### MESLEKİ YETERLİLİK

Sondaj çalışmalarını yetkili **Sonajörler** tarafından gerçekleştirilecektir.

- Sonajör: Sondaj makine ve ekipmanlarını kullanarak yer altı ve yer üstünü deşki katmanlarında sondaj işlemleri hazırlar, sondaj kuyusu açma ve numune alma gibi işlemleri yapar. Keskin:

Sondaj makinesi taşımada kullanılan kamyonlar, C sınıfı ehliyet sahibi şoförler tarafından kullanılacaktır.



#### ÇEVRESEL ETKİLER

Zemin etüdüne ilişkin olası çevresel etkiler ve alınması gereken önlemler bütün çalışanlara aktarılmıştır. Paydaşlarımızın bu çalışmalara ilişkin dikkat etmesi gereken konular şunlardır:



- Sondaj işlemleri sırasında gürültü önlemleri olarak 95dB seviyelerine ulaşılmamalıdır. Bu nedenle çevresel bireylerin konsantrasyonlarının olumsuz yönde etkilenmesi muhtemeldir.
- Sondaj makinesi, kamyonu marfeti ve yağlı iletilerle çalıştırılarak, azami ses seviyesi kontrol edilmelidir. Böyle bir durumda emici pedler kullanılarak sesin yayılması engellenmelidir. Kontaminasyonun toprak kirlenmesini önlemeye çalışılmalıdır. Kontaminasyonun toprak kirlenmesini önlemeye çalışılmalıdır.
- Sondaj ekipmanlarının yıkama ve temizliği için gerekli olan suyun kanalizasyon sistemine atılması ve gözetim emniyetli olarak toprak kirlenmesini önlemeye çalışılmalıdır. Bütün yağmır suyu, yağmır suyu ve çamurlu suların kanalizasyon sistemine atılması, Çözümlenmiş çamur temizliği, düzenlenmesi yapılmalıdır, kanalizasyon ve gözetim emniyetli olacaktır.
- Sondaj çalışmalarında arıza olan ekipmanlar ve çalışanların etkileri (özellikle yorgunluk, açlık, yemecek, kışın vb.) değerlendirilerek faydalanan işlemlerin gerçekleştirilmesi için gerekli önlemler alınacaktır. Söz konusu önlemlerin uygulanması ve denetlenmesi projeye görev alan çalışanların sorumluluğundadır.



#### SOSYAL ETKİLER

Zemin etüdüne ilişkin öncül sosyal etkiler ve alınması gereken önlemler bütün çalışanlara bildirilmiştir. Paydaşlarımızın bu çalışmalara ilişkin dikkat etmesi gereken konular şunlardır:

- Sondaj çalışmalarında bina dışındaki olumsuz etkilerin önlenmesi için gerekli önlemler alınacaktır.
- Sondaj çalışmalarında bina kullanımını ve diğer paydaşların gürültü vb. etkilerinden olumsuz etkilenmemesi için gerekli önlemler alınacaktır. Söz konusu önlemler için gerekli önlemler alınacaktır. Söz konusu önlemler için gerekli önlemler alınacaktır.
- Trafik kazaları, müdahale ve teknik sorunların çevresel etki ve gürültüden etkilenmesi olasılığı. Dış ortamı test ve materyal çalışmaları sırasında, çalışma ve diğer paydaşların çalışma sahasına yakın konumlanmasında yapılan uyarılar bilgilendirme olarak çalışmaları için verilmelidir.
- Test, materyal çalışmaları sırasında, çalışma sahasında gerekli önlemler alınacaktır. Gerekli personeller tarafından gerçekleştirilmelidir. Bu konuda işlemler için gerekli önlemler alınacaktır.
- Proje ile ilgili alan çalışanları, hiç bir koşul altında paydaşlar ile çalışmaları sırasında gerekli uyarılar yapılmalıdır. Böyle bir durumda çalışmaları hakkında bilgi ve şikayet mekanizmaları vasıtasıyla bilgilendirilmelidir. (Check & şikayet süreci).
- Bütün çalışanların ayrımcılık, cinsiyet temelli güdük konusunda bilgilendirilme ve proje kapsamında bu tip davranışlara hiçbir şekilde izin verilmeyeceği bildirilmelidir. Bu çalışmaları için harici uzmanlar, danışmanlar, denetçiler ve diğer görevlilerin katılımıyla çalışmaları gerçekleştirilmelidir.

Detailed information was given about building structural support, destructive and nondestructive testing, and the process was explained. Information was given about determining the material and observations.

Image 4 PRESENTATION FILE SHARED SECTIONS\_04






**YAPISAL FİZİBİLİTE**

**BİNA TAŞIYICI YAPISI, TAHRİBATLI / TAHRİBATSIZ MUAYENE**

- Bina zemininde araştırma çukurları açılarak temel gözlemleri yapılacaktır.
- Donatı boyutları ve konumları incelenecek, projeler ile kıyaslanacaktır.
- Taşıyıcı yapı elemanlarından, uygun boyutlarda numuneler alınacak ve akredite laboratuvarlarda dayanım testlerine tabi tutulacaktır.
- Yerinde yapılan gözlemler ve laboratuvar test sonuçları raporlanacaktır.

NO	ALANIN YERİ	BAŞLANGIÇ DERİNLİĞİ (cm)	SONUÇLAŞTIRILAN DERİNLİK (cm)	YERİNDE GÖZLEMLERİNİN YERİ	YERİNDE GÖZLEMLERİNİN YERİ	YERİNDE GÖZLEMLERİNİN YERİ	YERİNDE GÖZLEMLERİNİN YERİ
1	YERİNDE GÖZLEM	1.200,00	1	27	6	11	2
2	YERİNDE GÖZLEM	1.200,00	1	75	8	11	3
3	YERİNDE GÖZLEM	1.200,00	2	104	25	16	2
4	YERİNDE GÖZLEM	1.200,00	2	104	35	16	2
5	YERİNDE GÖZLEM	1.200,00	2	104	45	16	2
6	YERİNDE GÖZLEM	1.200,00	2	104	55	16	2
7	YERİNDE GÖZLEM	1.200,00	2	104	65	16	2
8	YERİNDE GÖZLEM	1.200,00	2	104	75	16	2
9	YERİNDE GÖZLEM	1.200,00	2	104	85	16	2
10	YERİNDE GÖZLEM	1.200,00	2	104	95	16	2
11	YERİNDE GÖZLEM	1.200,00	2	104	105	16	2
12	YERİNDE GÖZLEM	1.200,00	2	104	115	16	2
13	YERİNDE GÖZLEM	1.200,00	2	104	125	16	2
14	YERİNDE GÖZLEM	1.200,00	2	104	135	16	2
15	YERİNDE GÖZLEM	1.200,00	2	104	145	16	2
16	YERİNDE GÖZLEM	1.200,00	2	104	155	16	2
17	YERİNDE GÖZLEM	1.200,00	2	104	165	16	2
18	YERİNDE GÖZLEM	1.200,00	2	104	175	16	2
19	YERİNDE GÖZLEM	1.200,00	2	104	185	16	2
20	YERİNDE GÖZLEM	1.200,00	2	104	195	16	2
21	YERİNDE GÖZLEM	1.200,00	2	104	205	16	2
22	YERİNDE GÖZLEM	1.200,00	2	104	215	16	2
23	YERİNDE GÖZLEM	1.200,00	2	104	225	16	2
24	YERİNDE GÖZLEM	1.200,00	2	104	235	16	2
25	YERİNDE GÖZLEM	1.200,00	2	104	245	16	2






**YAPISAL FİZİBİLİTE**

**BİNA TAŞIYICI YAPISI TAHRİBATLI / TAHRİBATSIZ MUAYENE**

Bina zemin/temel kontrolü için, temel kalınlığının bir miktar altına inilecek derinlikte yaklaşık (0,5m<sup>2</sup> yüzey alanı) araştırma çukuru açılır. Açılan çukur görsel olarak kontrol edilerek temel tipi, yapısı, bileşenleri kontrol edilir ve projeler ile kıyaslanır. Açılan çukur ve gözlemleri gözetilerek malzeme resimleri çeker. Araştırma sonrasında çukur uygun biçimde kapatılır.



**YAPISAL FİZİBİLİTE**

**BİNA TAŞIYICI YAPISI TAHRİBATLI / TAHRİBATSIZ MUAYENE**

Taşıyıcı yapı gözlemleri ve numune tespiti:

- Deney tespit edilmeden önce bina taşıyıcı elemanlarının içinde yer alan donatılardan (demir), konkriteri, dökümleri ve orijinleri belirlenmeye çalışılır.
- Deney ve denetim numuneleri alınacak bölümler tespit edilir.
- Numune alınacak bölümler ve numune alınacak yarıçapları yarıma bildirilir.






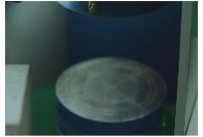





14 : 31

14 : 35

- A statement was made about the destructive and nondestructive testing to be done after the soil survey.
- Information was given about the reinforcement and stirrups.
- Explained how to take samples.

Image 5 PRESENTATION FILE SHARED SECTIONS\_05

		<div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <p style="text-align: center;"><b>YAPISAL FIZIBILITE</b></p> <p><b>BINA TAŞIYICI YAPISI TAHRİBATLI / TAHRİBATSIZ MUAYENE</b></p> <p>Donatı ve etriye nedir?</p> <ul style="list-style-type: none"> <li>• <b>Donatı:</b> Beton içerisindeki çelik çubuklardır. (Beton basınca karşı iyi çalışan bir malzeme olmasına rağmen, çekme dayanımı çok düşüktür. Çekme bölgesindeki genişlemeyi karşılamak üzere, bu bölgeye çelik çubuklar yerleştirilir.)</li> <li>• <b>Etriye:</b> Kolon, kiriş gibi taşıyıcı sistem elemanlarının, boyuna donatıların sararın, inşaat çeliğinin bükülmesiyle elde edilen bir sarğı donatıdır.</li> </ul>  </div> <div style="width: 48%;"> <p style="text-align: center;"><b>YAPISAL FIZIBILITE</b></p> <p><b>BINA TAŞIYICI YAPISI TAHRİBATLI / TAHRİBATSIZ MUAYENE</b></p> <p>Namunelerin çıkarılması;</p> <ul style="list-style-type: none"> <li>• <b>Donatı kontrolü:</b> için belirlenen yüzeyler üzerinde; boyu, ölçü, sıra ve beton kalınları, kinci marifeti ile <b>kaldırılır</b>, <b>sayılır</b>. Bu suretle kontrol edilecek demirler ortaya çıkarılır.</li> <li>• Çıkarılan donatı (<b>etriye</b> ve <b>boyuna donatı</b>) üzerindeki beton kalınlık ve pas, uygun boyutta menai fırçalar kullanılarak temizlenir.</li> <li>• Donatıya yapılan hasarın, dayanım tesadüflüğü numune için başlangıç noktası, uygun boy marifeti ile demir çubuklar kesilir.</li> </ul>  </div> </div>
14 : 35	14 : 38	<ul style="list-style-type: none"> <li>▪ It was stated that the tensile strength test will be applied to the samples taken.</li> <li>▪ It was explained that the sample to be taken for the core test will be taken from the structural support. It has been explained that the durability of these samples will be measured by compressive strength tests.</li> </ul> <p style="text-align: center;"><b>Image 6 PRESENTATION FILE SHARED SECTIONS_06</b></p> <div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <p style="text-align: center;"><b>YAPISAL FIZIBILITE</b></p> <p><b>BINA TAŞIYICI YAPISI TAHRİBATLI / TAHRİBATSIZ MUAYENE</b></p> <p>Donatı numuneleri; alırdite laboratuvarlarda çekme dayanım testlerine tabi tutulur, kopma kuvvetleri belirlenir ve raporlanır.</p>  </div> <div style="width: 48%;"> <p style="text-align: center;"><b>YAPISAL FIZIBILITE</b></p> <p><b>BINA TAŞIYICI YAPISI TAHRİBATLI / TAHRİBATSIZ MUAYENE</b></p> <p>Kolon, kiriş nedir?</p> <ul style="list-style-type: none"> <li>• <b>Kolon:</b> Sülun olarak da bilinen, taşıyıcı sistemde düşey yapı elemanlarına verilen isimdir. Yapıda diğ ve iç eksenlerden oluşan kuvvetleri (moment, kesme kuvveti vb.) temellere, dolayısı ile zemine aktarırlar.</li> <li>• <b>Kiriş:</b> Yapılarda düşey ve kullanım alanı yüklerini düşey taşıyıcılara (kolon) aktaran yapı elemanıdır.</li> </ul>  </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 20px;"> <div style="width: 48%;"> <p style="text-align: center;"><b>YAPISAL FIZIBILITE</b></p> <p><b>BINA TAŞIYICI YAPISI TAHRİBATLI / TAHRİBATSIZ MUAYENE</b></p> <p>Namunelerin çıkarılması;</p> <p>Taşyıcı beton karırsız için kolonlardan 10cm çapında 10cm derinliğinde, silindirik numunelerin çıkarılması;</p> <ul style="list-style-type: none"> <li>• Karot makinesi, numune alınacak noktaya hassas olarak uygun çapta ritel / vida kullanılarak sabitlenir.</li> <li>• Karot makinesi çalıştırılır. Makine uygun devide donatı ve işlem yapılan noktaya uygun miktarda su alınarak istenilen işlem yapılır.</li> <li>• 100 -150mm derinliğe ulaşılığında cihaz yatağı üzerinden karot kesici çelik ve cihaz kapalı konuma getirilir.</li> <li>• Karot makinesi yarıdan girer. Doğru boy ve uygun hızla makine murg ve çelik kullanılarak numune koparılır. Alınarak numunenin bağları, yüzeyinden kopması sağlanır. Serbest kalan numune yarıdan çıkarılır.</li> </ul>  </div> <div style="width: 48%;"> <p style="text-align: center;"><b>YAPISAL FIZIBILITE</b></p> <p><b>BINA TAŞIYICI YAPISI TAHRİBATLI / TAHRİBATSIZ MUAYENE</b></p> <p>Beton numuneleri; alırdite laboratuvarlarda basma dayanım testlerine tabi tutulur, dayanıklılık seviyesi belirlenir ve raporlanır.</p>  </div> </div>

14 : 38	14 : 40	<p>It was stated that the samples were taken from places that were not exposed to force, the parts damaged by column stripping and the places where concrete samples were taken will be filled with high-strength filling mortars and repaired.</p> <p><b>Image 7 PRESENTATION FILE SHARED SECTIONS_07</b></p> <div style="text-align: center;">   </div> <p><b>YAPISAL FİZİBİLİTE</b> TAHRİBATLI TEST SONRASI ONARIM</p> <p>Proje kapsamında gerçekleştirilen tahribatlı muayenelerin, temin edilen numunelerin; binaya yapısal hasar vermesi söz konusu değildir.</p> <ul style="list-style-type: none"> <li>• Demir numuneler kuvelinde kalıyorsa lüzumsuz vb. noktalardan alınmaktadır.</li> <li>• Kalon sızması sonucu tahrip olan kısımlar ve beton numunesi alınan bölümler yüksek mukavemetli dolgu harçları kullanılarak doldurulacak, onarılacaktır.</li> </ul> 
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### İŞ SAĞLIĞI GÜVENLİĞİ

Birisi işi yaparken düşerse, tırnak ve mücadere gelişimlerine ilişkin esas amalar gerektirir. İşin, iş sağlığı ve güvenliği şartları ve çalışanların sağlığını ve güvenliğini etkiler. İşyerinde çalışanların sağlığını ve güvenliğini etkiler. İşyerinde çalışanların sağlığını ve güvenliğini etkiler.

- Çalışanların işyerinde çalışırken işyeri güvenliğine ilişkin esas amalar gerektirir. İşyerinde çalışanların sağlığını ve güvenliğini etkiler.
- Çalışanların işyerinde çalışırken işyeri güvenliğine ilişkin esas amalar gerektirir. İşyerinde çalışanların sağlığını ve güvenliğini etkiler.
- Çalışanların işyerinde çalışırken işyeri güvenliğine ilişkin esas amalar gerektirir. İşyerinde çalışanların sağlığını ve güvenliğini etkiler.
- Çalışanların işyerinde çalışırken işyeri güvenliğine ilişkin esas amalar gerektirir. İşyerinde çalışanların sağlığını ve güvenliğini etkiler.
- Çalışanların işyerinde çalışırken işyeri güvenliğine ilişkin esas amalar gerektirir. İşyerinde çalışanların sağlığını ve güvenliğini etkiler.

### İŞ SAĞLIĞI GÜVENLİĞİ - ÇALIŞANLAR

Çalışanların işyerinde çalışırken işyeri güvenliğine ilişkin esas amalar gerektirir. İşyerinde çalışanların sağlığını ve güvenliğini etkiler. İşyerinde çalışanların sağlığını ve güvenliğini etkiler.

- İşyerinde çalışanların sağlığını ve güvenliğini etkiler.
- İşyerinde çalışanların sağlığını ve güvenliğini etkiler.
- İşyerinde çalışanların sağlığını ve güvenliğini etkiler.
- İşyerinde çalışanların sağlığını ve güvenliğini etkiler.
- İşyerinde çalışanların sağlığını ve güvenliğini etkiler.

### ÇEVRESEL ETKİLER

Birisi işi yaparken, tırnak ve mücadere gelişimlerine ilişkin esas amalar gerektirir. İşin, iş sağlığı ve güvenliği şartları ve çalışanların sağlığını ve güvenliğini etkiler. İşyerinde çalışanların sağlığını ve güvenliğini etkiler.

- Çalışanların işyerinde çalışırken işyeri güvenliğine ilişkin esas amalar gerektirir. İşyerinde çalışanların sağlığını ve güvenliğini etkiler.
- Çalışanların işyerinde çalışırken işyeri güvenliğine ilişkin esas amalar gerektirir. İşyerinde çalışanların sağlığını ve güvenliğini etkiler.
- Çalışanların işyerinde çalışırken işyeri güvenliğine ilişkin esas amalar gerektirir. İşyerinde çalışanların sağlığını ve güvenliğini etkiler.
- Çalışanların işyerinde çalışırken işyeri güvenliğine ilişkin esas amalar gerektirir. İşyerinde çalışanların sağlığını ve güvenliğini etkiler.
- Çalışanların işyerinde çalışırken işyeri güvenliğine ilişkin esas amalar gerektirir. İşyerinde çalışanların sağlığını ve güvenliğini etkiler.

### SOSYAL ETKİLER

Birisi işi yaparken, tırnak ve mücadere gelişimlerine ilişkin esas amalar gerektirir. İşin, iş sağlığı ve güvenliği şartları ve çalışanların sağlığını ve güvenliğini etkiler. İşyerinde çalışanların sağlığını ve güvenliğini etkiler.

- Çalışanların işyerinde çalışırken işyeri güvenliğine ilişkin esas amalar gerektirir. İşyerinde çalışanların sağlığını ve güvenliğini etkiler.
- Çalışanların işyerinde çalışırken işyeri güvenliğine ilişkin esas amalar gerektirir. İşyerinde çalışanların sağlığını ve güvenliğini etkiler.
- Çalışanların işyerinde çalışırken işyeri güvenliğine ilişkin esas amalar gerektirir. İşyerinde çalışanların sağlığını ve güvenliğini etkiler.
- Çalışanların işyerinde çalışırken işyeri güvenliğine ilişkin esas amalar gerektirir. İşyerinde çalışanların sağlığını ve güvenliğini etkiler.
- Çalışanların işyerinde çalışırken işyeri güvenliğine ilişkin esas amalar gerektirir. İşyerinde çalışanların sağlığını ve güvenliğini etkiler.

14 : 45

14 : 50

- It has been stated that the OHS rules that the contractor companies must comply with and the general environmental and social effects/measures are explained in the OHS plan prepared specifically for this project and communicated to the relevant employees.
- In addition to the structural feasibility, it was stated that studies will be carried out on the **energy efficiency** of the buildings and various controls and examinations will be carried out in order to understand the current situation of the building before these.

**Image 9 PRESENTATION FILE SHARED SECTIONS\_09**

### ENERJİ VERİMLİLİĞİ

**ENERJİ PERFORMANSI EKİLEME YAPISI VE SİSTEMLERİN TEKTİRİ**

Birisi işi yaparken, tırnak ve mücadere gelişimlerine ilişkin esas amalar gerektirir. İşin, iş sağlığı ve güvenliği şartları ve çalışanların sağlığını ve güvenliğini etkiler. İşyerinde çalışanların sağlığını ve güvenliğini etkiler.

- Çalışanların işyerinde çalışırken işyeri güvenliğine ilişkin esas amalar gerektirir. İşyerinde çalışanların sağlığını ve güvenliğini etkiler.
- Çalışanların işyerinde çalışırken işyeri güvenliğine ilişkin esas amalar gerektirir. İşyerinde çalışanların sağlığını ve güvenliğini etkiler.
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- Çalışanların işyerinde çalışırken işyeri güvenliğine ilişkin esas amalar gerektirir. İşyerinde çalışanların sağlığını ve güvenliğini etkiler.

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Birisi işi yaparken, tırnak ve mücadere gelişimlerine ilişkin esas amalar gerektirir. İşin, iş sağlığı ve güvenliği şartları ve çalışanların sağlığını ve güvenliğini etkiler. İşyerinde çalışanların sağlığını ve güvenliğini etkiler.

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- Çalışanların işyerinde çalışırken işyeri güvenliğine ilişkin esas amalar gerektirir. İşyerinde çalışanların sağlığını ve güvenliğini etkiler.

Sayfa 85 / 105



## Questions and Answers

	NAME LAST NAME	QUESTION	NAME LAST NAME	ANSWER
01	Participant 1	When will the works begin?	Birsen Bakır	After the current analysis, it was said that the works will start when the tender process is over.
02	Participant 2	How long will the works take?	Birsen Bakır	It is stated that the project phase will last for a maximum of 12 months.

Meeting Photos



## Participant List and Contact Information

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Within the scope of the Law on the Protection of Personal Data Personal (Law No. 6698), participants' clear identity information cannot be shared. However, records of the meeting are kept by the PIU.



## Annex VII: Stakeholder Engagement Meeting Content & Records (Environmental and Social Management Plan)

Project Code	WB/CS-DESSUP-01	Building Name	BOĞAZIÇI UNIVERSITY SARITEPE (KİLYOS) CAMPUS
Date	20.09.2023	Start   End time	13 : 30   15 : 28

### Annex-VII/Table 1 Meeting Agenda

START TIME	END TIME	ACTIVITY
13 : 30	13 : 40	Meeting kick-off speech (Moderator: Orhan Kenan Sülahi)
13 : 40	13 : 45	Within the framework of the Law on the Protection of Personal Data, general information was provided regarding the meeting recording and the processing of personal data. There are no participants who oppose the meeting recording. <ul style="list-style-type: none"><li>As of 13:45, the entire meeting was recorded in *.mp4 video format and *.m4a audio file format. In addition, meeting messages are recorded in *.txt format.</li></ul>
13 : 45	13 : 54	Information was given about the SREBPB project and which buildings in Kilyos Campus are within the scope of the project.

Picture 7 PRESENTATION FILE SHARED SECTIONS\_01



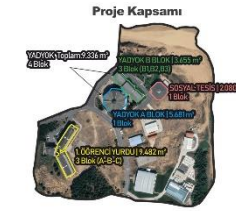
**KAMU BİNALARINDA DEPREM DAYANIMI VE ENERJİ VERİMLİLİĞİ PROJESİ**  
Finansmanı Dünya Bankası tarafından sağlanmakta. Hazine & Maliye Bakanlığı garantörlüğünde, Çevre, Şehircilik ve İklim Değişikliği Bakanlığı tarafından yürütülmektedir.



<https://kamuguclendirme.csb.gov.tr>



**Kamu Binalarında Deprem Dayanımı ve Enerji Verimliliği (KADEV) Projesi;** yüksek sismik risk altında ve enerji verimliliği düşük yükseköğretim binaları, yurtlar, sosyal hizmet kurumları, hastaneler ve hükümet konakları gibi kamu binalarında sismik güçlendirme ve enerji verimliliğine odaklanmıştır. Bu sunum; BOÜN Santepe (Kilyos) Kampüsü bünyesinde yer alan Yabancı Diller Yüksek Okulu (YADYOK) A ve B Blok, Sosyal Tesis ve 1. Öğrenci Yurdu binalarının yapısal güçlendirme ve enerji verimliliği odaklı iyileştirme çalışmaları sırasında olması muhtemel çevresel, sosyal ve İSG konularındaki olumsuzluklar ve bunların kabul edilebilir seviyelere indirilebilmesi için alınması gereken tedbirler hakkında bilgi verecektir.



13 : 54

14 : 16

- Explanations were made about structural strengthening, one of the renovations determined as a result of the survey.
- It was stated which renovations the structural strengthening would include.
- Information was given about building floor reinforcement (Micro Pile), existing carrier system reinforcement, additional carrier system manufacturing, dismantling of brittle structures and floor, ceiling, wall and door renovations due to structural strengthening activities.

## Picture 8 PRESENTATION FILE SHARED SECTIONS\_02



### Yapım Aşaması

Etüt neticesinde, yapısal güçlendirme ve enerji verimliliği odaklı renovasyonlar belirlenmiş ve projelendirilmiştir. Söz konusu renovasyonlar, aşağıda ana başlıklar halinde belirtilmiştir:

#### YAPISAL GÜÇLENDİRME

- Duvardan kırık ve çöken bölümler
- Mevcut yapıya çözümlenmesi için taşıyıcı sistem yenileme
- Genel yapısal güçlendirme
- Yapısal güçlendirme faaliyetleri için taşıyıcı sistem duvar, yapı elemanlarının

#### ENERJİ VERİMLİLİĞİ

- Çatı ve dış cephe yalıtım
- Akıllı iklimlendirme
- Mekanizasyon sistemleri yenileme
- Yalıtım tesisatı yenileme, çeşitli enerji yalıtım sistemleri
- Mekanizasyon ekipmanları
- Bina ile entegrasyon (örneğin enerji verimliliği artırma için enerji verimliliği artırma teknolojileri)
- Aydınlatma sistemleri için enerji verimliliği artırma teknolojileri (örneğin LED aydınlatma sistemleri)
- Çatı ve dış cephe yalıtım sistemleri için enerji verimliliği artırma teknolojileri
- Enerji verimliliği artırma teknolojileri için enerji verimliliği artırma teknolojileri

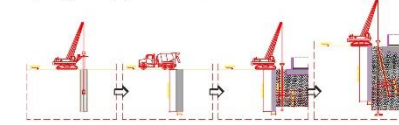
01



### Yapısal Güçlendirme Zemin Güçlendirme

Proje kapsamına giren tüm yapıların zeminleri mikro kazık ve enjeksiyon ile güçlendirilecektir.

01



### Yapısal Güçlendirme Taşıyıcı Sistem Güçlendirme

Güçlendirme perdeleri ve kolon mantoları yapılacak akslardaki duvarlar işaretlenerek en üst kattan başlanacak şekilde, balyoz ve kırıcı marifetle yıkılacaktır. Duvar yıkımı öncesi zarar görmeye maruz kalan kapı, pencere, vitrin, tezgâh, elektrik ve mekanik tesisat ekipmanları sökülecektir ve Faydalıncı kurum tarafından gösterilen alanlarda geçici muhafaza edilecektir.

01



### Yapısal Güçlendirme Taşıyıcı Sistem Güçlendirme

Söküm işleminin sonuna güçlendirme elemanlarının temellere bağlanması amacıyla perde ve kolon mantosu çevresinin açılması için subasman betonunun kırılması ve temel içi dolgunusunun kazılması gerekmektedir. Bu kırım ve kazı işlemleri el ile (kırıcı ve balyoz yardımıyla) ve/veya yapı içerisinde girebilen küçük makinelerle (bobcat vb.) gerçekleştirilecektir.

01



### Yapısal Güçlendirme Taşıyıcı Sistem Güçlendirme

Kırım ve kazı işlemleri tamamlandıktan sonra mevcut kolon, kırık ve temellere ankraj çubukları çakılır. Ankraj deliklerindeki ölçülere uygun olarak delici makinelarla mevcut elemanlara delik açılması, deliğin hava kompresörü ile temizlenmesi, epoksi yapıştırıcının delik içine sıkılması ve önceden hazırlanmış ankraj demirinin delik içine sokulması şeklinde yapılır.

01



### Yapısal Güçlendirme Taşıyıcı Sistem Güçlendirme

Ankraj imalatları ile beraber güçlendirme donatısının döşenmesi işlerine başlanacaktır. Donatı numune kontrolleri sonrası Plywood kalıplar kapatılarak bir üst kat döşemesinden açılan delikten veya kuyu açılarak denetim kalıpların imal edilen huniler içersinden kalıp içersine "kendiliğinden yerleşen beton" (ince agregalı, süper akışkanlaştırıcı katkılı beton) dökülür.

01



### Yapısal Güçlendirme İnce İşler

Kaba inşaatın tamamlandığından arından onarım işlerine geçilir. Güçlendirme perdesinin iç ve dış yüzlerinin sıva, boya, yalıtım vb. uygulamaları, bozulan zeminlere tesviye betonu ve kaplama malzemesi düzenlemeleri, elektrik tesisatı ve mekanik tesisat montajları ve gerekirse kapı pencere imalatları yapılarak güçlendirme işleri tamamlanır.

01





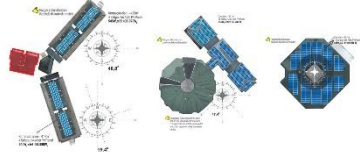











### Gevrek Yapıların Demontajı

1. Öğrenci Yurdu, A-B blok yapıları arasında yer alan metal konstrüksiyon geçiş köprüsünün, deprem riskleri nedeniyle kaldırılması gerektiği kanaatine varılmıştır.

01



		<div style="text-align: center;">   </div> <p style="text-align: center;"><b>Bina Cephe Onarımı</b></p> <ol style="list-style-type: none"> <li>1. Öğrenci Yurdu, yapısal güçlendirme ve gövke yapıların demontajı sonrasında zara gören dış cephe ve cephe bileşenlerinin mevcut termal yalıtım katmanını korumak üzere tamirat işlemleri yüklenici firma tarafından gerçekleştirilecektir.</li> <li>2. YADYOK güçlendirme işlemleri sonrasında zara gören dış cephe ve cephe bileşenlerinin mevcut termal yalıtım katmanını korumak üzere tamirat işlemleri yüklenici firma tarafından gerçekleştirilecektir.</li> <li>3. Sosyal Tesis cephesi mevcut termal yalıtımının yetersiz olduğu tespit edilmiştir. Bu nedenle söz konusu yapı cephesinin tamamı termal yalıtım çalışmaları çerçevesinde yenilenecektir.</li> </ol>
14 : 16	15 : 34	<ul style="list-style-type: none"> <li>Information was given about the studies to be carried out focusing on energy efficiency.</li> <li>Explanations were made about rooftop solar power plants, air conditioning &amp; domestic hot water production, motors &amp; pumps, installation insulation, lighting system, facade components, facade insulation and automation.</li> <li>The savings rates to be achieved with the work to be done were stated.</li> </ul> <p><b>Picture 9 PRESENTATION FILE SHARED SECTIONS_03</b></p> <div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;"> <div style="text-align: center;">   </div> <p><b>Enerji Verimliliği Odaklı Çalışmalar</b> <b>Çatı Üzeri Güneş Enerji Santralleri</b></p> <p>Proje kapsamına giren yapı çatıları 550Wp kapasiteli solar paneller ile kaplanacaktır. Yapılan hesaplamalar söz konusu sistemin yılda 410MWh'lyi elektrik üretim potansiyeli barındırdığını göstermektedir.</p> <div style="text-align: center;">  </div> </div> <div style="width: 50%;"> <div style="text-align: center;">   </div> <p><b>Enerji Verimliliği Odaklı Çalışmalar</b> <b>İklimlendirme &amp; Domestik Sıcak Su Üretimi</b></p> <p>Proje kapsamına giren yapıların iklimlendirme ve domestik sıcak su üretim sistemleri yüksek verimli ekipmanlar ve ısı pompaları kullanılarak yenilenecektir. Bu suretle toplam enerji tüketiminde ~26% oranında tasarruf elde edilebileceği hesaplanmıştır.</p> <ul style="list-style-type: none"> <li>1. Öğrenci Yurdu; 2007 model mevcut konvansiyonel kazan yerine (Demirdöküm marka MK 20 Model 875.000kcal/h) 2 adet 500.000kcal/h kapasiteli KASKAD iklimli yoğunmalı premix yer tipi kazan ile değiştirilmiştir.</li> <li>YADYOK; Mevcut iklimlendirme sisteminde istima kapasitesi 700kW soğutma kapasitesi 560 kW olan hava kaynaklı ısı pompasının entegre edilmesi, iklim koşullarına göre söz konusu cihazın otomasyon sistemi üzerinden yüksek verimli işletilmesi.</li> <li>Sosyal Tesis; YADYOK ısı hatlarının pasivize edilmesi, 140kW kapasiteli 2 adet duvar tipi yoğunmalı kazan ve 170kW istima, 135kW soğutma kapasitesine sahip hava kaynaklı ısı pompasının tesisi projelendirilmiştir.</li> </ul> </div> </div> <div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;"> <div style="text-align: center;">   </div> <p><b>Enerji Verimliliği Odaklı Çalışmalar</b> <b>Motor &amp; Pompalar</b></p> <p>Sirkülasyon sisteminde mevcut motor &amp; pompa elemanlarının yedekleri ile birlikte; entegre frekans kontrolü yüksek verimli sistemler ile değişimi sağlanacaktır. Bu suretle toplam enerji tüketiminde ~1% oranında tasarruf elde edilebileceği hesaplanmıştır.</p> <ul style="list-style-type: none"> <li>1. Öğrenci Yurdu; 10 adet asenkron motor, pompa değişimi gerçekleştirilecektir.</li> <li>YADYOK; 5 adet asenkron motor, pompa değişimi gerçekleştirilecektir.</li> <li>Sosyal Tesis; mevcut istima sistemi tamamen yenilenmektedir. Söz konusu sistem tesisatlarında bahsedilen yüksek verimli entegre frekans kontrolü elemanlar kullanılacaktır.</li> </ul> <div style="text-align: center;">  </div> </div> <div style="width: 50%;"> <div style="text-align: center;">   </div> <p><b>Enerji Verimliliği Odaklı Çalışmalar</b> <b>Tesisat Yalıtımı</b></p> <p>Yalıtımsız tesisat ve tesisat elemanlarının tamamı uygun termal drenaj sahip malzemeler ile kaplanacak, ısı transferi kaynaklı kayıplar engellenecektir. Bu suretle toplam enerji tüketiminde ~1,5% oranında tasarruf elde edilebileceği hesaplanmıştır.</p> <div style="text-align: center;">  </div> </div> </div>

		<div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <p style="text-align: center;"><b>Enerji Verimliliği Odaklı Çalışmalar</b> <b>Cephe Yalıtımı</b></p> <p>1. Öğrenci yurdu ve YADYOK yapılarının mevcut yalıtım katmanlarının, iklim bölgesi çerçevesinde uygun olduğu kanaatine varılmıştır. Ancak Sosyal tesis termal yalıtımının yetersiz olduğu görülmüştür. Bu çerçevede; Sosyal Tesis mevcut <b>3cm</b> cephe yalıtımının kazınması, <b>8cm</b> taşıyıcı termal yalıtım kaplaması tesisi projelendirilmiştir (uygulama yüzey alanı 656,81m<sup>2</sup>).</p>  </div> <div style="width: 48%;"> <p style="text-align: center;"><b>Enerji Verimliliği Odaklı Çalışmalar</b> <b>Otomasyon Sistemi</b></p> <p>Enerji izleme sistemi ve otomasyon sisteminin, EN ISO 50001 Enerji Yönetim Sistem şartlarına uygun biçimde kurulması ve etkinliğinin sağlanması sureti ile toplam enerji tüketiminde <b>+6%</b> oranında tasarruf elde edilebileceği hesaplanmıştır.</p> <p>Projelendirme safhasında önemli enerji kullanıcıların tüketim değerlerinin anlık gözlenmesi, GES üretim miktarlarının takip ve kontrolü, mekanik otomasyon elemanlarının takip ve kontrolü dikkate alınmıştır.</p> </div> </div> <div style="text-align: center; margin-top: 20px;"> <p style="text-align: center;"><b>Enerji Verimliliği Odaklı Çalışmalar</b></p> <p>Yapılan hesaplamalar neticesinde belirlenen önlem senaryolarının hayata geçirilmesi ile toplam enerji tüketiminde <b>58,30%</b> oranında tasarruf elde edilebilecek, yaklaşık 580 ton/yıl sera gazı emisyonu engellenebilecektir. Söz konusu renovasyonlar ve yenilenen sistemlerin EN ISO 50001 Enerji Yönetim Sistem şartlarına uygun biçimde işletilmesi ile yıllık 623.000kWh elektrik, 1.100.000kWh doğalgaz tasarrufu sağlanabilecektir. Söz konusu tasarrufun maddi boyutu yaklaşık 3.500.000€/yıl seviyesindedir.</p> </div>
14 : 34	14 : 48	<p>General explanations regarding occupational health and safety plans were made in this context;</p> <ul style="list-style-type: none"> <li>▪ The issues taken into account within the framework of OHS plans were explained item by item.</li> <li>▪ General OHS rules and especially the measures to be taken for environmental safety were mentioned.</li> <li>▪ It was underlined that the devices should not be touched while working and that technical personnel should show the sockets fed by residual current protected lines for the connection of electrical devices.</li> <li>▪ The importance of professional competence was mentioned. For example; It has been stated that Civil Engineers and Construction Technicians under their supervision will take part in the structural equipment tests.</li> <li>▪ The environmental impacts of all studies and the precautions to be taken were communicated to all employees, and the issues that stakeholders should pay attention to were explained.</li> </ul>





- Within the scope of the project, the technical training that the consultant will give to the contractor personnel and the training to be taken in line with the Standards Regulation that must be followed are explained.

Picture 12 PRESENTATION FILE SHARED SECTIONS\_08

**Öneri Şikayet Sistemi**

Çevre, Sağlık ve İleri Düşünceli Bakanlığının (ÇSİB) Şikayetleri Bakanlar Hattı da web sitesinde yayımlanmıştır. Bu sistem hakkında bilgi için aşağıdaki linklere ulaşabilirsiniz. Öneri ve şikayetleriniz için aşağıdaki linklere ulaşabilirsiniz. Öneri ve şikayetleriniz için aşağıdaki linklere ulaşabilirsiniz.

**Öneri Şikayet Sistemi**

Öneri ve şikayetleriniz için aşağıdaki linklere ulaşabilirsiniz. Öneri ve şikayetleriniz için aşağıdaki linklere ulaşabilirsiniz. Öneri ve şikayetleriniz için aşağıdaki linklere ulaşabilirsiniz.

**Anket Çalışması**

Proje kapsamında Pazarcık Kazım Toptaşlıoğlu, yapım alanındaki (on-line) 2 şer dakikalık anket çalışması yapılacaktır. Ülkemizde ki her türlü projelerin, hizmetlerinin, personellerinin ve diğerlerinin olarak değerlendirilmeye çalışılmaktadır.

**Eğitimler**

Proje kapsamında, Mükemmel Yılı'ya aday olan şirketlere yönelik olarak eğitimler verilmektedir. Eğitimler aşağıdaki gibidir:

- Çevre ve Sosyal Etkiler
- Çevre ve Sosyal Etkiler
- Sağlık, Mekanizasyon (SM)
- Çevre ve Sosyal Etkiler
- Akis Yönetim
- Tarih ve Kültür
- Sağlık, Mekanizasyon ve Çevre Etkileri
- Çevre ve Sosyal Etkiler
- Çevre ve Sosyal Etkiler
- Sağlık, Mekanizasyon ve Çevre Etkileri
- Çevre ve Sosyal Etkiler

15 : 06

15 : 28

Participants' questions were answered.  
CLOSING speech was made and the meeting ended.

Picture 13 PRESENTATION FILE SHARED SECTIONS\_09



İgi ve anlayışınız için teşekkür ederiz!



# Questions and Answers

Annex-VII/Table 2 List of Questions & Answers

	NAME SURNAME	QUESTION	NAME SURNAME	ANSWER
01	Participant 1	Why wasn't the 3rd Dormitory building included in the Project?	İsmail Ozan DEMİREL	There are selection criteria for buildings within the scope of the project. One of these is that buildings must cover an area of at least 5,000 m2. It has been said that the building in question does not exceed the area of 5000 m2, which is under the project conditions.
02	Participant 2	When will the project start?	Orhan Kenan SÜLAHİ Semahat Dicle MAYBEK	It is said that it will start at most 45 business days after the tender is concluded. However, it has been stated that the process is expected to take much shorter.
03	Participant 3	Why wasn't a ground survey done for the lodging building?	Orhan Kenan SÜLAHİ BOÜN Yapı İşleri Teknik Daire Başkanlığı-Serkan BIYIK	It was stated that the building, which had previously been retrofitted, was not included in the scope and that the building was built in accordance with the 2007 regulations since the strengthening work was carried out 9 years ago.
04	Participant 4	Is there a danger of liquefaction in buildings? Doesn't the audit need to be completed?	İsmail Ozan DEMİREL	It has been stated that the study has been carried out and can be requested.
05	Participant 5	Will we not be affected while the work is being carried out?	Tülün YILDIRIM Ganime GÜZEL Semahat Dicle MAYBEK	Environmental and social impacts are explained and the functioning of the grievance mechanism is mentioned again. It has been stated that efforts will be made to ensure that the impact is at a minimum level.
06	Participant 6	Risky and risk-free buildings of Kilyos were announced. Why isn't priority given to the housing building?	İsmail Ozan DEMİREL	It was stated that the World Bank was not included due to the parameters in the project inclusion process.
07	Participant 7	Will the OHS officer be present here?	Tülün Yıldırım	It was stated that the OHS experts of both the contractor and the consultant company will be present during the process and they can report any grievances.
08	Participant 8	Where will the workers stay?	Tülün Yıldırım	It was said that the contractor would create its own areas outside the campus.

09	Participant 9	Will all 3 building studies start at the same time?	Orhan Kenan Sülahi	It is stated that after the contractor submits the work plans, they will be shared with the administration.
10	Participant 10	Won't there be a problem with the foundation of the building? (For guesthouse)	İsmail Ozan DEMİREL	It has been said that there will be no problems since the foundations will be strengthened by injection method.
11	Participant 11	Will decibel measurement be made? Is there a limit to this?	Ganime GÜZEL	It has been stated that controls will be carried out in accordance with the Environmental Noise Control Regulation and measures will be taken accordingly.
12	Participant 12	What impact will the workspace lighting mentioned in the ESMP have on us?	Tülün YILDIRIM	It has been stated that the lighting will be for precautionary purposes and will provide as much illumination as a street lamp.
13	Participant 13	What will the workers' working hours be like?	Tülün YILDIRIM	It is stated that the work will be during the day, including weekends, unless there is an extra necessity.
14	Participant 14	Why weren't we notified about the SEM held on North Campus?	Semahat Dicle MAYBEK	Normally, PKT is not performed for feasibility studies, but we wanted to inform everyone. The consultant company also sent a letter to the university campus, but it was said that we hurried to take quick action.
15	Participant 15	Is it possible to notify us at least 10 days in advance so that we can organize your requests regarding PKT or any other issue?	Semahat Dicle MAYBEK	The first meeting was for feasibility studies. The building was empty, but the technical team had to be informed. We are currently in a hurry to deliver the dormitories to the students. It was said that we would inform each other through mutual meetings.

- SREBPB Project framework plan brochures and additional presentations will be delivered to all departments via mobile phones or e-mail addresses.
- The suggestion & grievance form link will be sent to all participants via their mobile phones or e-mail addresses.

# Meeting Photos



## Participant List and Contact Information

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Within the scope of the Law on the Protection of Personal Data Personal (Law No. 6698), participants' clear identity information cannot be shared. However, records of the meeting are kept by the PIU.

# Stakeholder Engagement Meeting Presentation



## KAMU BİNALARINDA DEPREM DAYANIMI & ENERJİ VERİMLİLİĞİ PROJESİ

Finansmanı Dünya Bankası tarafından sağlanmakta, Hazine & Maliye Bakanlığı garantisinde, Çevre, Şehircilik ve İklim Değişikliği Bakanlığı tarafından yürütülmektedir.



<https://kamuugclendirme.csb.gov.tr>

**Kamu Binalarında Deprem Dayanımı ve Enerji Verimliliği (KADEV) Projesi**, yüksek sismik risk altında ve enerji verimliliği düşük yükseköğretim binaları, yurtlar, sosyal hizmet kurumları, hastaneler ve hükümet konakları gibi kamu binalarında sismik güçlendirme ve enerji verimliliğine odaklanmıştır. Bu sunum; BOÜN Sarıtepe (Kilyos) Kampüsü bünyesinde yer alan Yabancı Diller Yüksek Okulu (YADYOK) A ve B Blok, Sosyal Tesis ve 1. Öğrenci Yurdu binalarının yapısal güçlendirme ve enerji verimliliği odaklı iyileştirme çalışmaları sırasında olması muhtemel çevresel, sosyal ve İSG konularındaki olumsuzluklar ve bunların kabul edilebilir seviyeye indirilebilmesi için alınması gereken tedbirler hakkında bilgi verecektir.

## Proje Kapsamı



## Yapım Aşaması

Ekli neticesinde yapısal güçlendirme ve enerji verimliliği odaklı renovasyonlar belirlenmiş ve projelendirilmiştir. Söz konusu renovasyonlar, aşağıda ana başlıklar halinde belirtilmiştir:

### YAPISAL GÜÇLENDİRME

- Risk temelli güçlendirme çalışmaları
- Mevcut yapılar için güçlendirme çalışmaları
- Gececi yapıların demontajı
- Yapıya göre restorasyon çalışmaları (kapı, duvar, banyo restorasyonu)

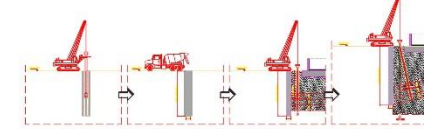
### ENERJİ VERİMLİLİĞİ

- Cephaneye cila temizliği
- Kapı restorasyonu
- Sıkıştırılmış hava sistemleri çalışmaları
- Yüksek basınçlı temizlik çalışmaları
- Mükemmel izolasyon çalışmaları
- Isınma pompası çalışmaları
- Isınma pompası çalışmaları
- Aydınlatma sistemleri çalışmaları
- Çatı restorasyonu çalışmaları
- Enerji verimliliği çalışmaları

## Yapısal Güçlendirme

### Zemin Güçlendirme

Proje kapsamına giren tüm yapıların zeminleri mikro kazık ve enjeksiyon ile güçlendirilecektir.



## Yapısal Güçlendirme

### Taşıyıcı Sistem Güçlendirme

Güçlendirme perdeleri ve kolon mantoları yapılacak akslardaki duvarlar işaretlenerek en üst kattan başlanacak şekilde, balıoz ve kırıcı marifetleriyle yıkılacaktır. Duvar yıkımı öncesi zarar göreme sirkeli bannıran; kapı, pencere, vitriףye, tezgâh, elektrik ve mekanik tesisat ekipmanları sökülecektir ve Faydalanıcı kurum tarafından gösterilen alanlarda geçici muhafaza edilecektir.



## Yapısal Güçlendirme

### Taşıyıcı Sistem Güçlendirme

Söküm işleminin sonuna gelindiğinde elemanların temellere bağlanması amacıyla perde ve kolon mantosu çevresinin açılması için subasman betonunun kırılması ve temel içi doğusunun kazılması gerekmektedir. Bu kırım ve kazı işlemleri el ile (kırıcı ve balıoz yardımıyla) ve/veya yapı içine girebilen küçük makinelerle (bobcat vb.) gerçekleştirilecektir.



## Yapısal Güçlendirme

### Taşıyıcı Sistem Güçlendirme

Kırım ve kazı işlemleri tamamlandıktan sonra mevcut kolon, kiriş ve temellere ankraj çubukları çakılır. Ankraj delikleri detay projelerindeki ölçülere uygun olarak delici matkaplarla mevcut elemanlara delik açılması, deliğin hava kompresörü ile temizlenmesi, epoksi yapıştırıcının delik içine sıkılması ve önceden hazırlanmış ankraj demirinin delik içine sokulması şeklinde yapılır.





## Yapısal Güçlendirme Taşıtıcı Sistem Güçlendirme

Ankraj imalatları ile beraber güçlendirme donatısının döşemesi işlerine başlanacaktır. Donatı numune kontrolleri sonrası Plywood kalıplar kapatılarak bir üst kat döşemesinden açılan delikten veya kuş ağızı da denilen kalıptan imal edilen huniler içerisinden kalıp içerisine "kandıllıktan yerleşen beton" (ince agregalı, süper akışkanlaştırıcı katkılı beton) dökülür.

01



## Yapısal Güçlendirme İnce İşler

Kaba inşaatın tamamlanmasının ardından onarım işlerine geçilir. Güçlendirme perdelerrinin iç ve dış yüzeylerinin sıva, boya, yalıtım vb. uygulamaları, bozulan zeminlere taşıyıcı beton ve kaplama matzamesi düzenlemeleri, elektrik tesisatı ve mekanik tesisat montajları ve gerekiyorsa kapı pencere imalatları yapılarak güçlendirme işleri tamamlanır.

01



## Gevrek Yapıların Demontajı

1. Öğrenci Yurdu, A-B blok yapıları arasında yer alan metal konstrüksiyon geçiş köprüsünün, deprem riskleri nedeniyle kaldırılması gerektiği kanaatine varılmıştır.

01



## Bina Cephe Onarımı

1. Öğrenci Yurdu, yapısal güçlendirme ve gevrek yapıların demontajı sonrasında zara gören dış cephe ve cephe bileşenlerinin mevcut termal yalıtım katmanını korumak üzere tamirat işlemleri yüklenici firma tarafından gerçekleştirilecektir.
2. YADYOK, güçlendirme işlemleri sonrasında zara gören dış cephe ve cephe bileşenlerinin mevcut termal yalıtım katmanını korumak üzere tamirat işlemleri yüklenici firma tarafından gerçekleştirilecektir.
3. Sosyal Tesis cephesi mevcut termal yalıtımın yetersiz olduğu tespit edilmiştir. Bu nedenle söz konusu yapı cephesinin tamamı termal yalıtım çalışmaları çerçevesinde yenilenecektir.

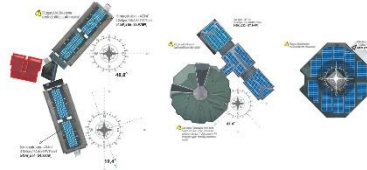
01



## Enerji Verimliliği Odaklı Çalışmalar Çatı Üzeri Güneş Enerji Santralleri

Proje kapsamına giren yapı çatıları 550Wp kapasiteli solar paneller ile kaplanacaktır. Yapılan hesaplamalar söz konusu sistem yılda 410MWh/yıl elektrik üretim potansiyeli barındırdığını göstermektedir.

02



## Enerji Verimliliği Odaklı Çalışmalar İklimlendirme & Domestik Sıcak Su Üretimi

Proje kapsamına giren yapıların iklimlendirme ve domestik sıcak su üretim sistemleri yüksek verimli ikameler ve ısı pompaları kullanılarak yenilenecektir. Bu suretle toplam enerji tüketiminde ~ 26% oranında tasarruf elde edilebileceği hesaplanmıştır.

- 1. Öğrenci Yurdu, 2007 model mevcut korvansiyonel kazan yerine (Damirdüküm marka MK 20 Model 875.000kcal/h) 2 adet 500.000kcal/h kapasiteli KASKAD dilimli yoğunmalı premix yer tipi kazan ile değişimi.
- YADYOK, Mevcut iklimlendirme sistemine istima kapasitesi 700kW, soğutma kapasitesi 560 kW olan hava kaynaklı ısı pompasının entegre edilmesi. İklim koşullarına göre söz konusu cihazın otomasyon sistemi üzerinden yüksek verimli işletilmesi.
- Sosyal Tesis, YADYOK ısı hatlarının pasivize edilmesi, 140kW kapasiteli 2 adet duvar tipi yoğunmalı kazan ve 170kW istima, 138kW soğutma kapasitesine sahip hava kaynaklı ısı pompasının tesisi projelendirilmiştir.

02



## Enerji Verimliliği Odaklı Çalışmalar Motor & Pompalar

Sirkülasyon sisteminde mevcut motor & pompa elemanlarının yedekleri ile birlikte, entegre frekans kontrollü yüksek verimli sistemler ile değişimi sağlanacaktır. Bu suretle toplam enerji tüketiminde ~1% oranında tasarruf elde edilebileceği hesaplanmıştır.

02

- 1. Öğrenci Yurdu, 10 adet asenkron motor, pompa değişimi gerçekleştirilecektir.
- YADYOK, 5 adet asenkron motor, pompa değişimi gerçekleştirilecektir.
- Sosyal Tesis, merkezi ısıtma sistemi tamamen yenilenmektedir. Söz konusu sistem tesisatlarında bahsedilen yüksek verimli entegre frekans kontrollü elemanlar kullanılacaktır.



## Enerji Verimliliği Odaklı Çalışmalar Tesisat Yalıtımı

Yalıtımsız tesisat ve tesisat elemanlarının tamamı uygun termal dirence sahip matzemeler ile kaplanacak, ısı transferi kaynaklı kayıplar engellenecektir. Bu suretle toplam enerji tüketiminde ~1.5% oranında tasarruf elde edilebileceği hesaplanmıştır.

02



## Enerji Verimliliği Odaklı Çalışmalar Aydınlatma Sistemi

Mevcut aydınlatma elemanlarının tamamının LED dönüşümleri gerçekleştirilecektir. Bu suretle toplam enerji tüketiminde ~7% oranında tasarruf elde edilebileceği hesaplanmıştır.

- 1. Öğrenci Yurdu, 741Ad. armatür değişimi.
- YADYOK, 1631 Ad. armatür değişimi.
- Sosyal Tesis, 369 Ad. armatür değişimi.

02



## Enerji Verimliliği Odaklı Çalışmalar Cephe Bileşenleri

Yalıtımsız dış kaplıları (tek camlı ve termal yalıtıma sahip olmayan alüminyum çerçeveli) Termal yalıtıma sahip ikameleri ile değişimi sağlanacaktır. Yalıtımsız metal kapılara sürülebilir termal yalıtım tesisi edilecektir (çerden ve dışardan). Bu suretle toplam enerji tüketiminde ~1.5% oranında tasarruf elde edilebileceği hesaplanmıştır.

02

- 1. Öğrenci Yurdu, 12m² kapı değişimi.
- YADYOK, 24m² kapı değişimi, 12m² termal kaplama
- Sosyal Tesis, 20m² kapı değişimi, 6m² termal kaplama



## Enerji Verimliliği Odaklı Çalışmalar Cephe Yalıtımı

1. Öğrenci yurdu ve YADYOK yapılarının mevcut yalıtım katmanlarının, iklim bölgesi çerçevesinde uygun olduğu kanaatine varılmıştır. Ancak Sosyal tesis termal yalıtımının yetersiz olduğu görülmüştür. Bu çerçevede; Sosyal Tesis mevcut 3cm cephe yalıtımının kazınması, 8cm taşıyıcı termal yalıtım katmanını kaplaması tesisi projelendirilmiştir (uygulama yüzey alanı 656,81m²).

02



## Enerji Verimliliği Odaklı Çalışmalar Otomasyon Sistemi

Enerji izleme sistemi ve otomasyon sisteminin, EN ISO 50001 Enerji Yönetim Sistem şartlarına uygun biçimde kurulması ve etkinliğinin sağlanması sureti ile toplam enerji tüketiminde ~6% oranında tasarruf elde edilebileceği hesaplanmıştır.

Projelendirme safhasında önemli enerji kullanıcılarının tüketim değerlerinin anlık gözlenmesi, GES üretim miktarlarının takip ve kontrolü, mekanik otomasyon elemanlarının takip ve kontrolü dikkate alınmıştır.

02



## Enerji Verimliliği Odaklı Çalışmalar

Yapılan hesaplamalar neticesinde belirlenen önlem senaryolarının hayata geçirilmesi ile toplam enerji tüketiminde **58,30%** oranında tasarruf elde edilebilecek, yaklaşık 580 ton/yıl sera gazı emisyonu engellenebilecektir. Söz konusu renovasyonlar ve yenilenen sistemlerin EN ISO 50001 Enerji Yönetim Sistem şartlarına uygun biçimde işletilmesi ile yıllık 623.000kWh elektrik, 1.100.000kWh doğalgaz tasarrufu sağlanabilecektir. Söz konusu tasarrufun maddi boyutu yaklaşık 3.500.000€/yl seviyesindedir.

02



## İş Sağlığı Güvenliği

Yapım sürecine ilişkin, **İş Sağlığı ve Güvenliği Planları** hazırlanmıştır. Yüklenci firmamız;

- Tarafımızca hazırlanan **İŞ SAĞLIĞI GÜVENLİĞİ PLANI** doğrultusunda, sorumlu olduğu bütün çalışmalar kapsar mahiyette **İŞ SAĞLIĞI GÜVENLİĞİ PLANI** ve Risk Analizi hazırlaması ve Müşavir onayına sunması zorundur. Ancak söz konusu plan, analizlerin uygun görülmesi sonrasında çalışmalar başlayacaktır.
- Yüklenci firmamızın 1. Öğrenci Yurdu kaptırısı sökümü öncesi detaylı yapım metodunu hazırlaması ve Müşavir onayına sunması zorundur. Ancak yapım metodu, bu iş üzerinde risk analizinin uygun görülmesi sonrasında çalışmalar başlayacaktır.



Paydaşlarımızın bu çalışmalarla ilişkin dikkat etmeleri gereken konular şunlardır:

- Mobil viny, kazıcı yükleyici, sondaj makinesi, kompresör vb. iş makinelerinin tamamının periyodik muayene raporlarının temin edilmiş olması ve makineler içinde hazır bulunulması zorundur. Söz konusu makineler, yetkili operatörler tarafından kullanılabilir. Operatörler yetki belgelerini hazır bulundurmalı ve sahaya kontrolör, denetimci eşliğinde yetkili İSG uzmanlarını taşıyarak giriş yaptırmaları esastır.



## İş Sağlığı Güvenliği

- Sahada kullanılan her türlü elektrikli cihaz/ekipmanın elektrik açılma güvenliği dışındaki diğer PAT testleri yapılması esastır. Söz konusu ekipmanların tamamında cihaz üzerindeki uygunluk göstergeleri yer almalıdır.
- Ancak uygun Mesleki Yeterlilik Belgesine sahip çalışanların sahaya girmesine izin verilecektir.
- Bütün çalışanlar görevleri çerçevesinde uygun kişisel koruyucu ekipmanları sahaya almalı ve etkin olarak kullanmalıdır.
- Bütün çalışanların, «Temel İSG Eğitimi», «Risk Analizi Eğitimi» almış olması zorundur.
- Yükseklik çalışmaları için «Yükseklik Çalışma Eğitimi» almış olması zorundur.
- Bütün çalışanların «EKED», «Eksplozifiteleme» ve «Düne» eğitimi almış olması zorundur.
- Çalışanların «İŞ SAĞLIĞI GÜVENLİĞİ PLANI» içinde belirtilen diğer ilgili eğitimleri çalışma öncesinde almış olması zorundur.
- İş iskelelerinin TS EN 12011-1 standart şartlarını karşılaması esastır. Söz konusu iş iskelelerinde çıkpaçak bütün personellerin yükseklik çalışma eğitimi almış olması, paraşüt tipi emniyet kemeri ve diğer emniyet ekipmanları kullanmaları zorundur.
- Kampüs içinde İŞ SAĞLIĞI GÜVENLİĞİ PLANI içinde belirtilen «TRAFFİK EYLEM PLANINA» uygun hareket edilmelidir.
- Yüklenici firması, bu çalışma sahada özünde acil durum eylem planları geliştirilmesi ve bütün çalışanların kapsar maliyette tatbikatları gerçekleştirilmelidir.



## İş Sağlığı Güvenliği

Çalışanların tamamının **İŞ SAĞLIĞI GÜVENLİĞİ PLANI** içinde belirtilen kişisel koruyucu donanımları disiplinli şekilde kullanmakla yükümlüdür. Söz konusu donanımları uygun şekilde taşımayarak kullanılmayanların çalışmalarına izin verilmeyecektir.

Örnek kişisel koruyucu donanımlar;

- Bonnet - TS EN 397-A1
- Küçük Titanoz - TS EN 352-2
- Koruyucu Gözlük - TS EN ISO 18321-3
- Genel Amaçlı İş Eldiveni - TS EN ISO 21420
- İş Ayakkabısı - TS EN ISO 20347
- Yarım Yüz Maske - TS EN 140
- Paraşüt Tipi Emniyet Kemeri - TS EN 361 (Sadece yüksekte çalışan personeller)



## İş Sağlığı Güvenliği

Acil durumlarda çalışanların toplanacağı bölgeler, deprem riski de dikkate alınarak belirlenmiş ve vaziyet planlarında gösterilmiştir.

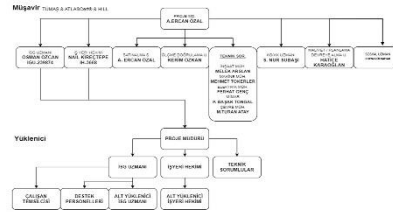


## Trafik Eylem Planı

Kampüs için araç kullanımına ilişkin sınırlar **İŞ SAĞLIĞI GÜVENLİĞİ PLANI** içinde belirtilmiştir.



## Sağlık & Güvenlik Organizasyonu



## Çevresel Etkiler

Öngörülen çevresel etkiler Çevresel ve Sosyal Yönetim Planı içinde belirtilmiştir. Çalışanların tamamının söz konusu plan çerçevesinde eğitime tabii tutulması zorundur. Yapısal güçlendirme ve enerji verimliliği odaklı renovasyon çalışmalarının öngörülen çevresel etkileri aşağıda genel olarak belirtilmiştir;

- Zemin ve atıyıp parçalanma öncesinde; zarar görme riski bulunan açığının taşınması, taşınmaması adına ve diğer kilitlerin yerine faydalanıcı kurulum tarafından belirlenen alanlara yerli dikim yapılması sağlanacaktır.



## Çevresel Etkiler

- YADYOK ve Sosyal Tesisi yakınındaki BÖLÜN Yenilenebilir Enerji Teknolojileri Araştırma Grubu (BUNET) binası ile öğrenci yurtlarının yanında yer alan ve projeye katılacak binaya yakın binasının da inşaat sürecinden etkilenmesi beklenmektedir. Gürültü, toz, vibrasyon, hafriyat atıklarının inşaat sahada dışarıya yayılması gibi etkiler nedeniyle karşılaşılabilecek olası sorunlar, söz konusu binalarda çalışanları etkilemeyecektir. Gürültü, toz, vibrasyon, hafriyat atıkları ve diğer etkiler Çevresel Sosyal Yönetim Planında yer almaktadır. Konuyu ilişkin belli başlı önlemler, önlemlerin, hava kirliliğinin ve diğer elektrik mekanik cihazların motor kapakları kapalı olacak ve yerleşim alanlarından mümkün olduğunca uzakta yerleştirilecektir. Asbestin sökülmesinin gerektiği durumlarda sökümler öncesinde asbest tozunun ön az düzeyde tutulması için asbest metodu ve zararlı maddelerin saklandığı konteynerler ve atık yığınları toprağa dökülme ve sızıntıyı önlemek için sızdırmaz beton alanlara yerleştirilecektir. Ayrıca inşaat sürecindeki her aşamadan en az 7 gün önce üniversite yönetimine (binanın toplanabilirliği için kullanılı bulunmaktadırlar) bilgi verilecektir. İnşaat takvimi gündeyde, paydaşların görülebileceği bir yerde, proje sürecine girebilecekleri bulundurulacaktır.
- Üniversite dışındaki yapıların, proje kapsamına giren yapıların mesafelerinde İstanbul Kiteboard Ac. İKA Spor K1 160-200m, Maranegra Vİllanı 300-350m, Blue Beach 300-350m bulunmaktadır. Söz konusu yapıların özellikle İstanbul Kiteboard'un proje alanına yakın mesafesinde nedeniyle proje faaliyetlerinden kaynaklanabilecek olası çevresel ve sosyal risk/etkilerden (toz, gürültü, toplanma sağlığı ve güvenliği, ses kirliliği) etkilenmesi olacaktır. Proje faaliyetlerinden kaynaklanabilecek olası çevresel ve sosyal risk/etkilerin kontrol edilebilmesi, azaltılabilmesi ve/veya ortadan tamamen kaldırılabilmesi için alınacak önlemler örnek olarak; İnşaat sahalarında uygun noktaları sızdırmaz betonla kapatacağı, hafriyat sırasında prizmatik kazıda oluşan toz, dökülen su, yıkulmuş ve/veya sarıyıcı toz perdeleri muhafazaları kontrol edilerek, dikkate alınarak madde/etkiler ayrıca konuya ilişkin detaylı Çevresel Sosyal Yönetim Planında detaylı olarak sunulmuştur.



## Çevresel Etkiler

- İnşaat çalışmaları sırasında, bütçede hâlihazırda mevcut olan kanalizasyon, elektrik ve su şebekeleri kullanılacaktır.
- Evsel atıklar, belediye hizmetlerinden faydalanarak bertaraf edilecek, diğer atıklar için ise geçici depolama alanları oluşturulup belediye hizmetleri tarafından taşınması sağlanacaktır. Proje alanında herhangi bir atıyıp hizmet almı gerektirmeyecek kanalizasyon hatlarında tıkanma sonucu bina (Vizajlar hizmeti almı), uzun süreli elektrik kesintisi (mobil jeneratör), uzun süreli su kesintisi (su tankeri ile tozla mücadele vb.) mevcut atıyıp imkânları (jeneratör vb.) değerlendirilecek ve ilgili yöntemlere uygun olarak gerçekleştirilecektir.



## Çevresel Etkiler Atık Yönetimi

İnşaat, Hafriyat ve Sondaj Atıkları:

- Sondaj esnasında çıkan taş, kaya vb. malzemeler inşaat ve yıkım atıkları ile aynı noktada depolanacaktır. Sondaj esnasında bu tip atıkların çöplüğe atılması ve özellikle alt yapı malzemesi olarak yeniden değerlendirilmesi öncelikli olarak ele alınacaktır.
- Sondaj esnasında ortaya çıkan sulu çamurları atıfı dağılması için geçici çamur havuzları oluşturulacaktır. Söz konusu havuzlar sondaj işleri sonrasında kapatacağı eski haline getirilecektir.
- Söküm faaliyetleri sonrasında binaya ait zımmetli malzeme oluşması durumunda bina yönetimine çıkan malzemenin teslim edildiğine dair belge alınacaktır.
- İnşaat/yıkım atıklarının kazanılması ve özellikle alt yapı malzemesi olarak yeniden değerlendirilmesi öncelikli olarak ele alınacaktır. Hafriyat atıkları ilgili belediyenin atık depolama tesisine gönderilecektir. Atıkların sahaya kabul edilmeğine dair Belediyesinden resmî yazı alınarak kayıtları sunulacaktır.



## Çevresel Etkiler Atık Yönetimi

Tehlikeli Atıklar:

- Tehlikeli atıkların yönetimi, Atık Yönetimi Yönetmeliği uyarınca gerçekleştirilecektir.
- Proje sahalarında tehlikeli atıkların geçici olarak depolanması durumunda; atıklar sağlamlı, sızdırmaz, emniyetli ve ulaştırılması kabul edilmiş standartlara uygun konteynerlere ve proje alanı içerisinde muhafaza edilecek, konteynerlerin üstünde tehlikeli atık barındıran yer verilecek ve depolanma maddelerin atık kodu, miktarı, içeriği, özellikleri, koruma koşulları ve depolama tarih konteynerler üzerinde belirtilecektir. Tehlikeli maddelerin azami 6 ay geçici olarak depolanabilir. (Geçici depolama alanları yüklenici firma tarafından mevzuatı uygun olarak Üniversite idaresinden izin alınarak belirlenecek ve muavazir söz konusu alanlar bildirilecektir.)
- Zararlı maddelerin saklandığı konteynerler ve atık yığınları toprağa dökülme ve sızıntı önlemek için sızdırmaz beton alanlara yerleştirilecektir.
- Zehirli içeriğe sahip boyalar, erici madde (solvent) ya da kuruyan bulaş kimyasalları kullanılmayacaktır.







## Çevresel Etkiler Atık Yönetimi

Tehlikeli Atıklar;

- Sahiteye sahasında oluşması muhtemel tehlikeli kimyasal madde ve atıkların Çevre Sağlık ve İlim Değişikliği Bakanlığı çarvıncı programı Entegre Çevre Bilgi Sistemi (E-CBS) üzerinden atık yönetimi uygulaması kullanılarak lisanslı bertaraf tesislerine gönderilecektir.
- Çalışma sahaslarında döküntü sızını emici pod kilitleri hazır bulundurulacaktır. Görevli bütün personeller tehlikeli kimyasal sızını ve döküntüsüne ilişkin korunma ve acil durum eğitimi labi tutulacaktır.
- Orta ve büyük ölçekli çevresel kazaların oluşması halinde, kaza araştırması yapılacak ve raporlanacaktır.
- Tadilat/İnşaat çalışmalarını sırasında sökülen kullanılan floresan lambalar ruhsatlı tesislerde bertaraf edilecektir. Malzemenin taşınmasında ve bertarafına ilişkin gerekli belgeler, inşaat sahyesinde tutulacak ve istenirse ÇSİDB ve Dünya Bankası'na iletilecektir.



## Çevresel Etkiler Atık Yönetimi

Evsel Atıklar;

- Oluşacak evsel nitelikli atıklar kaynağında ayrıştırılacak (plastik, cam, kağıt, vb.) ve değerlendirilerek ortamları geri dönüşümü sağlanacaktır. Atıkların uygun biçimde ayrıştırılması için çalışanlara eğitim verilecektir.
  - Geri kazanımı mümkün olmayan atıklar, ağır kapalı sızını çöp bidonlarında biriktirilecek, Sarıyer Belediyesi'nin katı atık toplama sistemi aracılığıyla düzenli depolama sahaslarına gönderilecektir.
- Ambalaj Atıkları;
- Kontamine olmaması geri dönüştürülebilir atıkların (plastik, cam, kağıt, vb.) geri dönüşümü sağlanacaktır. Atıkların uygun biçimde ayrıştırılması için çalışanlara eğitim verilecektir.
  - Tehlikeli maddeler ile kontamine olmuş atıkların tanımı, tehlikeli atık statüsünde değerlendirilecektir.



## Paydaşlarımıza aktarmak istediğimiz hususlar şunlardır;

- Söz konusu çalışmaların, bna dayanımını olumsuz etkilemesi söz konusu değildir.
- Renovasyon çalışmaları esnasında, kullanıcı ve diğer paydaşların çalışma sahaslarına yerleşmelerini hususunda yapılan uyarıları dikkate alarak destek vermesini rica ediyoruz.
- Renovasyon çalışmaları sonrası çalışma sahaslarında gerekli düzenlemeler, görevli personeller tarafından gerçekleştirilecektir. Bu konuya ilişkin şikayetlerimize katılan bnazı bilginiz.
- Projele görev alan çalışanlarımız; hiç bir koşul altında paydaşlar ile tartışmaları hususunda gerekli uyarılar yapılacaktır. Böyle bir durumda karşılaşılması halinde öneri ve şikayet mekanizmasını vestiasıyla bizlere ulaştırmanızı bekliyoruz. (Öneri & şikayet süreci)
- Bütün çalışanlar ayrımcılık, cinsiyet temelli şiddet konusunda bilgilendirilecektir ve proje kapsamında bu tip davranışlara hiçbir şart ve koşul altında izin verilmeyeceği bildirilmiştir. Bu yaklaşımı aykırı hareket edenlerin, projede görev almamasına ya da görevlerinin devamlılığına müsaade edilmeyecektir.



Yüklenici firmaların umulan gereken iş sağlığı ve güvenliği kuraları ile genel çevresel sosyal etkiler/etkileri; bu proje esnasında kullanılan İSG PLANI ve ÇEVRESEL SOSYAL YÖNETİM PLANI içinde açıklanmıştır.



## Öneri Şikayet Sistemi

Öneri ve şikayetlerinizi; işerği ne olursa olsun, nasıl kaleme alırsanız bizim için değeri olduğunu bilmenizi istiyoruz. Genel etik ilkelere uygun leteceğiniz öneri ve şikayetlerinizden dolayı olumsuz herhangi bir durumla karşılaşmayacağınızı, eleştirilmeyeceğinizi garanti ediyoruz. Öneri ve şikayetlerinizi hangi yöntemle iletirseniz İletim (matbu, mail), internet formları ya da telefon) hepsi aynı şekilde değerlendirilir, tamamı gizli bilgi statüsündedir, tarafsız bir kurul tarafından incelenir.

03.05.2023 tarihinden itibaren şikayet kullanımını kontrolleri düzenli olarak yapılmaktadır ancak inşaat başladıktan sonra binhalara girişler yasak olacağı için dijital kanalları kullanmanız gerekmektedir.

Bu proje hakkında genel bilgi almak çevresel ve sosyal proje dokümanlarına erişmek ya da öneri ve şikayetlerinizi bildirmek için; <https://kamuguculendirmo.csb.gov.tr/> web sayfasını ziyaret edebilirsiniz.



## Öneri Şikayet Sistemi

Çevre, Sağlık ve İlim Değişikliği Bakanlığı'nın (ÇSİDB) hem telefon hem de web sitesi aracılığıyla erişilebilen bir 'Alo181' yardım hattı vardır. Bu yardım hattı aynı zamanda çalışanlar, çözüm ortamları ve daha geniş çözümler için bakanlık düzeyinde bir şikayet mekanizması görevi görür. ÇSİDB tarafından sağlanan tüm çevre ve sağlık hizmetleri ile ilgili soru, talep ve şikayetler profesyonel olarak yönetilen ALO 181 çağrı merkezi tarafından yanıtlanmaktadır. ya da Proje Uygulama Birimine iletilmektedir.

KADEV projesi için şikayet ve öneri sahipleri aşağıda verilen farklı kanallardan taleplerini iletebilirler:

ÇağrıMerkezi :Alo 181  
Telefon :0312 586 4558  
E-Posta :kamuguculendirmo@csb.gov.tr  
ŞikayetFormu :<https://kadev.csb.gov.tr/onetip>



## Öneri Şikayet Sistemi



İnternet üzerinden şikayet formuna hemen erişim için lütfen yandaki kodu telefonunuza okutun.

(Bu işlem için akıllı telefonunuzda QR kod uygulamasını indiriniz. Söz konusu uygulama yavaş, herhangi bir internet bağlantısı yoksa, özdeş QR kodu şikayet formunu erişim ekranını görüntüler.)



## Anket Çalışması

Proje kapsamında Paydaş Katılım Toplantılarında, yapım işleri öncesi (online) ve yapım işleri sonrası (online) 2'er dakikalık anket çalışmaları olacaktır. Üniversite idaresi, Kilyos kampüsünü kullanan/kullanacak personel ve öğrenciler olarak desteğinizi rica ederiz. ©



## Eğitimler

Proje kapsamında, Müşavirin Yüklenici personeline yönelik Teknik ve uyulması gerek Standartlar Yönetmeliği doğrultusunda alınacak eğitimler sonucunda yüklenici firmamız kurumsal kapasitesinin gelişmesini beklemekteyiz. Bu eğitimler aşağıda listelenmiştir.

- Çevresel ve Sosyal Etkiler
- Çevresel Acil Durumlara Tepki
- Şikayet Mekanizması (SM)
- Devranç Kuralları
- Atık Yönetimi
- Tarihi Mirasın Korunması
- İSG Planı Uygulama ve İzleme Eğitimi
- Etkileme ve Kitleme Eğitimi
- İş İlan Sistemi Eğitimi
- Paydaş Katılım/Bilgilendirme Faaliyetleri
- Cinsiyet Eşitliği / Cinsiyet Temelli Şiddet/Cinsel Sömürü/Cinsel Saldırı/Cinsel Taciz



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