SEISMIC RESILIENCE AND ENERGY EFFICIENCY
IN PUBLIC BUILDINGS PROJECT
(SREEPB PROJECT)

BOĞAZİÇİ UNIVERSITY KANDİLLİ CAMPUS
NEW GEOPHYSICS BUILDING

ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

MAY
2024

Table of Contents

Table List

Figure List

Abbreviations

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

Executive Summary

Seismic Resilience and Energy Efficiency in Public Buildings (SREEPB) Project focuses on seismic retrofitting and energy efficiency in public buildings such as higher education buildings, dormitories, social service institutions, hospitals, and government buildings located in high seismic risk areas with low energy efficiency. Under the reference number WB/CS-DESSUP-01, this project covers 32 structures on 11 campuses, including Boğaziçi University (BU), Marmara University, Istanbul Technical University (ITU), Istanbul University, Sakarya Government Building, and two student dormitories in Kocaeli.

This document provides information about the structural retrofitting and energy efficiency improvement efforts of the New Geophysics Building (1 Block) located at the Kandilli Campus within Boğaziçi University. It discusses the applicable national and international regulations, outlines measures to mitigate or eliminate potential adverse environmental and social impacts during the projects, and addresses health and safety measures. Additionally, this Environmental and Social Management Plan (ESMP) includes details about stakeholder engagement activities, and the establishment of a Grievance Mechanism (GM), and outlines the responsibilities of relevant parties within the project scope.

Introduction

This Environmental and Social Management Plan (ESMP) has been prepared within the scope of the Seismic Resilience and Energy Efficiency in Public Buildings Project (SREEPB) New Geophysics Building (1 Block) located at Boğaziçi University Kandilli Campus Kuleli, Koca Çınar Sokak 10-1, 34684 Üsküdar/İstanbul. The plan aims to outline the necessary measures to mitigate or eliminate potential adverse environmental and social impacts, as well as risks that may arise from the structural retrofitting and energy efficiency-focused renovation activities.

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

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 retrofitting them, as well as to make improvements in terms of energy efficiency, to reduce energy consumption and CO_2 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.

Throughout the project, structural retrofitting works include building load-bearing system improvements and additions, as well as soil improvement if needed (*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.

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.

The structure covered by this ESMP is located within the Boğaziçi University Kandilli Campus. Other buildings/structures or the campus itself will not be directly affected by the project activities. Additionally, the buildings within the scope will be out of use during the construction activities. Therefore, there is no overlap between the project activity schedule and daily operations.

This ESMP has been prepared as a guidance document for the SREEPB Project to eliminate or reduce to an acceptable level its environmental impacts such as waste generation (hazardous, non-hazardous), air and water pollution, as well as societal health and safety and occupational health and safety (OHS) impacts and risks, considering the requirements of the World Bank (WB) and relevant national legislation.

The project, funded by the World Bank (WB), will be carried out by the Ministry of Environment, Urbanization, and Climate Change (MoEUCC) General Directorate of Construction Affairs (GDCA). GDCA will be responsible for the overall implementation, control, management, and coordination of the project. The consulting firm will be responsible for the preparation and control of the ESMP, while the contractor will be responsible for the on-site implementation of the ESMP.

1.1.2 Project Information

Satellite images of Boğaziçi University Kandilli Campus New Geophysics Building, within the scope of the project, and detailed information about the building are given in Figure 1.1 and Table 1.1, respectively.

Building within the Scope of the Project

Figure 1-1: Boğaziçi University, New Geophysics Building Satellite Image

Table 1-1: Building General Information

CAMPUS NAME	Boğaziçi University, Kandilli Campus
BUILDING NAMES ***(included in the project)***	New Geophysics Building (1 Block) (1.100 m2)
PROVINCE	İstanbul
DISTRICT	Üsküdar
NUMBER OF USERS	~60 people/day
BUILDING INFORMATION	
CONSTRUCTION AREA	~ 1.100 m^2
THE PLANNED WORKS TO BE CARRIED OUT IN ALL BUILDINGS INCLUDED IN THE PROJECT	
STRUCTURAL REINFORCEMENT	• Existing load-bearing system reinforcement. • Additional load-bearing system manufacturing • Floor, ceiling, wall and door renovations due to structural retrofitting activities
ENERGY EFFICIENCY	• Facade and roof thermal insulation • Doors and windows changes • Circulation system motor/pump changes • Establishment of a new heat center • Non-insulated installation elements, thermal insulation installation for heat exchangers • Thermal insulation was installed on the heat exchangers in hot water production • Lighting element replacements (one-to-one replacements will be made, electrical installation intervention (line, column line replacement, etc.) will not be conducted.) • Self-consumption focused solar power plant facility (on the roof) (to be integrated into the existing supply line) • EN ISO 50001 Establishment and Operation of Energy Management System in Compliance with the Standard Requirements Purchase, • Mechanical Automation Establishment of the System and Commissioning •
DURATION AND SEASON OF ACTIVITIES	
All work to be carried out within the scope of the project will be carried out between the second quarter of 2024 and the second quarter of 2025. The Contractor is obliged to complete the planned works in the buildings within the specified timeframe as stated in the Job Description. Additionally, the Contractor will clearly and in advance inform all stakeholders about the timeline of construction activities before starting any construction work.	
EXPECTED NUMBER OF WORKERS	
The total estimated number of workers in the buildings is expected to be an average of 60 personnel per day.	

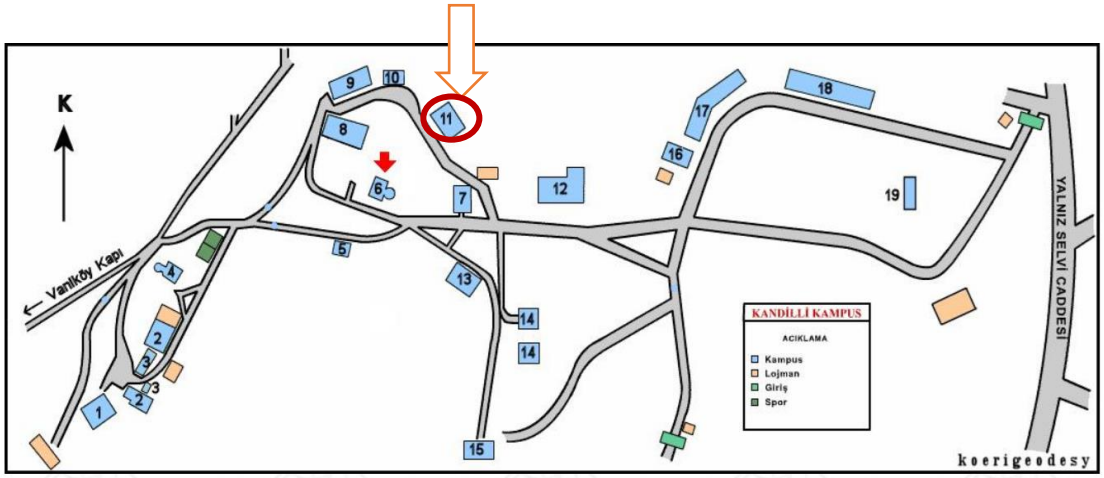
1.1.3 Locations of Campus & Buildings

The satellite image showing the campus boundaries is presented in Figure 1-2.

Figure 1-2: Boğaziçi University Kandilli Campus 929 Block/1 Plot Boundaries

New Geophysics Building Coordinates		
No	**Longitude**	**Latitude**
1	29.06108069566872	41.06360226102531
2	29.06122194937599	41.06366024185765
3	29.06101082586968	41.06391530068581
4	29.06087161494017	41.0638551173909

Figure 1-3: Boğaziçi University Kandilli Campus New Geophysics Building View and Coordinates



1 - Yemekhane
2 - Atölye
3 - Garaj
4 - Meteoroloji Laboratuvarı
5 - Bahçe
6 - **Astronomi Laboratuvarı**
7 - Jeodezi Ana Bilim Dalı
8 - Müze
9 - Ulusal Deprem İzleme Merkezi
10 - Jeofizik Ana Bilim Dalı
11 - Jeofizik Ana Bilim Dalı
12 - Yönetim Binası
Fatin Gökmen Konferans Salonu
Kütüphane
Optik Laboratuvarı
13 - Jeomanyetizma Laboratuvarı
14 - Manyetik Gözlem İstasyonu
15 - Jeodezik ve Manyetik Gözlem İstasyonu
16 - Misafirhane
17 - Deprem Mühühendisliği Ana Bilim Dalı
18 - Konferans Merkezi
Afete Hazırlık Eğitim Birimi
19 - **Güneş Kulesi**

During the retrofitting and renovation in the buildings, the potential adverse effects primarily occur within the buildings, and as there is no need for soil improvement works, the impacts that may extend to the outside of the building are limited to noise and dust generation, increased traffic, parking space constraints, vibration, and visual effects. The influence radius on surrounding buildings is limited to 100 meters, and the major impact area is shown in Figure 1.4.

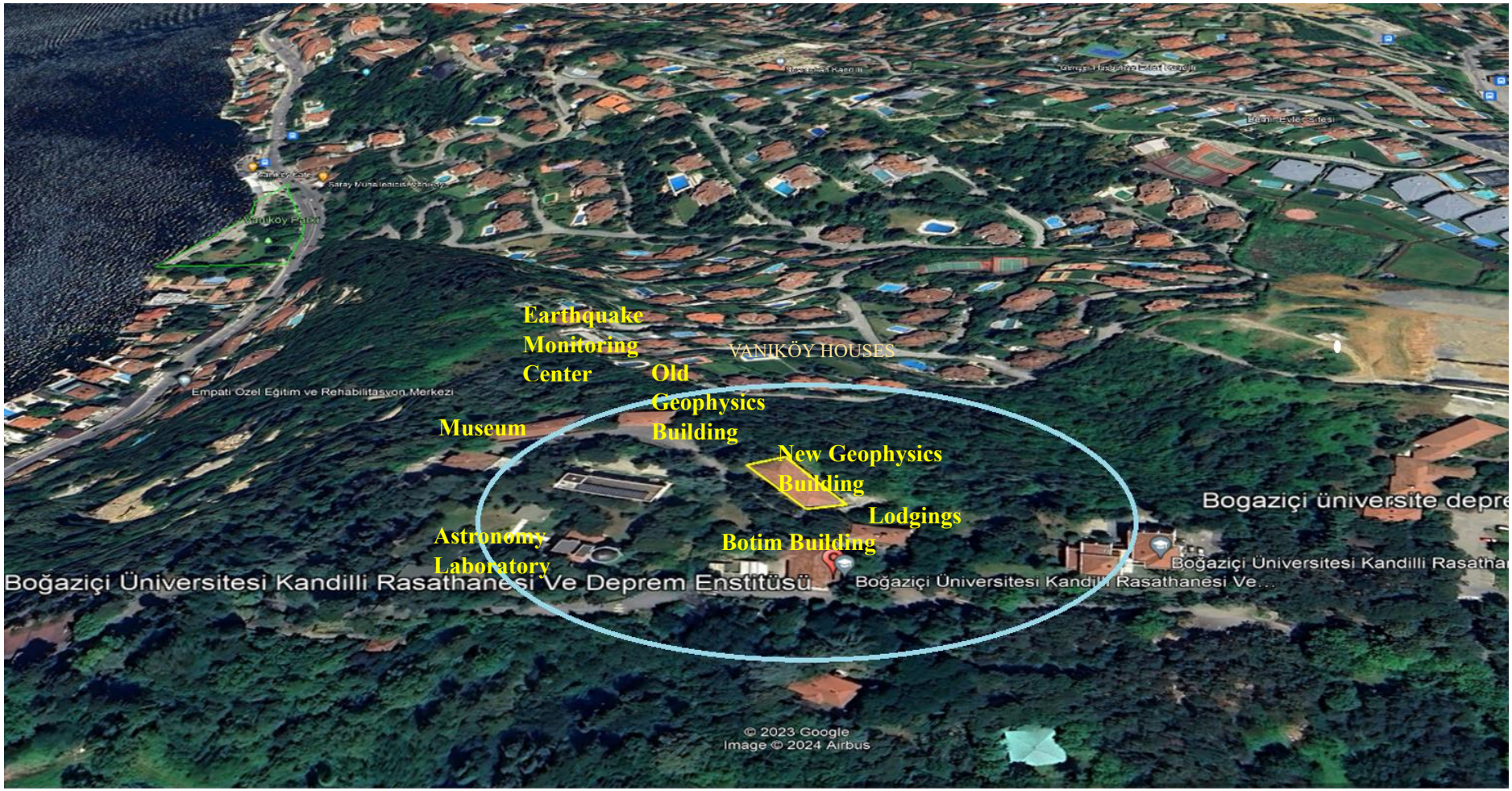


Figure 1-4: View of the Major Impact Area and Surroundings of the Buildings within the Scope of the Project

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

2.1 National Regulation

The ESMP is primarily prepared in compliance with the legislation of the Republic of Türkiye. The fundamental framework of Turkey's environmental legislation is the Environmental Law (Law No. 2872), published in the Official Gazette dated August 11, 1983, and last revised in the Official Gazette dated December 29, 2022, concerning administrative fines. This law is supported by regulations. Below are the regulations primarily utilized or 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, published in the Official Gazette dated December 31, 2004, with the latest amendment published in the Official Gazette dated May 12, 2023, with the number 32188.
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 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 comply with the national legislation as well as the requirements of the World Bank Environmental and Social Framework[1] (ESF) and the relevant Environmental, Health, and Safety (EHS) Guidelines[2] 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 2-1.

Table 2-1: 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[3]
ESS6: Biodiversity Conservation and Sustainable Management of Living Natural Resources	No[4]
ESS7: Indigenous Peoples/ Sub-Saharan African Historically Underserved Traditional Local Communities	No[5]
ESS8: Cultural Heritage	Yes
ESS9: Financial Intermediaries	No[6]
ESS10: Stakeholder Engagement and Information Disclosure	Yes

[1] https://www.worldbank.org/en/projects-operations/environmental-and-social-framework

[2] 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

[3] 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.

4 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.

[5] There are no indigenous groups in Turkey that meet the definition provided in ESS7.

[6] Since there is no involvement of any financial intermediary institution in this project, ESS9 will not be applicable to this project.

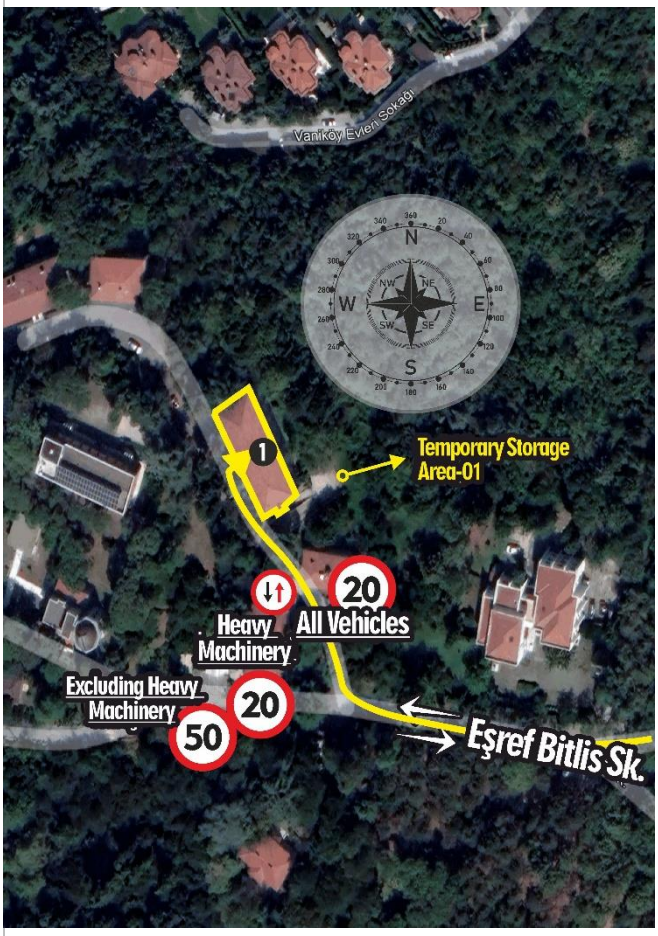
3 Activities to be Conducted within the Scope of the Project

The summary technical information about the structural retrofitting and energy efficiency works to be carried out in the New Geophysics Building at Boğaziçi University Kandilli Campus is given in Table 3-1 below. This ESMP will be accessible to all stakeholders throughout the project's lifespan, both at the construction sites and on the project's website (https://kamuguclendirme.csb.gov.tr/). In addition, in order to ensure that stakeholders participate in the meeting with sufficient information about the project before the information meeting, the draft ESMP will be disclosed on the official website of Boğaziçi University (https://bogazici.edu.tr/) at least 10 days before the meeting. The contractor will employ a full-time environmental specialist, a social specialist, and an occupational health and safety (OHS) specialist; an environmental expert, a social expert and an OHS expert will be employed within the Construction Supervision Consultancy firm. The Consultant, the Contractor and the Ministry's Project Implementation Unit (PIU) will be responsible for recording and answering the questions and opinions regarding environmental, social and OHS issues received by the stakeholders.

Table 3-1: Summary Information About the Activities to be Conducted

SAHA ÇALIŞMALARI	
DEFINITION OF THE GEOGRAPHICAL, PHYSICAL, BIOLOGICAL, GEOLOGICAL, HYDROGRAPHIC, AND SOCIO-ECONOMIC CONTEXT	 **Figure 3-1: View of Boğaziçi University New Geophysics Building** The project involves work on a building located within the Boğaziçi University Kandilli Campus. During the implementation of project activities (such as scaffold installation, painting, exterior cladding, etc.), it is expected that the soil surrounding the buildings will be affected. Necessary precautions will be taken to prevent the contamination of soil with hazardous chemicals during the activities conducted in this area. Measures to manage potential environmental and social impacts and risks of the project are detailed in Section 5. No transportation issues are anticipated for accessing the project site. All necessary infrastructure facilities such as electricity, water, sewage, natural gas, and internet can be accessed for the work.

LOCATIONS AND DISTANCE WHERE THE CLOSEST SENSITIVE RECEPTORS ARE LOCATED, SUCH AS HOSPITALS, HEALTH UNITS, PUBLIC BUILDINGS, HOMES.	The project site is located within the boundaries of Boğaziçi University Kandilli Campus. The majority of the retrofitting and renovation works will be carried out inside the buildings. However, the prevention of adverse effects on nearby settlements from construction activities in the project area is addressed in this Environmental and Social Management Plan (ESMP) The activity area and its surroundings are shown in Figure 1.4. The major impact area and distances to the buildings due to seismic retrofitting and energy efficiency operations for the buildings involved in the project are provided below. • Old Geophysics Building (42 m) • Lodgings (13 m) • Botim Building (30 m) • Astronomy Laboratory (55 m) • Museum (75 m) • Earthquake Monitoring Center (60 m) • Geodesy Department (20 m) • Vaniköy Houses (85 m) are located within the major impact area of the Boğaziçi University New Geophysics Building renovation works. Potential issues related to waste management, such as noise, dust, vibration, and the spread of excavation waste beyond the construction site, may adversely affect occupants or residents of the buildings within the major impact area. Detailed information on this matter and the measures to be taken are provided in Section 5. Additionally, at least 7 days before each stage of the construction process, information will be provided to the management of Boğaziçi University New Geophysics Building (as the building to be worked on will be vacated before retrofitting work begins, there will be no occupants in the building during the work). The construction schedule will be posted in a visible location at the construction site and will be continuously updated throughout the project duration.All these nearby buildings are considered sensitive receptors, and measures to prevent these sensitive receptors from being affected by potential environmental and social impacts/risks are presented in Section 5 as mentioned above. Mediva Hospital, located 2.5 km from the project site, is considered in the preparation of occupational health and safety emergency action plans, taking into account that the travel time by car is approximately 7 minutes considering traffic conditions.

TRAFFIC ACTION PLAN	Considering the activity area and its immediate surroundings, it is not foreseen that there will be any problems during the transportation of the materials needed for construction activities. Access roads and rules are specified in the Traffic Action Plan. The traffic action plan is included in the Occupational Health and Safety Plan prepared by the Consultant. In addition, the Community Safety and Traffic Management Plan will be prepared by the contractor before the construction process begins.  **Figure 3-2: Traffic Action Plan**
SEWAGE SYSTEM, ELECTRICITY, WATER NETWORKS, ETC. INFRASTRUCTURE USED BY THE PROJECT	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.

NATIONAL LEGISLATION AND PERMITS APPLICABLE TO THE PROJECT ACTIVITY (EG. SPP INSTALLATION ETC.)VB.)	The existing building permits will be used for the unlicensed electricity generation application of the SPP facility. The documents to be obtained for Unlicensed Electricity Generation are not limited to the following: • Documents required for the Call Letter from the Authorized Electricity Distribution Company, ▪ Unlicensed generation connection application form, ▪ Non-fixed subscriber number, ▪ Receipt showing the application fee has been deposited into the account of the relevant network operator, ▪ Single Line Diagram showing the technical specifications of the facility to be installed, ▪ SPP Technical Evaluation Form prepared by the Directorate General of Renewable Energy, personnel program, ▪ Approved coordinated application diagram, ▪ Building occupancy permit in roof-type applications, • SPP Static Projects (Roof-Top SPP Plants) Approval • "Connection Opinion" and "Connection Agreement Call Letter" to be obtained from the relevant distribution company • System Basic Information Form • Technical project and calculations • District Municipality-SPP Compliance Letter (according to Zoning Regulation Legislation) Within the scope of the "Regulation on Unlicensed Electricity Production in the Electricity Market", the online application to the authorized energy distribution company for photovoltaic panel installation is in the process of being initiated by the Consultant.
STAKEHOLDER ENGAGEMENT PROCESS	
STAKEHOLDER ENGAGEMENT PROCESS	The first stakeholder participation meeting regarding the feasibility studies carried out before the field evaluation (determination of the need for structural retrofitting, energy audit studies) was held in person on 09.03.2023 and general information was given about the technical details, purpose/targets and stages of the project.. (Annex VI) On 29.04.2024, a stakeholder information meeting was held to provide detailed information about the reinforcement and energy efficiency renovations to be carried out at the New Geophysics Building on the Boğaziçi University Kandilli Campus, and to explain the anticipated environmental and social impacts. The meeting was attended by representatives from the beneficiary institution management and technical units, building users, experts from the consulting firm, and experts from the Public Procurement Agency. In total, 13 people (3 female, 10 male) participated in person, while an Energy Systems Engineer, 3 Occupational Health and Safety Specialists, 2 Environmental Specialists, a Social Specialist, and a Sociologist participated online (4 female, 4 male). Before the information meeting, this ESMP was disclosed on the website of the Ministry of Environment, Urbanization, and Climate Change for 27 days, allowing stakeholders to access it. The ESMF will remain accessible to all stakeholders both on the relevant website and at construction sites throughout the project lifespan. Additionally, printed copies of this ESMF were made available for 27 days in all buildings involved in the project for stakeholders to access. Details about the Grievance Mechanism established specifically for the project are presented in Section 4.

ISSUES AND CONCERNS RAISED BY BUILDING USERS	Building users at the information meeting regarding the feasibility studies held on 09.03.2023; They were informed about the structural retrofitting and energy efficiency renovation process and asked if they had any concerns, opinions, suggestions and/or questions regarding these possible activities. During and after this period (until the date of preparation of this report), there was no feedback from any stakeholder regarding the project, either written/verbally or through the project Grievance Mechanism. The concerns of students and other building users regarding these activities were raised during stakeholder participation meetings held for the ESMP and recorded in meeting. Stakeholder views, recommendations, and concerns are documented in Annex VII. This document has been revised based on the additional data obtained from these meetings.
INSTITUTIONAL CAPACITY DEVELOPMENT	
TRAINING	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: • Environmental and Social Impacts • Waste Management • Response to Environmental Emergencies • Energy Efficiency • Stakeholder Engagement/Information Activities • Grievance Mechanism (GM) • Gender Equality/Gender-Based Violence/Sexual Exploitation/Sexual Abuse/Sexual Harassment • Code of Conduct • Preservation of Historical Heritage • Implementation and Monitoring of the OHS Plan • Tagging and Lockout Training • Work Permit System Training

4 Stakeholder Engagement and Grievance Mechanism (GM)

Stakeholder Engagement is an inclusive process to be carried out throughout the project lifecycle and supports the establishment of strong, constructive and responsive business relationships that are important for the successful management of the project's environmental and social impacts and risks. Stakeholder Engagement Meetings facilitate early, frequent, and transparent communication throughout the project lifespan to manage stakeholder expectations that may influence risks, potential disputes, and project delays. For this reason, a stakeholder information meeting on feasibility studies prior to the field assessment (determination of structural retrofitting needs, energy audit studies) was held on 09.03.2023 with a total of 25 participants (5 women and 20 men) and general information was given about the reasons, purpose/objectives and stages of the project (Annex VI)

The specific ESMP for this sub-project will be disclosed on the SREEPB Project's website (https://kamuguclendirme.csb.gov.tr/) throughout the project lifespan to ensure that all stakeholders are informed about how the project will be implemented in the field and to address any objections or suggestions. Additionally, it was disclosed in the New Geophysics Building of Boğaziçi University Kandilli Campus on 03.04.2024. Upon completion of the disclosure process, a Stakeholder Engagement Meeting was held again on April 29, 2024, with the participation of the contractor, beneficiary institution management and technical units, consultant firm employees, and relevant experts from the Project Implementation Unit, totaling 21 participants, including 7 female and 14 male. Details of the Stakeholder Engagement Meeting are provided in Annex VII.

Furthermore, the consultant has prepared promotional materials (brochures, posters, etc.) for informational purposes and ensured their delivery to stakeholders.

The Grievance Mechanism is to provide access to an effective procedure for project-affected or interested parties. Grievances can be an indicator of stakeholder concerns and can escalate if not identified and resolved. Identifying and responding to grievances supports the development of positive relationships between Project staff, local communities and other stakeholders.

The Ministry of Environment, Urbanization, and Climate Change PIU has developed a transparent and comprehensive Grievance Mechanism (GM) specific to the SREEPB Project to receive, evaluate, and resolve grievances/opinions/suggestions that may arise during the activities carried out in public buildings within the scope of the SREEPB Project. This mechanism is designed to assist all relevant stakeholders in conveying their grievances/opinions/suggestions about the activities to the relevant individuals and institutions, thereby strengthening stakeholder participation in the project. The mechanism also enables all employees involved in the project (PIU, Consultant, Contractor) to submit their grievances/suggestions/opinions to the Ministry and the World Bank either anonymously or with open identification. The responsibilities of the Contractor, the consulting firm, and PIU are detailed in the Project Stakeholder Engagement Framework (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 obliged to implement the Project's Environmental and Social Management Plan, Stakeholder Engagement Framework, and Labor Management Procedure.

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

a) **Contractor Level:** Each contractor appointed to carry out construction works will be responsible for receiving, recording, and, if possible, resolving grievances /concerns/opinions/suggestions expressed by any stakeholder (building management, building users, visitors, local communities or beneficiaries, project staff, etc.) in accordance with the Grievance Mechanism Procedure. The contractor will ensure that all personnel

involved in the project are aware that they can use the Grievance Mechanism (GM) and that grievances from staff will not be an obstacle to renewing their employment contract in the future.
The steps for transmitting grievances/opinions/suggestions from employees are detailed under the "Grievance Mechanism for Employees" heading in the SREEPB Project Workforce Management Procedures. All employees can use this mechanism openly or anonymously.
If the Contractor cannot resolve grievances/concerns/opinions/suggestions related to construction works carried out within the scope of the SREEPB Project, they are obliged to forward these applications to the relevant person/organizations by the Grievance Mechanism Procedure of the project.
Contractors will also report the records they keep, including resolved and unresolved grievances/concerns/opinions/suggestions, to the Consultant weekly. The contractor is obliged to resolve grievances within 15 calendar days at the latest.
.

b) **Consultant Level:** Concerns/opinions/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 Grievance Mechanism Procedure, will prepare a status 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 grievances /concerns/opinions/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/opinions/recommendations they receive and those conveyed by the contractor to the Ministry of Environment, Urbanization, and Climate Change on a weekly basis.

c) **MoEUCC Provincial Directorates Level**: To the extent possible, the Provincial Directorate of Environment, Urbanization, and Climate Change will be responsible for grievances /concerns/opinions/recommendations received regarding activities carried out within the scope of the SREEPB Project. Provincial directorates will also promptly forward all grievances/concerns / opinions / recommendations received, whether or not they resolve them, to the Administration.

d) **MoEUCC Level (PIU):** Within the scope of the SREEPB Project, MoEUCC is responsible for collecting, recording, and resolving all grievances/concerns/opinions/recommendations expressed by stakeholders through the levels mentioned above. MoEUCC is responsible for resolving the collected grievances/concerns/opinions/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 grievances regarding gender-based violence and sexual exploitation and harassment, it is recommended to use the web-based grievance system provided in Annex III, which allows anonymous grievances, in terms of confidentiality. In order to ensure confidentiality, an authorized personnel will have access to this web-based grievance system.

In addition to the Grievance Mechanisms at different levels defined above, throughout the life of the Project, stakeholders will also be able to use the national Grievance Mechanism channels detailed below. The channels for communicating grievances and suggestions to the Administration, especially the national Grievance Mechanism such as the CIMER Communication Center, are given below:

Table 4-1: CİMER Communication Channels

Website	: https://www.cimer.gov.tr
	https://giris.turkiye.gov.tr
Help Line	: Alo 150
Mailing Adress	: T.C. Cumhurbaşkanlığı Külliiyesi 06560 Beştepe - Ankara
Phone	: 0312 590 20 00
Fax	: 0312 473 64 94

Table 4-2: GM Communication Channels

Call Center	: ALO 181
Phone	: 0312 586 4858
E-mail	: yigmkadev@csb.gov.tr
Grievance	: https://kadevoneri.csb.gov.tr/oneri.jsp |
	| 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 grievance 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 suggestions 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).

The Construction Contractor is responsible for receiving, recording, and resolving, grievances/concerns/opinions/recommendations 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 Closeout Form provided in Annexes IV and V. Verbal, opinions, and suggestions will be recorded by the responsible personnel (Project manager, social expert) 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 and social expert are responsible for reporting the received, suggestions, and requests to the MoEUCC weekly.

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.

5 Environmental and Social Risks & Impacts and Precautions to be Taken

Table 5-1: 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	***a) OHS*** Possible adverse safety and health effects for workers, local population and employees due to: - Possible injuries that employees may be exposed to due to reasons such as working at height, working with hazardous materials, and electrical tools; - National and defined international occupational health and	• Local construction and environmental inspection authorities and communities will be informed about the planned activities. • The public will be informed through stakeholder participation, in the media, and/or in public places through appropriate notifications. • All necessary legal permits for construction and/or improvement will be obtained. • 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, including the regulations regarding building fire protection, and the requirements of World Bank standards. •	Project Implementation Unit (PIU) Consultant

	safety in the workplace - Failure to comply with national and defined international occupational health and safety requirements in the workplace;	• In areas where the underground natural gas pipeline passes, the Natural Gas Provider Company is responsible for the necessary work before the start of Phase II (Construction Phase) of the projects. All processes related to the Natural Gas Pipeline will be carried out by the Service Provider Local Distribution Company, and before the Site Handover, all necessary conditions will be created with all checks and tests completed entirely, and the delivery will be made as specified in the projects. For all processes related to the natural gas pipeline, the Property Owner must apply in accordance with the relevant legislation. Therefore, neither the Consulting Firm nor the Contractor will intervene in any way in the natural gas pipeline. • 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 investigation report along with a corrective action plan to the World Bank within 30 business days. • 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. • 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. • Occupational Health and Safety Plan for Boğaziçi University Kandilli Campus New Geophysics Building was prepared by the Consultant. Work will be carried out in the field in accordance with the measures determined in the OHS Plan. • 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.	Consultant PIU Contractor

		• 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 (https://webdosya.csb.gov.tr/kamuguclendirme/menu/SREEPB-p175894_csyc_final100521--mayis_20210510070430.pdf-) such as the Asbestos-Containing Structure Dismantling Procedure. • Proper signage will be used on construction sites to inform workers of basic rules and regulations they should follow. • 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. • The contractor formally acknowledges that all works will be carried out in a safe and disciplined manner, designed to minimize the impact on residents and the environment. • The contractor will appoint personnel/responsible/experts with relevant certificates and experience for occupational health and safety. • The contractor will provide a safe working environment for workers and, before construction activities, will supply personal protective equipment (PPE) (such as helmets, masks, safety goggles, safety harnesses, and safety boots as needed) in accordance with international best practices and Turkish regulations. • An appropriate environment for workers to rest during breaks will be provided by the contractor firm, and this will be arranged and approved in consultation with building managements, taking into account the number of workers and break times.	Consultant Contractor

		• Eating places for workers will be established in areas determined by campus management with the written permission and approval of the student dormitory management. • Changing areas for workers (lockable) will be provided within the buildings with the written permission and approval of the Bogazici University Kandilli Campus New Geophysics Building's management. These areas will be determined by building technical teams, and the use of areas outside of these designated areas is strictly prohibited. Workers will be informed by the contractor firm not to keep valuable items in these areas, and the building management will not be responsible for any theft or similar incidents in these areas. Warning signs will also be posted regarding this matter. • Toilet needs for workers will be addressed through building infrastructures with the written permission and approval of the Bogazici University Kandilli Campus management. In case the existing infrastructure cannot be used, WC containers with all necessary hygiene materials will be provided by the contractor. However, ▪ 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. ▪ 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. ▪ The contractor will provide all necessary materials for hygiene that employees may need. • The contractor will provide work uniforms that display the project name to easily distinguish the employees.	

		• 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 individuals or activities, employees will immediately report three situations to their supervisor (The 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. • 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). • In the event of any epidemic or pandemic/infectious disease, guidance, guidelines, and recommendations provided by the Ministry of Health, Ministry of Labor and Social Security, and the World Health Organization will be followed. All relevant measures for occupational health and safety for both employees and workplaces will be implemented. • Entry of third parties without a specific role in the construction site will be prevented. • The names of personnel who will be on duty at the construction site, along with the necessary training certificates, will be submitted to the Consultant in a list. Employees with appropriate training and personal protective equipment will enter the construction site with identification cards. • Individuals under the age of 18 will not be allowed to enter the construction site.	

		• Smoking areas on the construction site will be determined by the contractor. • Eating, drinking, break/rest, toilet, and sink facilities will be provided in designated areas within the building where the work is being carried out, as indicated by technical units. This information will be communicated to the student dormitory management. Workers involved in the project will not leave the allocated areas. • Hygiene materials necessary for workers will be provided by the contractor. The existing sewer infrastructure in the region will be used for wastewater. • Packaged water (plastic bottle, glass bottle, etc.) will be provided for workers as drinking water. • 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 *(such as always wearing helmets, using respiratory protective equipment when necessary, protective eyewear, full-body safety harnesses, foot protection, etc.)*. • 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. • In case of work accidents resulting in lost workdays, accident investigations will be conducted and reported. • Workers who 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 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. • 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. • 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. • 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. • Before 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. • 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. • 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 will be present. Each team working in different buildings will be evaluated separately. • storage areas for materials will be established. Chemical substances will be brought to the site after checking their safety data sheets. • Workers without vocational competency certificates will not be employed. • All employees will start work only after completing basic OHS training and orientation. Training will be updated as required by regulations. • 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. • 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. • A construction method and risk assessment will be conducted for every activity to be carried out in the field. • A work permit system will be established for hazardous activities such as night work, working at heights, excavation work, welding work, etc. • 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. • A discipline enforcement system for OHS non-compliance in the field will be established, and all employees will receive training on this matter.	

		• 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. • 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. • 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. • 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. • An organizational chart outlining roles, responsibilities, and contact information for OHS will be created under the OHS heading. • In case of changes to public building entrances during construction, appropriate structures for disabled users will be provided. • 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. • Records of all activities and incidents (m*eetings, inspections, supervision, training, accidents, fires, etc*.) conducted during the construction phases will be kept. • In accordance with the SREEPB Project Labor Management Procedure and covering all contractors and subcontractors:	

		• The contractor and all subcontractors will create a written and signed social policy/commitment statement, confirming that they will not engage in forced labor, child labor, or employ uninsured workers. They will also commit not to discriminate among workers based on age, gender, religion, language, race, etc., and will refrain from the use of force, abuse, bullying, insults, and humiliation. This document will emphasize that all contractor employees should pay attention to these aspects in their relationships and communication with each other. • Measures will be taken to prevent the spread of infectious diseases (including sexually transmitted diseases and infections such as HIV) and non-communicable diseases arising from the performance of construction works. In this context, particular attention will be given to the awareness that different groups of the community, especially vulnerable and fragile groups, may be at varying levels of risk. Preventive and mitigating measures will be implemented to address the spread of infectious diseases that may arise from temporary or permanent labor mobility associated with the contract.	
Renovation and Retrofitting Works for Seismic Resilience and Energy Efficiency Improvement in Public Buildings	***b) OHS*** 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	• The project site will be illuminated throughout the night. • 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. • Any broken glass during the process will be immediately cleaned. • Work areas will be separated from inhabited areas of the building using physical barriers. • All procedures related to asbestos are outlined in Appendix-8 of the Environmental and Social Management Framework document. The work will be carried out in accordance with the requirements of Annex 8 and the Regulation on Health and Safety Measures in Work with Asbestos and other relevant legislation. • Additional cleaning will be added to the building's cleaning schedule to eliminate the excess dust and dirt generated by the demolition work.	Contractor

		• To minimize the risk of misuse, leaks, and accidental human exposure, the storage, transportation, and distribution of hazardous materials will be carried out in accordance with safety guidelines. • Old windows and doors will be temporarily stored in a secure location designed to prevent unauthorized access. • Regular maintenance will be conducted on vehicles to minimize the risk of accidents due to equipment failure or early breakdowns. • Both training sessions and incidents (such as fatalities, lost-time accidents, leaks, fires, etc.) will be documented. • 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	
	c) Safety	• The contractor will be responsible for the safety of all personnel and individuals within the construction site from the moment construction work commences. • 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. • 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. • 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	Contractor

		prevent accidents. The Contractor will establish a dedicated team for this purpose. • 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. • 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. • The scrap parts of machinery, equipment, and systems that have been replaced will be delivered to the building management without causing any damage. • These machines, 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.	
Renovation and Retrofitting Works for Seismic Resilience and Energy Efficiency Improvement in Public Buildings	***d) Waste Management*** Various waste streams and improper waste management may lead to potential adverse environmental and health effects (improper waste management can result in direct and	**General Information** • 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. • 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.	PIU Consultant

	indirect pollution of water and soil and can affect air quality).	• The Waste Management Plan will be prepared by the consultant as specified in Annex 9 of the Environmental and Social Management Framework[7]. • Waste collection and disposal routes and sites for all waste types expected to arise from renovation, demolition and construction activities will be defined in site-specific Waste Management Plans. • Daily visual site inspections will be conducted by the consultant to monitor the implementation of mitigation measures.	Consultant
		• All types of waste will be separated at the source and collected separately during construction activities. The waste will be transported to temporarily designated waste storage areas in compliance with project and regulatory requirements, as determined in consultation with the beneficiary's knowledge. (The temporary storage period is limited to 6 months.) • Temporary storage areas will be determined by the contractor, with permission obtained from the Bogazini University Kandilli Campus management, and these areas will be reported to the consultant. • 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 its own waste. • The contractor will, if possible, reuse and recycle appropriate and feasible materials (except asbestos). • Documents related to waste disposal and recycling will be regularly maintained and recorded. A Waste Record Information Form will be prepared for keeping these records.	Contractor

[7] https://webdosya.csb.gov.tr/db/kamuguclendirme/menu/kadev-p175894_csyc_final100521--mayis_20210510070430.pdf

		• During construction activities, when vehicle tires need replacement, old tires will be disposed of through a tire distribution and sales business using licensed vehicles for transportation. **Solar Panels** • Unused and/or end-of-life solar panels will be temporarily stored in an area determined by the beneficiary for a maximum of 6 months, in a way that does not pose an OHS and environmental risk. • PV panels taken to licensed facilities with licensed vehicles after temporary storage will be primarily recycled, and those that cannot be recycled will be disposed of in accordance with the relevant legislation. • **Excavation, and Debris Wastes:** • 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. • 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. **Waste Batteries and Accumulators:** • Waste batteries and accumulators will be transported to authorized disposal facilities for waste batteries and accumulators within the municipal boundaries. **Hazardous Wastes:** • In the temporary storage of hazardous wastes on the project site, the wastes will be kept in secure, leak-proof, and internationally accepted	

		standard containers within the project area. The containers will be labeled as hazardous waste, and information such as the waste code, quantity, content, characteristics, protection conditions, and storage date of the stored substance will be specified on the containers. Hazardous substances can be stored temporarily for a maximum of 6 months. (Temporary storage areas will be determined by the contractor by the regulations, with permission obtained from the University Administration, and these areas will be reported to the consultant.) • Containers storing hazardous materials and waste oils will be placed in impermeable concrete areas to prevent spillage and leakage into the soil. • Harmful substances such as paints with toxic content, solvents, or lead-based chemicals will not be used. • The management of hazardous waste will be carried out in accordance with the Waste Management Regulation. • 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. • 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. • In the event of medium and large-scale environmental accidents, an accident investigation will be conducted and reported. • 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. **Domestic Waste:**	

		• 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. • Waste that cannot be recycled will be collected in sealed sanitary waste bins, and it will be sent to the sanitary landfills through the Üsküdar Municipality's solid waste collection system. **Asbestos:** • If asbestos is present on the project site, it will be clearly marked as a hazardous material. • In the case of asbestos being present on the project site, it will be properly stored and sealed to minimize its impact. • When asbestos removal is necessary, a wetting agent will be used to keep asbestos dust to a minimum before the removal. • The entire procedure to be applied regarding asbestos is included in Annex 8 of the Environmental and Social Management Framework document (https://webdosya.csb.gov.tr/db/kamuguclatma/menu/kadev-p175894_csyc_final100521--mayis_20210510070430.pdf). The Contractor will act by the content in question. • 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 campus. • 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. • Paints containing toxic components, solvents, or lead-based paints will not be used.	

Renovation and Retrofitting Works for Seismic Resilience and Energy Efficiency Improvement in Public Buildings	***e) Pollution Prevention*** Demolition and construction activities can lead to pollution on construction sites	• Site-Specific Pollution Prevention Plans to be prepared by the Contractor will be examined by the Consultant and approved by PIU. • 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.	PIU Consultant Contractor
		• Air quality related to dust generation is addressed in the "g. Air Quality/Emission" section of this document. • Hazardous substances will be secured in the designated storage area to prevent spillage and tipping. • Containers for partially used chemical materials will have lids and will be tightly closed when not in use. • 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. • In case of any hazardous substance or hazardous waste leakage, leakage prevention methods will be applied to limit the exposure area. • Leak kits will be placed at appropriate points on construction sites. • In the event of any leakage, workers who will respond to such incidents will be identified and trained in emergency response to leaks. • Training records will be maintained at construction sites.	Contractor

Renovation and Retrofitting Works for Seismic Resilience and Energy Efficiency Improvement in Public Buildings	***f) Noise*** The presence of workers on the construction site, renovation/construction activities, and the movement of transportation vehicles will increase noise and vibration levels.	• Regular site inspections will be conducted by PIU and the Consultant to ensure that all construction activities are carried out in compliance with national laws and regulations and World Bank ESHP requirements. • Noise during demolition and construction will be limited to specified periods as determined in the permit. • During activities, the motor covers of generators, air compressors, and other electrical/mechanical equipment will be closed, and they will be placed as far away from residential areas as possible. • Throughout the construction phase, the motor covers of generators, air compressors, and other mechanical equipment will be kept closed, and the equipment will be placed as far away as possible from student areas and other buildings on the campus not included in the project but located on the campus. The use of plastic wedges is mandatory for all such equipment to prevent excessive noise due to vibration. This should be considered in the selection of equipment. • Impact noise resulting from construction activities will not exceed 100 dBC in the LC Max noise indicator as specified in the Environmental Noise Control Regulation. For occupational health and safety, 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 stipulates that noise levels should not exceed 55 dB between 07:00-22:00 and 45 dB between 22:00-07:00 for residences/educational institutions and public institutions (https://www.ifc.org/content/dam/ifc/doc/2023/ifc-general-ehs-guidelines.pdf). This will be taken into account during site inspections. • Following the start of construction, noise levels will be measured once indoors and outdoors by accredited laboratories during the demolition process and the necessary precautions will be determined as a result of the measurements. If measurements exceed the levels permitted by legislation and WBG Guidelines, measurements will be made at regular intervals every week.	Contractor

		• As a result of the measurements, if necessary, noise curtains will be placed to prevent nearby settlements from being affected by noise. • Site assessments will be conducted according to the Environmental Noise Guidelines for the WHO European Region. • If there is an increase in the noise level during the construction phase, measures will be taken to ensure that machines are not operated simultaneously. • The work schedule of works that create high levels of noise will be planned in coordination with people in nearby buildings. • Necessary communication will be provided with the public in the nearest settlement in order to determine the impact of noise that will occur during construction works and to take the necessary precautions. • Measures such as using new model vehicles as much as possible will be taken to minimize noise levels. • The unnecessary use of horns and sirens by vehicles transporting machinery, equipment, materials, and personnel within the scope of the project is prohibited. This rule applies to both within and outside the campus. Contact numbers will be provided on vehicles to address and resolve grievances related to such issues.	

Renovation and Retrofitting Works for Seismic Resilience and Energy Efficiency Improvement in Public Buildings	**g)** ***Air Quality/Emission:***	• 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.) • Following the start of construction, dust measurement will be carried out once by accredited laboratories indoors and outdoors during the demolition process. The principles for preventing air quality problems occurring during demolition activities will be determined in the Construction Methods (which will be prepared by the contractors and approved by the PIU). • Renovation and retrofitting works will mainly take place inside buildings. Dust generated during scraping and stripping operations will be suppressed by continuous water spraying. • In case of debris generation, a debris chute will be used after the first floor. • The surrounding environment (sidewalks, roads) will be cleared of debris to minimize dust. • Open burning of construction materials/waste substances will not be allowed at the construction site. • Construction vehicles at the construction site will not be idled for an excessive period. • 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. • All vehicles to be used will have exhaust emission permits, and regular maintenance will be conducted on all vehicles or monitored for maintenance.	Consultant Contractor
Renovation and Retrofitting Works for Seismic Resilience and Energy Efficiency	***h) Water Quality*** Uncontrolled disposal of wastewater/waste	• Efforts will be made to minimize the storage or disposal of waste generated on the construction site.	Consultant Contractor

Improvement in Public Buildings	generated at the construction site can affect the coastline. **i) *Soil Quality*** The mixing of hazardous substances and waste into the soil	• The campus is 750 meters away from the sea. No waste will be thrown into the sea during the activity. • Construction vehicles and machinery will only be washed in areas where surface runoff will not contaminate natural surface water bodies. • The disciplined implementation of waste management mentioned in previous sections is necessary. • All hazardous chemicals (including contaminated waste) will be stored in temporary storage areas that meet leakproof requirements. • Before the use of chemicals, MGBFs (Material Safety Data Sheets) must be checked by the OHS Specialist and Occupational Health Physicians, and users need to be informed. • Leak pads will be provided for point source pollution in the field (such as spilled paint, oil leaks from vehicles, etc.), and all employees will undergo leak and spill training. These trainings will be reinforced with exercises. At least one leak spill kit will be provided for each building and each mobile machine.	
Renovation and Retrofitting Works for Seismic Resilience and Energy Efficiency Improvement in Public Buildings	**j) *Required Resources***	• 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. • Concrete will be sourced from locally licensed ready-mix concrete facilities. • 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.	Contractor
		• Regular on-site inspections will be conducted by the PIU and the Consultant to ensure that all construction activities are carried out in	PIU Consultant

		compliance with national laws, regulations, and the requirements of the World Bank standards.	
Renovation and Retrofitting Works for Seismic Resilience and Energy Efficiency Improvement in Public Buildings	***k) Community Health and Safety/Traffic and Pedestrian Safety***	• The site inspections for every two months will be carried out by the PIU and for daily by the Consultant to ensure and monitor that all construction activities are carried out following national laws and regulations, the requirements of the World Bank standards and the Occupational Health and Safety Plan prepared for the activity. • PIU will review and approve the site-specific Community Safety and Traffic Management Plan prepared in accordance with the Occupational Health and Safety Plan.	Consultant Contractor
		• The Contractor will develop a Traffic Action Plan, taking into account the needs of people with disabilities, as prepared by the Consultant. • 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. • 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. • 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. • 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. • Trained and visible personnel will actively manage traffic on the construction site to	
		• Construction sites will be surrounded by health and safety signs to prevent potential accidents.	Consultant Contractor

		• 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. • Construction sites will be separated and secured with warning/caution tapes to ensure safety. • All types of vehicles operating during construction will be required to adhere to the specified speed limit.	
		• The surroundings and surroundings of the project site will be arranged with traffic signs and warning signs. The Traffic Action Plan is included in the Occupational Health and Safety Plan prepared by the Consultant. In addition, the security-related measures to be taken will be specified in more detail in the Community Safety and Traffic Management Plan that the Contractor will prepare before starting work. • Visibility of the project site will be ensured. • Pedestrian paths and vehicle thoroughfares within the site will be separated from each other. These paths will be incorporated into the traffic plan. • Local community, building visitors, and users will be informed about potential hazards and risks through warning signs and informational meetings. • 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). • Pedestrian paths and vehicle thoroughfares within the site will be separated from each other. These paths will be incorporated into the traffic plan. • Activities that will affect regional traffic will be planned considering peak traffic hours as much as possible. All drivers involved in the	Consultant Contractor

		project will be informed about road safety, speed limits, traffic rules to be followed during the project, and conditions to be observed. • The weights of all vehicles used in the project will not exceed the limits specified in the relevant legislation. • In the event of hazardous chemicals 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. • 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. All traffic organization will be discussed and planned in coordination with the relevant authorities.	
Operational phase impacts and risks	***a) Waste Management*** 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).	• Waste streams will be collected separately, stored, and disposed of through licensed companies in accordance with national regulatory requirements.	Relevant beneficiary institution
Operational phase impacts and risks	***b) OHS risks*** Maintenance and repair activities related to the proper functioning of the building can pose	• Relevant OHS risks will be reduced through the provisions specified in national legislation. • 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.).	Relevant beneficiary institution

	occupational health and safety (OHS) risks for workers.	• Keeping records related to the Main Design Project and relevant project documents for easy maintenance and renovation of any part of the building.	
Throughout the project lifecycle	***Stakeholder Feedback (Suggestion, Grievance, Opinion)***	• 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. • The site supervisor of the Contractor will be provided with training on the operation of the Grievances Mechanism by the Social Specialist of the Consultant firm. • Corrective actions will be taken within 15 working days for grievances/opinions/suggestions collected under the project, and if the grievance period exceeds 15 days (the grievance 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. • 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. • 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.	PIU Consultant Contractor

		• The Contractor will follow the GM Procedure of the SREEPB Project in all activities related to GM. • All personnel working within the SREEPB Project (PIU, Consultant Firm, Contractors) can report their grievances/opinions/suggestions to the Administration and/or the World Bank following the process in GM outlined in the Labour Management Procedure for SREEPB Project. • 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). • The principles for receiving feedback are explained under the "4. Stakeholder Engagement and Grievance Mechanisms" title of this document.	

6 Environmental and Social Monitoring Plan

Table 6-1: Environmental And Social Monitoring Plan

What *parameters will be monitored?*	**Where** *parameters will be monitored?*	**How** *parameters will be monitored?*	**When** *parameters will be monitored (measurement frequency)?*	**Why** *parameters will be monitored?*	**Responsibility**
Renovation and Retrofitting Works Site Preparation Activities					
Community Health and Safety Management and Implemented Protective Measures	Around the project site	Visual Inspections Site Inspection Availability of Active Community Safety and Traffic Management Plan	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	• Contractor • Consultant

What *parameters will be monitored?*	**Where** *parameters will be monitored?*	**How** *parameters will be monitored?*	**When** *parameters will be monitored (measurement frequency)?*	**Why** *parameters will be monitored?*	**Responsibility**
Occupational Health and Safety (OHS) protection measures for construction site workers	Project site and buildings near the project site	Visual Inspections Site Inspection Availability of OHS plan	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.	• Contractor • Consultant
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/retrofitting work and continuously every working day	Preventing Post Activation Potential (PAP) injury due to inhalation of asbestos fibers or other construction dust.	• Contractor • Consultant

What *parameters will be monitored?*	**Where** *parameters will be monitored?*	**How** *parameters will be monitored?*	**When** *parameters will be monitored (measurement frequency)?*	**Why** *parameters will be monitored?*	**Responsibility**
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	• Contractor • Consultant • Asbestos Removal Specialist
Renovation and Retrofitting Construction Works					

What *parameters will be monitored?*	**Where** *parameters will be monitored?*	**How** *parameters will be monitored?*	**When** *parameters will be monitored (measurement frequency)?*	**Why** *parameters will be monitored?*	**Responsibility**
Occupational Health and Safety (OHS) Protection Measures for Site Workers *(Working at Heights, Working with Hazardous Materials, Working with Rotating Equipment, Working with Electrical Devices, etc.)*	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	• Contractor • Consultant

What *parameters will be monitored?*	**Where** *parameters will be monitored?*	**How** *parameters will be monitored?*	**When** *parameters will be monitored (measurement frequency)?*	**Why** *parameters will be monitored?*	**Responsibility**
Manufacturing, Operation and Delivery (pipeline manufacturing and construction)	Project site	Visual checks, Field Control Records, Required Tests, Control of Personnel Adequacy by the relevant authority	During the relevant manufacturing process in the project and when the manufacturing is completed	Confirming that pipeline construction is complete before delivery. To prevent a possible disaster after production and delivery to the end user.	• Beneficiary Institution • Service Provider Institution OHS Department • Advisor • Contractor •
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	• Contractor • Consultant
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	• Contractor • Consultant

What *parameters will be monitored?*	**Where** *parameters will be monitored?*	**How** *parameters will be monitored?*	**When** *parameters will be monitored (measurement frequency)?*	**Why** *parameters will be monitored?*	**Responsibility**
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	• Contractor Consultant
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	• Contractor • Consultant

What *parameters will be monitored?*	**Where** *parameters will be monitored?*	**How** *parameters will be monitored?*	**When** *parameters will be monitored (measurement frequency)?*	**Why** *parameters will be monitored?*	**Responsibility**
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	• Contractor • Consultant
Domestic Wastes	Project site	Waste Records Site Inspection	Throughout the project lifecycle/Daily	• Regulation on Control of Packaging Wastes • Waste Management Regulation	• Contractor
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	• Contractor • Consultant

What *parameters will be monitored?*	**Where** *parameters will be monitored?*	**How** *parameters will be monitored?*	**When** *parameters will be monitored (measurement frequency)?*	**Why** *parameters will be monitored?*	**Responsibility**
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	• Regulation on Health and Safety Measures in Working with Asbestos	• Consultant
Proper temporary storage, packaging and labeling of the extracted waste	Project site	Waste Records Site Inspection Visual Inspections	Throughout the project lifecycle/Daily	To minimize injuries, To prevent environmental pollution, Ensuring that inventory is kept properly. •Waste Management Regulation	• Contractor • Consultant
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	• Contractor • Consultant

What *parameters will be monitored?*	**Where** *parameters will be monitored?*	**How** *parameters will be monitored?*	**When** *parameters will be monitored (measurement frequency)?*	**Why** *parameters will be monitored?*	**Responsibility**
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	• Contractor • Consultant
Vehicle and Pedestrian Safety	Project sites and access roads	Visual inspection Using appropriate signs and signals Site inspection Implementation of Community Safety and Traffic Management Plan	Daily	Protecting construction workers, their beneficiaries' employees, and local communities from injuries and deaths related to traffic accidents.	• Contractor • Consultant

What *parameters will be monitored?*	**Where** *parameters will be monitored?*	**How** *parameters will be monitored?*	**When** *parameters will be monitored (measurement frequency)?*	**Why** *parameters will be monitored?*	**Responsibility**
Stakeholder engagement	Bogazici University Kandilli 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.	• PIU • Contractor • Consultant

Grievance Mechanism	Project site • Buildings near the project site	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) The physical condition of suggestion and grievance boxes	Weekly (During the life of the project)	• Environmental Social Management Plan (ESMP) • Grievance Mechanism (GM) • Stakeholder Engagement Framework (SEF) 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.	• Contractor • Consultant • PIU

What *parameters will be monitored?*	**Where** *parameters will be monitored?*	**How** *parameters will be monitored?*	**When** *parameters will be monitored (measurement frequency)?*	**Why** *parameters will be monitored?*	**Responsibility**
		Suggestion, condition of grievance boxes locking mechanisms			
Renovation/Retrofitting Works Operation Process					
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	Rectorate of Boğaziçi University Kandilli Campus
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	Rectorate of Boğaziçi University Kandilli Campus

7 Duties and Responsibilities

Table 7-1: Task Distribution List

RESPONSIBLE PARTY	RESPONSIBILITY
MoEUCC /PIU	• Implementation and monitoring of the project, and utilization of funds. • Employment of at least one full-time Environmental, Social, and Occupational Health and Safety (OHS) expert. • Conducting necessary correspondence with official authorities and ensuring follow-ups. • Supervising and ensuring compliance of Environment and Social Management Plans (ESMPs) with both national regulations and WB policies specific to the project. • Presenting the prepared ESMPs to the WB after relevant checks. • Establishment of a Grievance Mechanism. • Organizing and conducting project informational meetings. • Guiding consultants and contractors. • Summarizing environmental and social issues related to project implementation in regular progress reports submitted to the WB. • Coordinating and liaising with WB's inspection missions regarding the evaluation of project implementation in terms of environmental and social mitigation policies. • Supervising the contractor's ESMP implementation and documenting necessary performance, suggestions, and future activities as part of the general project audit. • Ensuring the contractor corrects the application if ESMP is not followed and informing the WB about the issue. • Assisting the consultant if needed to obtain necessary permits throughout the project. • 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.
MÜŞAVİR	• Conducting a preliminary site assessment before the project starts, • If at least one Environmental, one Social and one OHS expert is employed full-time • Preparation of the project-specific ESMP and OHS Plan, • Monitoring, evaluating and submitting to the Administration the activities defined as the responsibility of the contractor in the ESMP and OHS Plan, • Ensuring the operation of the Grievance Mechanism established by the Ministry, • Providing feedback to MoEUCC by preparing reports about the project and ESMP processes, • Examining sub-management plans such as Waste Management Plan, Pollution Prevention Plan, Total Safety and Traffic Management Plan, OHS Plan prepared by the Contractor and submitting them to the Administration for approval, • Review and approval of Construction Methods prepared by the contractor, • Application to the energy distribution company for the installation of PV, • Providing training for the contractor (Environmental Impacts, Waste Management, OHS Plan Implementation and Monitoring Training, Response to Environmental Emergencies, Energy Efficiency, *Stakeholder Engagement*

	and Information Activities, Code of Conduct, Grievance Mechanism, Gender-Based Violence/Sexual Exploitation/Sexual Abuse/Sexual Harassment, Lockout-Tagout Training (LOTO), Work Permit System Training, Conservation of Cultural Assets)
CONTRACTOR	• Employing at least one full-time Environmental, one Social and one OHS specialist, • Appointing an experienced Environmental and OHS Officer for the comprehensive management and monitoring of the site-specific ESMP and OHS Plan. • Implementing laws, regulations, and rules related to ESMP and OHS Plan attached to the tender documents as defined by the Consultant. • Implementing relevant laws and regulations mentioned in the tender documents appropriately. • Updating ESMP and OHS Plan content in coordination with the Consultant during the implementation of ESMPs and OHS Plan in the field as necessary. • Preparation of the OHS Plan for the activities to be carried out, taking into account the OHS Plan prepared by the Consultant, Monitoring the field activities defined in the ESMPs prepared specifically for the project at regular intervals (daily, monthly, etc.), • Preparation of the Community Safety and Traffic Management Plan • Operating the Grievance Mechanism in compliance with GM Procedure established by the Ministry. • Examination of the ESMP prepared by the Consultant, commitment to implement it or preparation of the Contractor ESMP by the contractor and relevant sub-management plans of the ESMP (e.g. Waste Management Plan, Pollution Prevention Plan, Community Safety and Traffic Management Plan, Occupational Health and Safety plan, etc.) and preparation of work-specific construction/application methods, • Preparing the Random Finding Procedure if deemed necessary. • Preparing ESMP progress reports for MoEUCC.'s review. • Applying to the authorized energy distribution company and local gas distribution company depending on the works to be carried out. • Establishing the Employee Grievance Mechanism detailed in the Labor Management Procedure before any construction work starts and ensuring its transparent operation. • Preparing the Labour Management Plan specific to the project considering the SREEPB Labor Management Plan (LMP)[8] .

[8] https://webdosya.csb.gov.tr/db/kamuguclendirme/menu/kadev-p175894_isgucuyonetimprosedurleri-nihai_tr_20210527081102.pdf

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 8-1.

Table 8-1: Reporting Process Requirement List

RESPONSIBLE PARTY	REPORTING PROCESS REQUIREMENT
MoEUCC /PIU	• Preparation of the 6-month Project Progress Report and submission to the World Bank (WB). • 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. • Monthly updates to the WB about the functioning of the Grievance Mechanism.
CONSULTANT	• Preparation of end-of-implementation ESMP reports for the Administration's review. • Preparation of monthly of ESMP progress reports and submission to the Administration. • Preparation of monthly of GM reports and submission to the Administration • Immediate reporting of any important events such as accidents, leaks, deaths, sexual harassment/abuse to the PIU.
CONTRACTOR	• Monthly preparation of ESMP progress reports and submission for approval by the Consultant. • Weekly preparation of GM reports and submission to the Project Manager of the Consultant. • Immediate reporting of any significant events such as accidents, leaks, deaths, sexual harassment/abuse to the Consultant. • Incident/Accident and Root Cause Analysis Reports will be prepared. • Report content details are presented within the Environmental and Social Management Framework.

Annex I Photos of Building Considered within the Scope of the Project

BOĞAZİÇİ UNIVERSITY KANDİLLİ CAMPUS NEW GEOPHYSICS BUILDING FACADE PHOTOS

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

Summary explanations of the World Bank Environmental and Social Standards (ESS) are included in Annex-2/Table 1.

Annex-2/Table 1: World Bank Environmental Social Standards Summary

ESS	SUBJECT	SUMMARY REQUIREMENT
ESS1	Assessment and Management of Environmental and Social Risks and Impacts	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. Environmental and social assessments will be conducted based on current information/data to define and describe the project and all related aspects and identify the nature of risks, impacts, and characteristics of mitigation measures. 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. 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.

ESS	SUBJECT	SUMMARY REQUIREMENT
ESS2	Labor and Working Conditions	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.

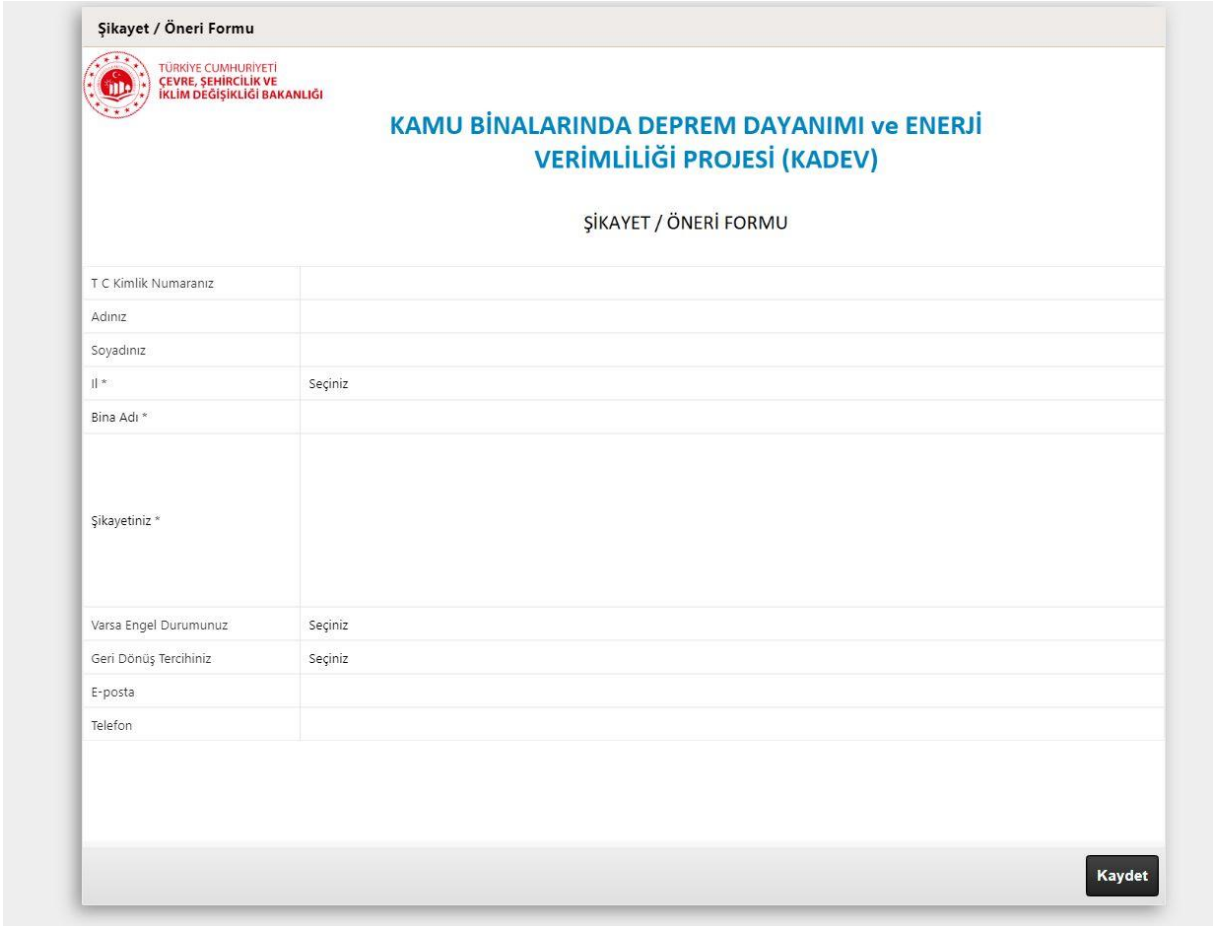
ESS	SUBJECT	SUMMARY REQUIREMENT
ESS3	Resource Efficiency and Pollution Prevention and Management	ESS3 recognizes that economic activities and urbanization largely pollute the air, water, and soil and consume limited resources at local, regional, and global levels, threatening people, ecosystem services, 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 **(This ESS is not applicable to the SREEPB Project)**	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 **(This ESS is not applicable to the SREEPB Project)**	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 **(This ESS is not applicable to the SREEPB Project)**	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 **(This ESS does not apply for the SREEPB Project)**	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	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 the most effective and 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.

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 *	
Varsa Engel Durumunuz	Seçiniz
Geri Dönüş Tercihiniz	Seçiniz
E-posta	
Telefon	

Kaydet

Annex IV: Suggestion & Grievance Form (Printed)

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

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

Annex V Grievance Closeout Form

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?	[ ] YES [ ] NO

Corrective Action and Decision Control	
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	Building Name	BOĞAZİÇİ UNIVERSITY NORTH CAMPUS
Date	9.03.2023	Start | End Time	14 : 00 | 15 : 00

ANNEXVI-Table 1 Meeting Agenda

START TIME	END TIME	ACTIVITY
14 : 00	14 : 10	Meeting kick-off speech
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. • 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.

14 : 15	14 : 20	Information was given about the SREEPB project and its objectives. **Image 1 PRESENTATION FILE SHARED SECTIONS_01** 
14 : 20	14 : 24	▪ The general stages of the SREEPB project have been explained. Information was given about the plans and their contents to be prepared together with the project and tender documents. ▪ **Environmental and Social Management Plan**; 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. ▪ **Occupational Health & Safety Plan** 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. ▪ **Stakeholder Engagement Plan** 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. ▪ 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. **Image 2 PRESENTATION FILE SHARED SECTIONS_02**

		   
14 : 24	14 : 31	▪ 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. ▪ It was stated what stakeholders and employees should do for occupational health and safety. ▪ It has been explained that the professional competence of the employees will be questioned. ▪ Possible environmental effects related to soil survey, precautions to be taken and considered in this regard were stated. ▪ The possible social effects of the ground survey, the precautions to be taken and the things to be considered about it were explained. **Image 3 PRESENTATION FILE SHARED SECTIONS_03**

YAPISAL FIZIBILITE

ZEMIN ETÜDÜ;

Araştırma çukuru *(her bir yapı için en az 1 adet)*, jeofizik serim *(her bir yapı için en az 2)*, 30m derinlikte sondaj *(2-15 ad. 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

ZEMIN ETÜDÜ;

Bu kapsamda gerçekleştirilecek test & numune sayıları aşağıdadır;

BİNA ADI	YAPI ADEDİ	TOPLAM OTURUM ALANI (m²)	TAHMİNİ SONDAJ SAYISI	JEOFİZİK SERİM	TAHMİNİ SONDAJ DERİNLİĞİ (m)	ARAŞTIRMA ÇUKURU ADEDİ
VADİ YEMEKHANE	1	1000	3	2	30	1
VADİ SPOR SALONU	1	1060	3	2	30	1
VADİ YURDU B	1	1174	2	2	30	2
VADİ YURDU C	1	1227	2	2	30	2
VADİ YURDU D	1	1275	3	2	30	2
VADİ YURDU E	1	1150	3	2	30	2
UÇAK UZAY FAKÜLTESİ	4	2190	4	2	30	2
AYAZAĞA KIZ ÖĞRENCİ YURDU	1	930	3	2	30	2
FEN BİLİMLERİ	1	1100	3	2	30	2
GEMİ İNŞAAT	6	2060	5	2	30	1
MADEN FAKÜLTESİ	13	7800	11	2	30	2
KAPALI SPOR SALONU	3	3548	6	2	30	2

İŞ SAĞLIĞI GÜVENLIĞI

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

- Kızaklı sondaj makinesi, kamyon marifeti ile sondaj noktalarına iletilecektir. Söz konusu kamyonların kullanımı, manevraları esnasında kimsenin zarar görmemesi için zaruri haller dışında 20m' den fazla yaklaşılmaması gerekmektedir! Kamyon ve iş makinelerinin azami hız sınırı 20 km' dir.
- Sondaj kulesinin kaldırılması esnasında, kule etki alanı içinde bina elemanlarının, ağaç dallarını vb. olmadığından emin olunmalıdır.
- Sondaj işlemi yapılan alana 20m' den fazla yaklaşılmaması gerekmektedir. Bunun tesisi için çalışma sahası emniyet şeridi ile ayrılacaktır.
- Sondaj işlemi esnasında çevredeki teknik kadroların tozdan etkilenmemesi için yarım yüz maskesi kullanımı önerilir.
- Sondaj işlemi esnasında gürültü anlık olarak 95dB seviyelerine ulaşabilmektedir. Bu nedenle çevredeki bireylerin konsantrasyonlarının olumsuz yönde etkilenmesi muhtemeldir.

- **Çalışma sonrasında araştırma çukurları ve sondaj delikleri kapatılacaktır. Bu suretle takılma, düşme riskleri bertaraf edilmiş olacaktır.**

İŞ SAĞLIĞI GÜVENLIĞI – ÇALIŞANLAR

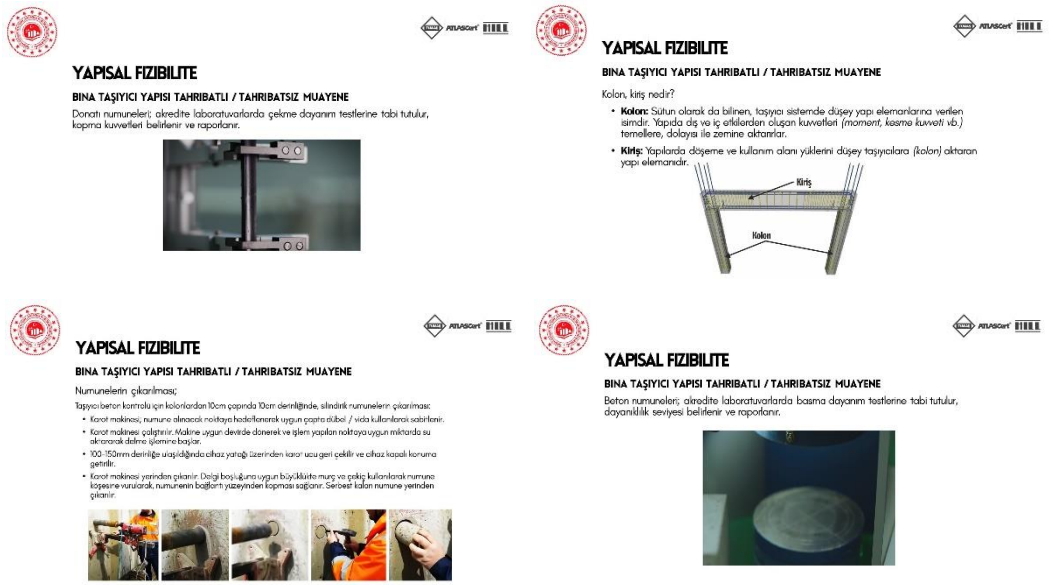
Çalışanların tamamı aşağıda belirtilen ve kendilerine teslim edilen kişisel koruyucu donanımları disiplinli şekilde kullanmakla yükümlüdür. Söz konusu donanımları uygun şekilde taşımayan/kullanmayanların çalışmalarına izin verilmeyecektir.

- Baret – TS EN 397+A1
- Kulak Tıkacı – TS EN 352-2
- Koruyucu Gözlük – TS EN ISO 16321-3
- Genel Amaçlı İş Eldiveni – TS EN ISO 21420
- İş Ayakkabısı – TS EN ISO 20347
- Yarım Yüz Maskesi – TS EN 140
- Paraşüt Tipi Emniyet Kemeri – TS EN 361 (Sadece Sondörler)

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.

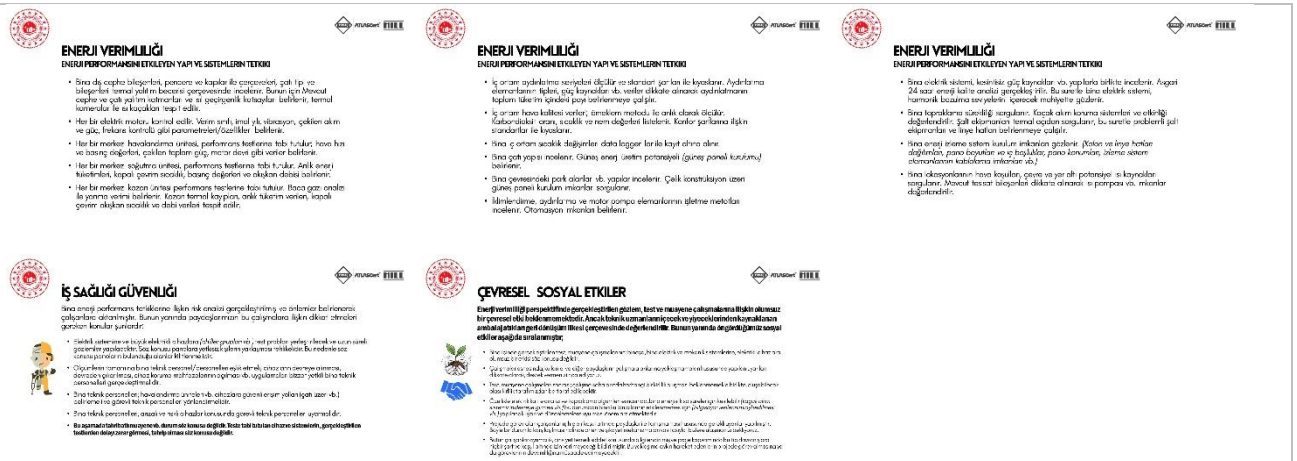
Image 4 PRESENTATION FILE SHARED SECTIONS_04

		
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** 
14 : 35	14 : 38	▪ It was stated that the tensile strength test will be applied to the samples taken. ▪ 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.

		Image 6 PRESENTATION FILE SHARED SECTIONS_06  YAPISAL FIZIBILITE BINA TAŞIYICI YAPISI TAHRIBATLI / TAHRIBATSIZ MUAYENE Donatı numuneleri; akredite laboratuvarlarda çekme dayanım testlerine tabi tutulur, kopma kuvvetleri belirlenir ve raporlanır. YAPISAL FIZIBILITE BINA TAŞIYICI YAPISI TAHRIBATLI / TAHRIBATSIZ MUAYENE Kolon, kiriş nedir? • **Kolon:** Sütun olarak da bilinen, taşıyıcı sistemde düşey yapı elemanlarına verilen isimdir. Yapıda dış ve iç etkilerden oluşan kuvvetleri *(moment, kesme kuvveti vb.)* temellere, dolayısı ile zemine aktarırlar. • **Kiriş:** Yapılarda döşeme ve kullanım alanı yüklerini düşey taşıyıcılara *(kolon)* aktaran yapı elemanıdır. Kiriş Kolon YAPISAL FIZIBILITE BINA TAŞIYICI YAPISI TAHRIBATLI / TAHRIBATSIZ MUAYENE Numunelerin çıkarılması; Taşıyıcı beton kontrolü için kolonlardan 10cm çapında 10cm derinliğinde, silindirik numunelerin çıkarılması: • Karot makinesi, numune alınacak noktaya hedeflenerek uygun çaptaki dübel / vida kullanılarak sabitlenir. • Karot makinesi çalıştırılır. Makine uygun devirde dönerek ve işlem yapılan noktaya uygun miktarda su akıtılarak delme işlemine başlar. • 100-150mm derinliğe ulaşıldığında cihaz yatağı üzerinden karot ucu geri çekilir ve cihaz kapalı konuma getirilir. • Karot makinesi yerinden çıkarılır. Delgi boşluğuna uygun büyüklükte murç ve çekiç kullanılarak numune köşesine vurularak, numunenin bağlantı yüzeyinden kopması sağlanır. Serbest kalan numune yerinden çıkarılır. YAPISAL FIZIBILITE BINA TAŞIYICI YAPISI TAHRIBATLI / TAHRIBATSIZ MUAYENE Beton numuneleri; akredite laboratuvarlarda basma dayanım testlerine tabi tutulur, dayanıklılık seviyesi belirlenir ve raporlanır.
14 : 38	14 : 40	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. **Image 7 PRESENTATION FILE SHARED SECTIONS_07**

		
14 : 40	14 : 45	General explanations regarding occupational health and safety plans were made within this framework; ▪ Matters taken into account within the framework of OHS plans are explained item by item. ▪ It was underlined that only authorized persons can access the areas where the renovation works will be carried out, therefore, the access of the building users will be restricted in some periods. It was reminded that work plans should be evaluated within this framework. ▪ General OHS rules and precautions to be taken especially for environmental safety were mentioned. ▪ It was underlined that it should not be touched while working with the devices and that the technical personnel should show the plugs fed from the residual current circuit lines for the connection of electrical devices. ▪ The importance of professional competence was mentioned. For example; It has been stated that Civil Engineers and Construction Technicians will take part in construction equipment tests under their supervision. ▪ The environmental impacts of all works and the precautions to be taken are explained to all employees and the issues that stakeholders should pay attention to are explained. ▪ It was stated that the wastes will be cleaned by technical experts and employees and will be separated into the regions indicated by the Administration. ▪ Projected social impacts related to indoor observation, test and inspection activities are stated in the OHS plans. ▪ It has been underlined again that the samples to be taken will not adversely affect the building's structural aspects. **Image 8 PRESENTATION FILE SHARED SECTIONS_08**

		
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** 

		
14 : 50	14 : 54	Clarifications were made regarding stakeholder engagement, receiving and evaluating suggestions and grievances, and informing the relevant parties about this process (decisions taken regarding suggestions and grievances, additional measures implemented, etc.) ▪ It was explained that suggestions and grievances can be received via digital form, telephone, e-mail addresses and QR codes. ▪ It was stated that suggestions and grievances can be conveyed by specifying the building name with the call line 181. ▪ Printed feedback forms were introduced, information was given about the suggestion and grievance boxes to be established in the building, and the control periods. ▪ It was announced that the grievances about gender-based violence (harassment, abuse, etc.) and gender-based discrimination, which were made within the scope of the project, will also be evaluated within the scope of the grievance resolution mechanism. **Image 10 PRESENTATION FILE SHARED SECTIONS_10**

		
14 : 54	15 : 00	Participants' questions were received and answered. CLOSING speech was made and the meeting was ended. **Image 11 PRESENTATION FILE SHARED SECTIONS_11** 

Questions and Answers

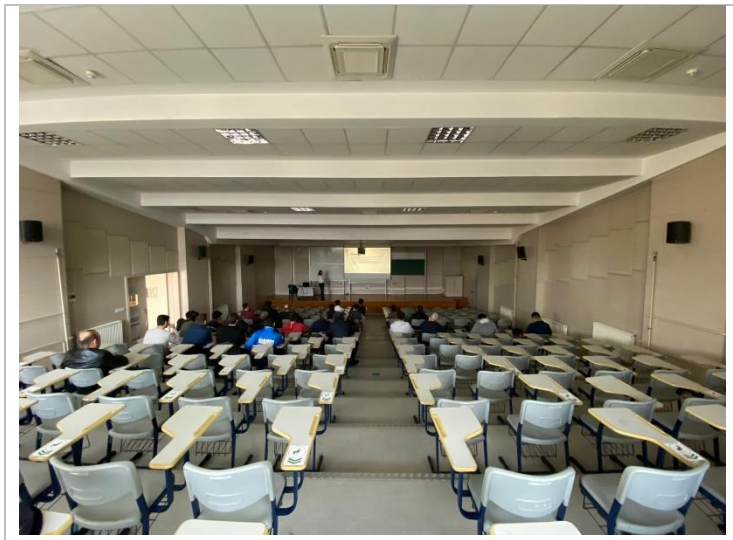
AnnexVI, Table 2: QUESTION & ANSWER LIST

	NAME SURNAME	QUESTION	NAME SURNAME	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 NOTES & GENERAL EVALUATION

- The brochures and appendix presentation files prepared within the framework of the SREEPB Project will be sent to all participants via their mobile phones or e-mail addresses.
- Suggestion & grievance form link will be sent to all participants via their mobile phones or e-mail addresses.

Annex VI Table 3 : MEETING PHOTOS



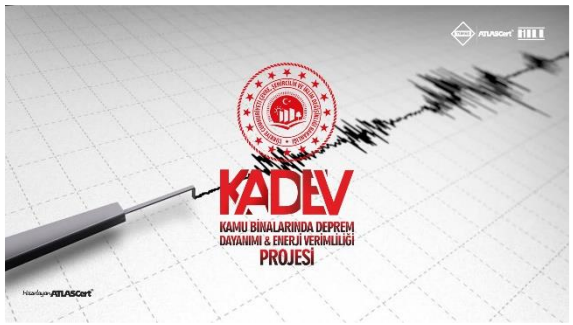
Participant List and Contact Information

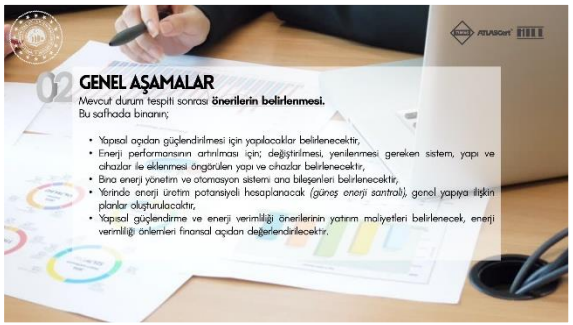
Participant List and Contact Information

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.

Explanation: The stakeholder engagement meeting was held on the digital platform (https://meet.google.com/qhy-mqzb-ers) Video recording was made with the information and approval of the participants.

Stakeholder Engagement Meeting Presentation





03 GENEL AŞAMALAR

Proje & ihale dokümanları ile birlikte;

- Çevresel Sosyal Yönetim Planları *(Projenin çevresel ve sosyal etkileri belirlenecek, riskler ve risklerin bertarafı için hayata geçirilecek eylemler tanımlanacaktır)*
- İş Sağlığı & Güvenliği Planları *(İmalat aşamalarına ilişkin iş sağlığı ve güvenliği riskleri belirlenecek ve bertarafı için alınması gereken önlemler tanımlanacaktır.)*
- Paydaş Katılım Planları *(Projeden direk ve dolaylı etkilenecek paydaşlar ve söz konusu paydaşların proje ve proje süreçleri hakkında ne kadar nasıl bilgilendirilecekleri, geri bildirimlerin (öneri, şikayet vb.) nasıl toplanacağı, inceleneceği ve cevaplanacağı tarif edilecektir.)*

hazırlanacaktır.

04 GENEL AŞAMALAR

Çevre, Şehircilik ve İklim Değişikliği Bakanlığı tarafından gerçekleştirilen ihale neticesinde belirlenen yüklenici firma (lar) tarafından **hayata geçirilen projelerin müşavirlik süreci.**

- Bir önceki aşamada belirtilen ve yüklenici firmalara tebliğ edilen planların tamamının *(çevresel, sosyal etkiler, paydaş katılımı, İSG)* disiplinli şekilde uygulanması zaruridir. Müşavirlik süreci sadece imalatlara ilişkin kalite gereksinimlerini değil aynı zamanda bu planların uygulanmasına ilişkin süreçleri de kapsamaktadır.

YAPISAL FIZIBILITE

ZEMIN ETÜDÜ;

Araştırma çukuru *(her bir yapı için en az 1 adet)*, jeofizik serim *(her bir yapı için en az 2)*, 30m derinlikte sondaj *(2-15 ad. 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

ZEMIN ETÜDÜ;

Bu kapsamda gerçekleştirilecek test & numune sayıları aşağıdadır;

BİNA ADI	YAPI ADEDİ	TOPLAM OTURUM ALANI (m²)	TAHMİNİ SONDAJ SAYISI	JEOFİZİK SERİM	TAHMİNİ SONDAJ DERİNLİĞİ (m)	ARAŞTIRMA ÇUKURU ADEDİ
VADİ YEMEKHANE	1	1000	3	2	30	1
VADİ SPOR SALONU	1	1060	3	2	30	1
VADİ YURDU B	1	1174	2	2	30	2
VADİ YURDU C	1	1227	2	2	30	2
VADİ YURDU D	1	1275	3	2	30	2
VADİ YURDU E	1	1150	3	2	30	2
UÇAK UZAY FAKÜLTESİ	4	2190	4	2	30	2
AYAZAĞA KIZ ÖĞRENCİ YURDU	1	960	3	2	30	2
FEN BİLİMLERİ	1	1100	3	2	30	2
GEMİ İNŞAAT	6	2960	5	2	30	1
MADEN FAKÜLTESİ	13	7800	11	3	30	2
KAPALI SPOR SALONU	3	5548	6	2	30	2

İŞ SAĞLIĞI GÜVENLIĞI

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

- Kızaklı sondaj makinesi, kamyon marifeti ile sondaj noktalarına iletilecektir. Söz konusu kamyonların kullanımı, manevraları esnasında kimsenin zarar görmemesi için zaruri haller dışında 20m' den fazla yaklaşılmaması gerekmektedir! Kamyon ve iş makinelerinin azami hız sınırı 20 km' dir.
- Sondaj kulesinin kaldırılması esnasında, kule etki alanı içinde bina elemanlarının, ağaç dallarını vb. olmadığından emin olunmalıdır.
- Sondaj işlemi yapılan alana 20m' den fazla yaklaşılmaması gerekmektedir. Bunun tesisi için çalışma sahası emniyet şeridi ile ayrılacaktır.
- Sondaj işlemi esnasında çevredeki teknik kadroların tozdan etkilenmemesi için yarım yüz maskesi kullanımı önerilir.
- Sondaj işlemi esnasında gürültü anlık olarak 95dB seviyelerine ulaşabilmektedir. Bu nedenle çevredeki bireylerin konsantrasyonlarının olumsuz yönde etkilenmesi muhtemeldir.

- **Çalışma sonrasında araştırma çukurları ve sondaj delikleri kapatılacaktır. Bu suretle takılma, düşme riskleri bertaraf edilmiş olacaktır.**

İŞ SAĞLIĞI GÜVENLIĞI – ÇALIŞANLAR

Çalışanların tamamı aşağıda belirtilen ve kendilerine teslim edilen kişisel koruyucu donanımları disiplinli şekilde kullanmakla yükümlüdür. Söz konusu donanımları uygun şekilde taşımayan/kullanmayanların çalışmalarına izin verilmeyecektir.

- Baret - TS EN 397+A1
- Kulak Tıkacı - TS EN 352-2
- Koruyucu Gözlük - TS EN ISO 16321-3
- Genel Amaçlı İş Eldiveni - TS EN ISO 21420
- İş Ayakkabısı - TS EN ISO 20347
- Yarım Yüz Maskesi - TS EN 140
- Paraşüt Tipi Emniyet Kemeri - TS EN 361 (Sadece Sondörler)

İŞ SAĞLIĞI GÜVENLIĞI – ÇALIŞANLAR

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

MESLEKI YETERLILIK

Sondaj çalışmaları yetkili Sondörler tarafından gerçekleştirilecektir.

- Sondör: Sondaj makine ve ekipmanlarını kullanarak yer altı ve yer üstünün değişik katmanlarında sondaj lokasyon hazırlığı, sondaj kuyusu açma ve numune alma gibi işlemleri yapan kimsedir.

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

ÇEVRESEL ETKILER

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

- Sondaj işlemi esnasında gürültü anlık olarak 95dB seviyelerine ulaşabilmektedir. Bu nedenle çevredeki bireylerin konsantrasyonlarının olumsuz yönde etkilenmesi muhtemeldir.
- Sondaj makinesi, kamyonu mazot ve yağ ikmali esnasında toprağa sıçrama, sızıntı riski söz konusudur. Böyle bir durumda emici pedler kullanılarak sızan mazot/yağ temizlenecek, kontamine olmuş toprak kürekle sıyrılacaktır. Kontamine ped ve sıyrılan toprak, tehlikeli atık statüsünde değerlendirilir.
- Sondaj suyunun kontrolsüz yayılımının engellenmesi için sondaj noktasında uygun kanallar oluşturulacak ve geçici çamur havuzlarına *(azami 1m³)* yönlendirilecektir. Buna rağmen sondaj yakın çevresinin su ve çamurdan etkilenmesi muhtemeldir. *(Çalışma sonrasında çevre temizlik, düzenlemesi yapılacak, kanal ve geçici havuzlar doldurulacaktır.)*
- Sondaj çalışmaları esnasında ortaya çıkan atıklar ve çalışanların atıkları *(içecek şişeleri, plastik yemek kapları vb.)* sınıflandırılarak faydalanıcı İdarenin göstereceği alanlarda geçici olarak depolanacaktır. Söz konusu atıkların ayrıştırılması ve depolanması projede görev alan çalışanların sorumluluğundadır.

SOSYAL ETKILER

Zemin etüdüne ilişkin öngörülen sosyal etkiler ve alınması gereken önlemler bütün çalışanlara bildirilmiştir. Paydaşlarımıza aktarmak istediğimiz hususlar şunlardır;

- Sondaj çalışmalarının, bina dayanımını olumsuz etkilemesi söz konusu değildir.
- Sondaj çalışmaları esnasında bina kullanıcılarının ve diğer paydaşların gürültü vb. etkilerden olumsuz etkilenmemesi için gerekli planlama konusunda saha personellerine yardımcı olmanızı rica ediyoruz.
- Tahribatsız muayenelerin ve teknik uzmanların çevresel etki ve gürültülerden etkilenmesi olasıdır. Dış ortam test ve muayene çalışmaları esnasında, kullanıcı ve diğer paydaşların çalışma sahalarına yaklaşmamaları hususunda yapılan uyarıları dikkate alarak destek vermenizi rica ediyoruz.
- Test, muayene çalışmaları sonrası; çalışma sahalarında gerekli düzenlemeler, görevli personeller tarafından gerçekleştirilecektir. Bu konuya ilişkin şikayetlerinizi lütfen bize bildirin.
- Projede görev alan çalışanların, hiç bir koşul altında paydaşlar ile tartışmaması hususunda gerekli uyarılar yapılmıştır. Böyle bir durumla karşılaşılması halinde öneri ve şikayet mekanizmaları vasıtasıyla bizlere ulaşmanızı bekliyoruz. (Öneri & şikayet süreci)
- Bütün çalışanlar ayrımcılık, cinsiyet temelli şiddet konusunda bilgilendirilmiş ve proje kapsamında bu tip davranışlara hiçbir şart ve koşul altında izin verilmeyeceği bildirilmiştir. Bu yaklaşıma aykırı hareket edenlerin, projede görev almasına ya da görevlerinin devamlılığına müsaade edilmeyecektir.

YAPISAL FIZIBILITE

BINA TAŞIYICI YAPISI, TAHRIBATLI / TAHRIBATSIZ MUAYENE

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

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
VADİ YEMEKHANESİ	1994	1.330,00	1	Z+2	9	12	48	2
VADİ SPOR SALONU	1994	1.208,00	1	Z+1	9	12	48	2
VADİ YURT BİNASI [illegible]	1994	[illegible]	2	B+Z+4	26	36	96	2
VADİ YURT BİNASI C	1994	[illegible]	2	B+Z+4	26	36	96	2
VADİ YURT BİNASI D	1994	5.180,71	2	B+Z+4	26	36	96	2
VADİ YURT BİNASI E	1994	5.177,40	2	B+Z+4	26	36	96	2
[illegible]	1992	[illegible]	[illegible]	[illegible]	45	80	200	[illegible]
[illegible] KIZ YURT BİNASI	1992	[illegible]	2	Z+4	22	36	80	2
BİLİM VE TEKNOLOJİ ENSTİTÜSÜ	1989	4.311,00	2	Z+4	22	36	80	2
GEMİ İNŞAATI VE OKYANUS FAKÜLTESİ EK	1987	13.030,00	2	Z+5	26	40	80	2
MADEN FAKÜLTESİ	1987	[illegible]	5	Z+3	45	80	200	[illegible]
KAPALI SPOR SALONU	1986	2.500,00	1	Z+1	9	12	48	2
			25		291	412	1168	27

YAPISAL FIZIBILITE

BINA TAŞIYICI YAPISI TAHRIBATLI / TAHRIBATSIZ MUAYENE

Bina zemin/temel kontrolü için; temel kalınlığının bir miktar altına inilecek derinlikte yaklaşık *(0,5m² 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 gösteri mahiyette resimler çekilir. Araştırma sonrasında çukur uygun biçimde kapatılır.

YAPISAL FIZIBILITE

BINA TAŞIYICI YAPISI TAHRIBATLI / TAHRIBATSIZ MUAYENE

Taşıyıcı yapı gözlemleri ve numune tespiti;

- Demir tespit cihazları ile bina taşıyıcı elemanlarının içinde yer alan donatıların *(demir)*; konumları, dizilimleri ve aralıkları belirlenmeye çalışılır.
- Beton ve demir numunesi alınacak bölümler işaretlenir.
- Numune etiketleri doldurulur ve numune alınacak yüzeylerin yanına iliştirilir.

YAPISAL FIZIBILITE

BINA TAŞIYICI YAPISI TAHRIBATLI / TAHRIBATSIZ MUAYENE

Donatı ve etriye nedir?

- **Donatı:** Beton içerisindeki çelik çubuklardır. *(Beton basınca karşı çok iyi çalışan bir malzeme olmasına rağmen, çekme dayanımı çok düşüktür. Çekme bölgesindeki gerilmeleri karşılamak üzere, bu bölgeye çelik çubuklar yerleştirilir.)*
- **Etriye:** Kolon, kiriş gibi taşıyıcı sistem elemanlarının; boyuna donatılarını saran, inşaat çeliğinin bükülmesiyle elde edilen bir sargı donatısıdır.

YAPISAL FIZIBILITE

BINA TAŞIYICI YAPISI TAHRIBATLI / TAHRIBATSIZ MUAYENE

Numunelerin çıkarılması;

- **Donatı kontrolü** için belirlenen yüzeyler üzerindeki; boya, alçı, sıva ve beton katmanlar, kırıcı marifeti ile **kaldırılır, sıyrılır.** Bu suretle kontrol edilecek demirler ortaya çıkarılır.
- Çıkarılan donatı *(**etriye ve boyuna donatı**)* üzerindeki beton kalıntılar ve pas, uygun boyutta metal fırçalar kullanılarak temizlenir.
- Donatı çapları tespit edilir, dayanım testi için numune filiz başlarından vb. spiral taş marifeti ile demir çubuklar kesilir.

YAPISAL FIZIBILITE

BINA TAŞIYICI YAPISI TAHRIBATLI / TAHRIBATSIZ MUAYENE

Donatı numuneleri; akredite laboratuvarlarda çekme dayanım testlerine tabi tutulur, kopma kuvvetleri belirlenir ve raporlanır.

YAPISAL FIZIBILITE

BINA TAŞIYICI YAPISI TAHRIBATLI / TAHRIBATSIZ MUAYENE

Kolon, kiriş nedir?

- **Kolon:** Sütun olarak da bilinen, taşıyıcı sistemde düşey yapı elemanlarına verilen isimdir. Yapıda dış ve iç etkilerden oluşan kuvvetleri *(moment, kesme kuvveti vb.)* temellere, dolayısı ile zemine aktarırlar.
- **Kiriş:** Yapılarda döşeme ve kullanım alanı yüklerini düşey taşıyıcılara *(kolon)* aktaran yapı elemanıdır.

KADEV 2023

Paydaş Katılımı Toplantı Raporu

Kamu Binalarında Deprem Dayanımı
ve Enerji Verimliliği Projesi

YAPISAL FIZIBILITE

BINA TAŞIYICI YAPISI TAHRIBATLI / TAHRIBATSIZ MUAYENE

Numunelerin çıkarılması;

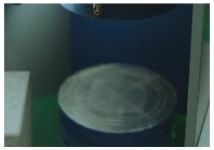
Taşıyıcı beton kontrolü için kolonlardan 10cm çapında 10cm derinliğinde, silindirik numunelerin çıkarılması:

- Karot makinesi; numune alınacak noktaya hedefleneerek uygun çapta dübel / vida kullanılarak sabitlenir.
- Karot makinesi çalıştırılır. Makine uygun devirde dönerek ve işlem yapılan noktaya uygun miktarda su aktararak delme işlemine başlar.
- 100-150mm derinliğe ulaşıldığında cihaz yatağı üzerinden karot ucu geri çekilir ve cihaz kapalı konuma getirilir.
- Karot makinesi yerinden çıkarılır. Delgi boşluğuna uygun büyüklükte murç ve çekiç kullanılarak numune köşesine vurularak, numunenin bağlantı yüzeyinden kopması sağlanır. Serbest kalan numune yerinden çıkarılır.

YAPISAL FIZIBILITE

BINA TAŞIYICI YAPISI TAHRIBATLI / TAHRIBATSIZ MUAYENE

Beton numuneleri; akredite laboratuvarlarda basma dayanım testlerine tabi tutulur, dayanıklılık seviyesi belirlenir ve raporlanır.



YAPISAL FIZIBILITE

TAHRIBATLI TEST SONRASI ONARIM

Proje kapsamında gerçekleştirilen tahribatlı muayenelerin, temin edilen numunelerin; binaya yapısal hasar vermesi söz konusu değildir.

- Demir numuneler kuvvet altında kalmayan filiz uçlarından vb. noktalardan alınmaktadır.
- Kolon sıyırması sonucu tahrip olan kısımlar ve beton numunesi alınan bölümler yüksek mukavemetli dolgu harçları kullanılarak doldurulacak, onarılacaktır.

İŞ SAĞLIĞI GÜVENLIĞI

Bina içi yapısal gözlem, test ve muayene çalışmalarına ilişkin risk analizi gerçekleştirilmiş, iş sağlığı ve güvenliği planları hazırlanmış ve çalışanlara aktarılmıştır. Paydaşlarımızın bu çalışmalara ilişkin dikkat etmeleri gereken konular şunlardır:

- Kazı, kırım, karot ve onarım harcı hazırlama esnasında görevli olmayan paydaşlar, çalışma noktalarına 5m'den fazla yaklaşmamalıdır. Bu suretle; çıkan toz, yüksek gürültülere uzun süre maruziyet, fırlayan çapak/beton parçalarından etkilenme ihtimali ortadan kalkacaktır.
- Çalışmalara eşlik edecek bina teknik kadrolarının/çalışanlarının; kazı, karot ve kırım işlemlerini yakından takip etmemesi, bu çalışmalar esnasında toz maskesi, koruyucu gözlük ve baret kullanmaları gerekmektedir.
- Çalışmalara eşlik eden teknik kadrolar; uzatma ve diğer elektrikli ekipmanlara temas etmemelidir.
- Çalışmalara eşlik eden teknik kadrolar; elektrikli cihazların bağlanabilmesi için, kaçak akım korumalı hatlardan beslenen uygun prizler seçmelidir.
- **Çalışma sonrasında araştırma çukurları, sıyırma işlemi yapılan kolonlar ve beton numunesi alınan bölgeler tamir edilecektir.**

İŞ SAĞLIĞI GÜVENLIĞI – ÇALIŞANLAR

Çalışanların tamamı aşağıda belirtilen ve kendilerine teslim edilen kişisel koruyucu donanımları disiplinli şekilde kullanmakla yükümlüdür. Söz konusu donanımları uygun şekilde taşımayan/kullanmayanların çalışmalarına izin verilmeyecektir.

- Baret - TS EN 397-A1
- Kulak Tıkacı - TS EN 352-2
- Koruyucu Gözlük - TS EN ISO 16321-3
- Genel Amaçlı İş Eldiveni - TS EN ISO 21420
- İş Ayakkabısı - TS EN ISO 20347
- Yarım Yüz Maskesi - TS EN 140

MESLEKI YETERLILIK

- Sahada gerçekleştirilen yapısal dayanım testlerinin tamamı İnşaat Mühendisleri tarafından ya da gözetiminde (teknikor, teknisyen) gerçekleştirilmektedir.
- Rölove çalışmaları Mimar, Makine Mühendisi ve Elektrik Mühendisleri tarafından gerçekleştirilecektir.

ÇEVRESEL ETKILER

Bina içi gözlem, test ve muayene çalışmalarına ilişkin olası çevresel etkiler ve alınması gereken önlemler, bütün çalışanlara aktarılmıştır. Paydaşlarımızın bu çalışmalara ilişkin dikkat etmeleri gereken konular şunlardır:

- Kırım, karot, spiral işlemi esnasında gürültü, anlık olarak 105dB seviyelerine ulaşabilmektedir. Bu nedenle çevredeki bireylerin konsantrasyonlarının olumsuz yönde etkilenmesi muhtemeldir.
- Kırım ve karot esnasında ortaya çıkan *atıklar (alçı, sıva ve beton parçaları/tozları, demir tozları, çapakları, parçaları)* görevli teknik uzmanlar ve çalışanlar tarafından temizlenecek ve faydalanıcı İdare tarafından gösterilen bölgelerde ayrıştırılarak depolanacaktır. Bu çalışmalara bağlı ciddi miktarda atık çıkması beklenmemektedir.
- Tamir harçlarının kullanımı esnasında çıkan atıklar, üretici tarafından beyan edilen şekilde *(MSDS - Material Safety Data Sheet (Türkçesi Güvenlik Bilgi Formu (GBF) olarak adlandırılmaktadır.))* sınıflandırılacak ve faydalanıcı İdare tarafından gösterilen bölgelere ayrıştırılarak depolanacaktır. Bu çalışmalara bağlı ciddi miktarda atık çıkması beklenmemektedir.
- Projede görevlendirilen teknik uzman ve çalışanların, içecek ve yiyecek tüketimlerine bağlı ortaya çıkacak geri dönüştürülebilir atıkların tamamı, bina içinde tesisi edilen geri dönüşüm kutularına atılır.

SOSYAL ETKILER

Bina içi gözlem, test ve muayene çalışmalarına ilişkin öngörülen sosyal etkiler, İSG planlarında belirtilmiştir. Söz konusu etkiler ve alınması gereken önlemler bütün çalışanlara bildirilmiştir. Bunun yanında paydaşlarımıza aktarmak istediğimiz hususlar şunlardır;

- Bina içinde gerçekleştirilen tahribatlı muayenelerin ve alınan numunelerin; bina dayanımını olumsuz etkilemesi söz konusu değildir.
- Test ve numune temini esnasında; bina kullanıcılarının ve diğer paydaşların gürültü vb. etkilerden olumsuz etkilenmemesi için gerekli planlama konusunda, saha personellerine yardımcı olmanızı rica ediyoruz.
- Teknik uzmanlarımızın ve çalışanlarımızın; çevresel etki ve gürültülerden etkilenmesi olasıdır. Çalışmalar esnasında, kullanıcı ve diğer paydaşların çalışma alanlarına yaklaşmamaları hususunda yapılan uyarıları dikkate alarak destek vermenizi rica ediyoruz.
- Test, muayene çalışmaları sonrası; çalışma sahalarında gerekli düzenlemeler, görevli personeller tarafından gerçekleştirilecektir. Bu konuya ilişkin şikayetlerinizi lütfen bize bildirin.
- Projede görev alan çalışanların hiç bir koşul altında paydaşlar ile tartışmaması hususunda gerekli uyarılar yapılmıştır. Böyle bir durumla karşılaşılması halinde öneri ve şikayet mekanizmaları vasıtasıyla bizlere ulaşmanızı bekliyoruz. (Öneri & şikayet süreci)
- Bütün çalışanlar ayrımcılık, cinsiyet temelli şiddet konusunda bilgilendirilmiş ve proje kapsamında bu tip davranışlara hiçbir şart ve koşul altında izin verilmeyeceği bildirilmiştir. Bu yaklaşıma aykırı hareket edenlerin projede görev almasına ya da görevlerinin devamlılığına müsaade edilmeyecektir.

Yüklenici firmaların uymaları gereken İş sağlığı ve güvenliği kuralları ile genel çevresel sosyal etkiler/önlemler; bu proje özelinde hazırlanan İSG planı içinde açıklanmıştır ve ilgili bütün çalışanlara tebliğ edilmiştir.

T.C. ÇEVRE, ŞEHİRCİLİK VE İKLİM DEĞİŞİKLİĞİ BAKANLIĞI

THE WORLD BANK

TÜMAŞ ATLASCert exergia

ENERJI VERIMLILIĞI

ENERJI PERFORMANSINI ETKILEYEN YAPI VE SISTEMLERIN TETKIKI

Bina enerji performansını ciddi şekilde etkileyen yapı ve sistemler aşağıda sıralanmıştır;

- Bina cephesi, cephe bileşenleri *(kapı, pencere)* ve çatı.
- Sirkülasyon motorları ve pompaları.
- Merkezi cebri havalandırma sistemleri.
- Merkezi iklimlendirme sistemleri (soğutma ve ısıtma).
- Sıcak kullanım suyu üretimi.
- Yerinde sürdürülebilir elektrik üretimi.
- Bina otomasyonu.
- Enerji yönetim ve izleme sistemleri.

ENERJI VERIMLILIĞI

ENERJI PERFORMANSINI ETKILEYEN YAPI VE SISTEMLERIN TETKIKI

- Bina dış cephe bileşenleri, pencere ve kapılar ile çerçeveleri, çatı tipi ve bileşenleri termal yalıtım becerisi çerçevesinde incelenir. Bunun için Mevcut cephe ve çatı yalıtım katmanları ve ısıl geçirgenlik katsayıları belirlenir, termal kameralar ile ısı kaçakları tespit edilir.
- Her bir elektrik motoru kontrol edilir. Verim sınıfı, imal yılı, vibrasyon, çekilen akım ve güç, frekans kontrolü gibi parametreleri/özellikleri belirlenir.
- Her bir merkezi havalandırma ünitesi, performans testlerine tabi tutulur; hava hızı ve basınç değerleri, çekilen toplam güç, motor devri gibi veriler belirlenir.
- Her bir merkezi soğutma ünitesi, performans testlerine tabi tutulur. Anlık enerji tüketimleri, kapalı çevrim sıcaklık, basınç değerleri ve akışkan debisi belirlenir.
- Her bir merkezi kazan ünitesi performans testlerine tabi tutulur. Baca gazı analizi ile yanma verimi belirlenir. Kazan termal kayıpları, anlık tüketim verileri, kapalı çevrim akışkan sıcaklık ve debi verileri tespit edilir.

ENERJI VERIMLILIĞI

ENERJI PERFORMANSINI ETKILEYEN YAPI VE SISTEMLERIN TETKIKI

- İç ortam aydınlatma seviyeleri ölçülür ve standart şartları ile kıyaslanır. Aydınlatma elemanlarının tipleri, güç kaynakları vb. veriler dikkate alınarak aydınlatmanın toplam tüketim içindeki payı belirlenmeye çalışılır.
- İç ortam hava kalitesi verileri; örneklem metodu ile anlık olarak ölçülür. Karbondioksit oranı, sıcaklık ve nem değerleri listelenir. Konfor şartlarına ilişkin standartlar ile kıyaslanır.
- Bina iç ortam sıcaklık değişimleri data logger' lar ile kayıt altına alınır.
- Bina çatı yapısı incelenir. Güneş enerji üretim potansiyeli *(güneş paneli kurulumu)* belirlenir.
- Bina çevresindeki park alanları vb. yapılar incelenir. Çelik konstrüksiyon üzeri güneş paneli kurulum imkanları sorgulanır.
- İklimlendirme, aydınlatma ve motor pompa elemanlarının işletme metotları incelenir. Otomasyon imkanları belirlenir.

ENERJI VERIMLILIĞI

ENERJI PERFORMANSINI ETKILEYEN YAPI VE SISTEMLERIN TETKIKI

- Bina elektrik sistemi, kesintisiz güç kaynakları vb. yapılarla birlikte incelenir. Asgari 24 saat enerji kalite analizi gerçekleştirilir. Bu suretle bina elektrik sistemi, harmonik bozulma seviyelerini içerecek mahiyette gözlenir.
- Bina topraklama sürekliliği sorgulanır. Kaçak akım koruma sistemleri ve etkinliği değerlendirilir. Şalt ekipmanları termal açıdan sorgulanır, bu suretle problemli şalt ekipmanları ve linye hatları belirlenmeye çalışılır.
- Bina enerji izleme sistem kurulum imkanları gözlenir. *(Kolon ve linye hatları dağılımları, pano boyutları ve iç bağlantılar, pano konumları, izleme sistem elemanlarının kablolama imkanları vb.)*
- Bina lokasyonlarının hava koşulları, çevre ve yer altı potansiyel ısı kaynakları sorgulanır. Mevcut tesisat bileşenleri dikkate alınarak ısı pompası vb. imkanlar değerlendirilir.

İŞ SAĞLIĞI GÜVENLIĞI

Bina enerji performans tetkiklerine ilişkin risk analizi gerçekleştirilmiş ve önlemler belirlenerek çalışanlara aktarılmıştır. Bunun yanında paydaşlarımızın bu çalışmalara ilişkin dikkat etmeleri gereken konular şunlardır:

- Elektrik sistemine ve büyük elektrikli cihazlara *(chiller grupları vb.)* test probları yerleştirilecek ve uzun süreli gözlemler yapılacaktır. Söz konusu panolara yetkisiz kişilerin yaklaşması tehlikelidir. Bu nedenle söz konusu panoların bulunduğu alanlar kilitlenmelidir.
- Ölçümlerin tamamına bina teknik personel/personelleri eşlik etmeli; cihazların devreye alınması, devreden çıkarılması, cihaz koruma mahfazalarının açılması vb. uygulamaların bilgisi yetkili bina teknik personelleri gerçekleştirmelidir.
- Bina teknik personelleri; havalandırma üniteleri vb. cihazlara güvenli erişim yolları (çatı üzeri vb.) belirlemeli ve görevli teknik personelleri yönlendirmelidir.
- Bina teknik personelleri; arızalı ve riskli cihazlar konusunda görevli teknik personelleri uyarmalıdır.
- **Bu aşamada tahrip bu muayene vb. durum söz konusu değildir. Teste tabi tutulan cihaz ve sistemlerin, gerçekleştirilen testlerden dolayı zarar görmesi, tahrip olması söz konusu değildir.**

ÇEVRESEL SOSYAL ETKILER

Enerji verimliliği perspektifinde gerçekleştirilen gözlem, test ve muayene çalışmalarına ilişkin olumsuz bir çevresel etki beklenmemektedir. Ancak teknik uzmanların çeceklerinden kaynaklanan ambalaj atıkları geri dönüşüm ilkesi çerçevesinde değerlendirilir. Bunun yanında öngördüğümüz sosyal etkiler aşağıda sıralanmıştır;

- Bina içinde gerçekleştirilen test, muayene çalışmaları ile binaya, bina elektrik ve mekanik sistemlerine, elektrikli cihazlara olumsuz bir etkisi söz konusu değildir.
- Çalışmalar esnasında, kullanıcı ve diğer paydaşların çalışma alanlarına yaklaşmamaları hususunda yapılan uyarılara dikkate alacak, destek vermelerini rica ediyoruz.
- Test, muayene çalışmaları sonrası; çalışma sahalarında herhangi bir iş artığı kalmaması beklenmemelidir. Binalara, oluşabilecek olası kirlilik ve rahatsızlıkların bertaraf edilmesidir.
- Özellikle elektrik kalite analizi ve topraklama ölçümleri esnasında, bina enerjisi kısa süreler için kesilebilir (kaçak akım sistemlerinin devreye girmesi vb.) bu durumdan binada kullanıcıların etkilenmemesi için, bilgilendirme yazılarının asılması sağlayacaktır. Bu yapılacak uyarı ve düzenlemelere uyulması önem arz etmektedir.
- Projede görev alan çalışanlara; hijyen kuralları ve pandemi ile ilgili tüm tedbirlerin alınması hususunda gerekli uyarılar yapılmıştır. Böyle bir durumla karşılaşılması halinde öneri ve şikayet mekanizmasının vasıtasıyla bizlere ulaşmanızı bekliyoruz.
- Bütün çalışanlar ayrı maliki, cinsiyet temelli şiddet konusunda bilgilendirilmiş ve proje kapsamında bu tip davranışlara hiçbir şart ve koşul altında izin verilmeyeceği bildirilmiştir. Bu yaklaşıma aykırı hareket edenlerin projede görev almasına ya da görevlerinin devamlılığına müsaade edilmeyecektir.

ÖNERI ŞIKAYET SISTEMI

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

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

ÖNERI ŞIKAYET SISTEMI

Çevre, Şehircilik ve İklim Değişikliği Bakanlığının (ÇŞİDB) hem telefon hem de web sitesi aracılığıyla erişilebilen bir 'Alo 181' yardım hattı vardır. Bu yardım hattı aynı zamanda çalışanları, çözüm ortaklarını ve daha geniş zümreler için bakanlık düzeyinde bir şikayet mekanizması işlevi görür. ÇŞİDB tarafından sağlanan tüm çevre ve şehir 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 talep lerini iletebilirler.

Çağrı Merkezi	**: Alo 181**
Telefon	**: 0312 586 4858**
E-Mail	**: ygmkadev@csb.gov.tr**
Şikayet Formu	**: https://kadevonerl.csb.gov.tr/onerl.jsp**

ÖNERI ŞIKAYET SISTEMI

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

(Bu işlem için akıllı telefonunuzda QR kod tanıtılması olmalıdır. Bir konu uygulama yoksa, herhangi bir internet tarayıcı adresi çubuğuna şikayet formu ara ve adresini yazabilirsiniz.)

İlgi ve anlayışınız için
teşekkür ederiz!

T.C. ÇEVRE, ŞEHİRCİLİK VE İKLİM DEĞİŞİKLİĞİ BAKANLIĞI
THE WORLD BANK
TÜMAŞ ATLASCert exergia

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

Project Code	WB/CS-DESSUP-01	Building Name	BOĞAZİÇİ UNIVERSITY KANDİLLİ CAMPUS NEW GEOPHYSICS BUILDING
Date	29.04.2024	Start | End Time	10 : 00 | 11 : 10

START TIME	END TIME	ACTIVITY
10 : 00	10 : 03	Meeting kick-off speech
10 : 03	10 : 05	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. • As of 10:05, the entire meeting was recorded in *.mp4 video format and *.m4a audio file format. In addition, meeting messages are recorded in *.txt format.
10 : 05	10 : 08	Information was given about the SREEPB project and its objectives. **Image 7 PRESENTATION FILE SHARED SECTIONS_01**

		  KAMU BİNALARINDA DEPREM DAYANIMI & ENERJİ VERİMLİLİĞİ PROJESİ Finansmanı Dünya Bankası tarafından sağlanmakta, Hazine & Maliye Bakanlığı garantörlüğünde, Çevre, Şehircilik ve İklim Değişikliği Bakanlığı tarafından yürütülmektedir. WORLD BANK GROUP 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; **Boğaziçi Üniversitesi Kandilli Kampüsü'nde** yer alan **YENİ JEOFİZİK BİNASI** (1.100 m²) yapısal güçlendirme ve enerji verimliliği odaklı iyileştirme çalışmaları hakkında bilgi verecektir.
10 : 08	10 : 15	▪ The renovations to be carried out for the structural retrofitting identified as a result of the feasibility study have been explained in detail. (Structural system reinforcement, fine works, etc.)

Image 2 PRESENTATION FILE SHARED SECTIONS_02

		 
10 : 15	10 : 21	▪ The renovations to be carried out for energy efficiency determined as a result of the survey are explained in detail. ▪ Solar Power Plants ▪ Heating Center Renovation ▪ Motor & Pump Replacement ▪ LED Conversion ▪ Automation System ▪ Facade Insulation ▪ Terrace Roof Insulation ▪ Exterior Door Replacement **Image 8 PRESENTATION FILE SHARED SECTIONS_03**

02

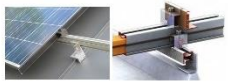
Enerji Verimliliği Odaklı Çalışmalar

Çatı Üzeri Güneş Enerji Santralleri

Kandilli Kampüsü içinde yer alan Yeni Jeofizik Binası çatısına güneş enerji santrali kurulumu gerçekleştirilecektir.

- Yapılan hesaplamalar söz konusu sistemin yılda yaklaşık olarak 44.274,20 kWh/yıl elektrik üretim potansiyeli barındırdığını göstermektedir.

Panel Sayısı: 62 Ad.
Sistem Kapasitesi : 33,79 kWp



02

Enerji Verimliliği Odaklı Çalışmalar

Isıtma ve Soğutma Sistemleri

- Bina özelinde 2 adet duvar tipi 115 kW kapasiteli yoğuşmalı kazan tesisi ve yeni ısı merkezinin kurulması önerilmiştir.

02

Enerji Verimliliği Odaklı Çalışmalar

Dış Kapı ve Pencere Değişimi

- Bina dış cephelerinde bulunan demir kapıların yerine ısı yalıtımlı alüminyum doğramalı ikameleri (4,32m2) ile değişimi ve PVC kapıların 4x16x4 çift camlı ve termal yalıtımlı kapılar ile değişimi sağlanacaktır. (8,64 m2 uygulama alanı)
- Mevcutta bulunan 4x12x4 ölçülerindeki PVC pencere sistemlerinin PVC doğramaya profil ile 4+4 mm kalınlıkta 16 mm ara boşluklu ılk camı güneş ve ısı kontrol kaplamalı çift camlı pencere ünitesi ile değişimi gerçekleştirilecektir.

02

Enerji Verimliliği Odaklı Çalışmalar

Termostatik Vana Tesisi

Proje kapsamına giren tüm yapıların radyator peteklerinin besleme kısmına termostatik vana tesisi önerilmektedir. (71 Vana, 8 Adet yedek)

02

Enerji Verimliliği Odaklı Çalışmalar

Aydınlatma Elemanları LED Dönüşümü

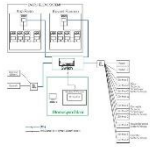
Boğaziçi Üniversitesi Kandilli Kampüsü Yeni Jeofizik Binası'nda, benzer aydınlatma şiddeti ve renk sıcaklığına sahip **LED aydınlatma armatürleri (204 adet)** ile değiştirilecek ve Koridor, WC gibi mahallere **hareket sensörü (26 adet) uygulaması** yapılacaktır.

02

Enerji Verimliliği Odaklı Çalışmalar

Otomasyon Sisterni

Bütün yapıları kapsayacak şekilde; enerji izleme sistemi *(ısıtma sistemi, domestik sıcak su üretimi, sirkülasyon motor &pompaları, güneş enerji santrali)* ve mekanik otomasyon sisteminin, EN ISO 50001 Enerji Yönetim Sistem şartlarına uygun biçimde kurulması ve etkinliğinin sağlanması sureti ile toplam enerji tüketiminde ~%0,29 elektrik, ~%2,49 oranında doğalgaz tasarrufu elde edilebileceği hesaplanmıştır.



		
10 : 21	10 : 24	General statements regarding occupational health and safety plans were made within this framework; ▪ The issues taken into account within the framework of OHS plans were explained item by item. ▪ It was underlined that only authorized individuals will be able to access the areas where renovation works will be carried out, and therefore the access of building users will be restricted in some periods. It was reminded that work plans should be evaluated within this framework. ▪ General OHS rules and especially the measures to be taken for environmental safety were mentioned. ▪ The environmental impacts of all studies and the precautions to be taken were conveyed to all employees and the issues that stakeholders should pay attention to were explained. **Image 9 PRESENTATION FILE SHARED SECTIONS_04** 

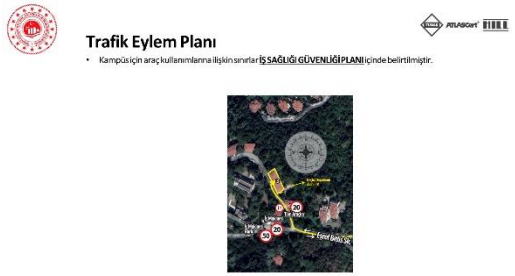
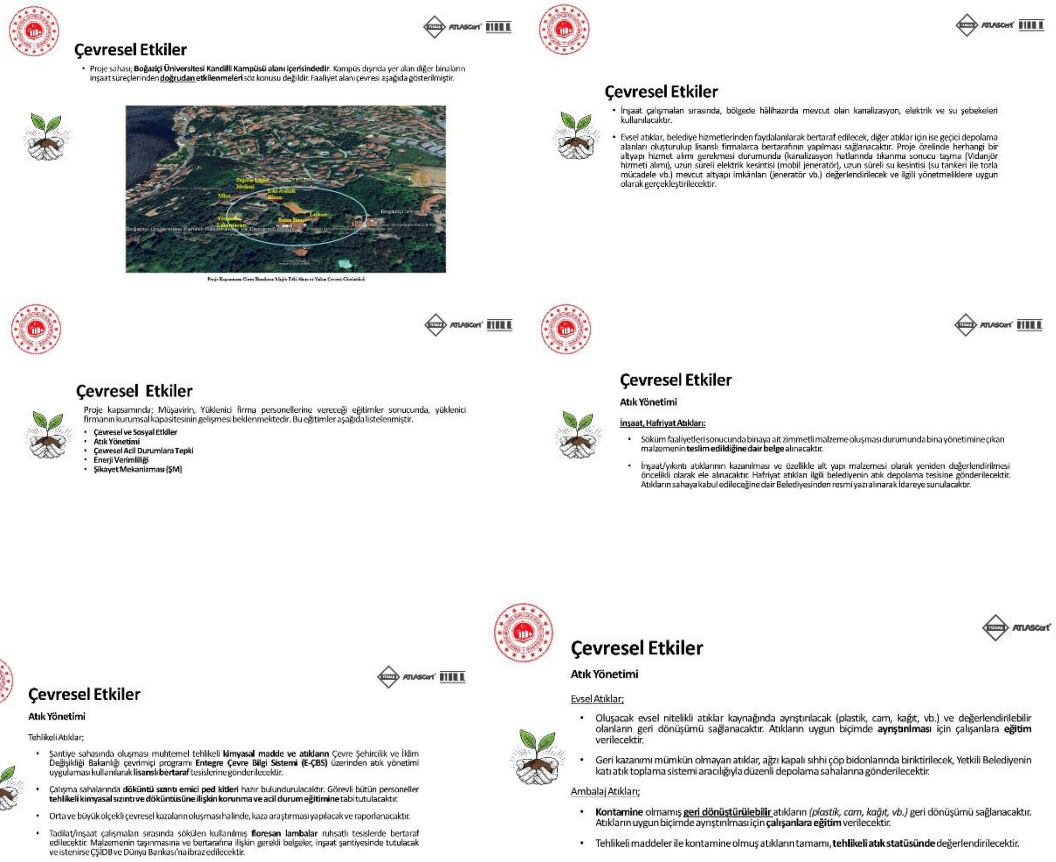
		 
10 : 24	10 : 26	▪ Information was given about the traffic action plan. ▪ Health & Safety Organization was explained. **Image 10 PRESENTATION FILE SHARED SECTIONS_05**  
10 : 26	10 : 29	▪ The environmental impacts of the work to be carried out are explained.

Image 11 PRESENTATION FILE SHARED SECTIONS_06



10 : 29	10 : 32	▪ It has been announced that the works will not adversely affect the building strength. ▪ It has been stated that work areas should not be approached. **Image 7 PRESENTATION FILE SHARED SECTIONS_07** 

10 : 32	10 : 33	▪ OHS rules and general environmental social impacts/measures that contractor companies must comply with; It was stated that it was explained in the OHS plan prepared specifically for this project and communicated to the relevant employees. **Image 8 PRESENTATION FILE SHARED SECTIONS_08** 
10 : 35	10 : 40	Clarifications were made regarding stakeholder engagement, receiving and evaluating suggestions and grievances, and informing the relevant parties about this process (decisions taken regarding suggestions and grievances, additional measures implemented, etc.) ▪ It was explained that suggestions and grievances can be received via digital form, telephone, e-mail addresses and QR codes. ▪ It was stated that suggestions and grievances can be conveyed by specifying the building name with the call line 181. ▪ Printed feedback forms were introduced, information was given about the suggestion and grievance boxes to be established in the building, and the control periods. ▪ It was announced that the grievances about gender-based violence (harassment, abuse, etc.) and gender-based discrimination, which were made within the scope of the project, will also be evaluated within the scope of the grievance resolution mechanism. **Image 9 PRESENTATION FILE SHARED SECTIONS_09** 

10 : 40	11 : 10	Participants' questions were received and answered. CLOSING speech was made and the meeting was ended. 

Questions and Answers

Table 3 QUESTIONS & ANSWERS LIST

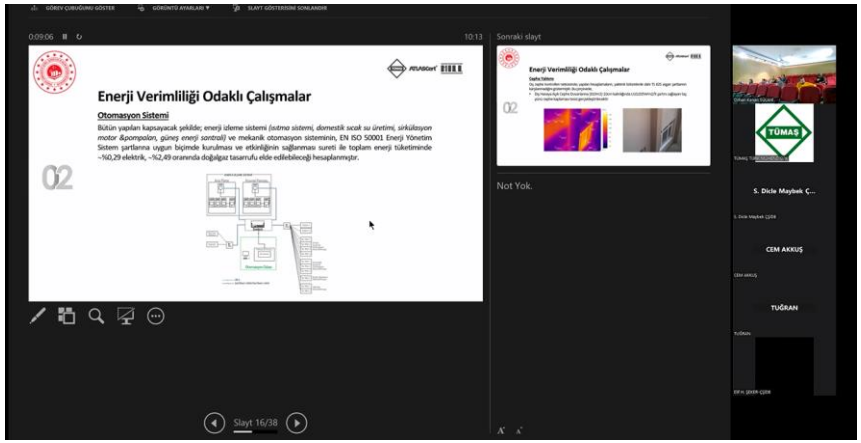
	NAME SURNAME	QUESTION	NAME SURNAME	ANSWER
01	Participant 1	When will the works start?	Orhan Kenan Sülahi	It has been stated that the process will start after the tender phase.
02	Participant 2	The collective improvement of the boiler room has been included in the plan. This building provides common gas supply. If that boiler is renewed, other boiler rooms not included in the project will also be involved. Do you have any other suggestions regarding this?	Hüseyin Tavaslıoğlu	It has been mentioned that there were difficulties due to the inability to accurately determine natural gas consumption for the building, and that other considered alternatives were not financially feasible, suggesting that evaluating it as a new individual boiler system would be appropriate.
03	Participant 3	Is it possible for you to share the OHS plan with us?	Tülün Yıldırım	It was stated that the OHS plan has been completed, and it will be accessible on the website during the day, and the contracting company will also determine an OHS plan accordingly.

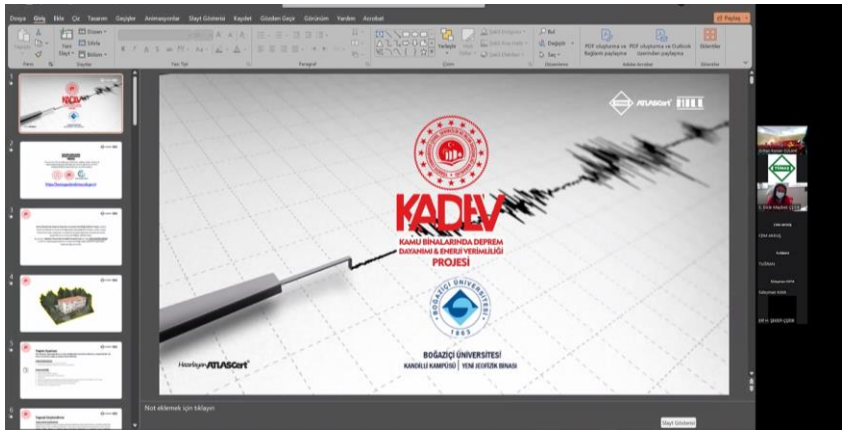
04	Participant 4	Will we, as the dormitory building users, be affected?	Orhan Kenan Sülahi Ganime Güzel	It was noted that there are World Bank standards, and attention will be paid to these. It was mentioned that in the ESMPs disclosed on the buildings, on our website, and on the university's website, they can see the precautions, and the documents were prepared to avoid any problems.
05	Participant 5	How long will the project last after the building is vacated?	Orhan Kenan Sülahi	It was indicated that it will take a total of 6-8 months.
06	Participant 6	Can we see the core drilling results?	Orhan Kenan Sülahi	It was stated that it can be requested from the administration but not directly shared.
07	Participant 7	Does the addition of the boiler room cover a significant area?	Hüseyin Tavaslıoğlu	It has been stated that since the project will be retrofitted, a smaller capacity boiler will be built.
08	Participant 8	Will the shapes of the rooms change?	Orhan Kenan Sülahi	It was stated that there will be no functional changes.

Table 2 MEETING NOTES & GENERAL EVALUATION

- The brochures and appendix presentation files prepared within the framework of the SREEPB project will be sent to all participants via their mobile phones or e-mail addresses.
- Suggestion & grievance form link will be sent to all participants via their mobile phones or e-mail addresses.

Table 3 **MEETING VISUALS**





Participant List and Contact Information

Table 4 Participant List and Contact Information

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.

CONSULTANCY COMPANY PARTICIPANTS

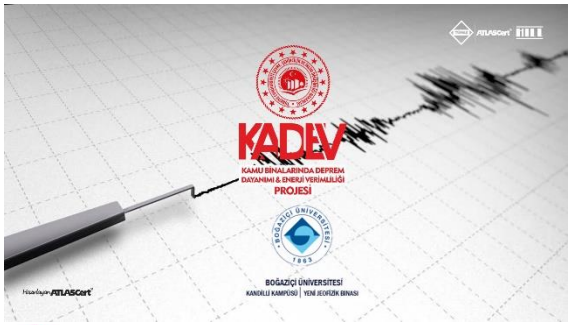
1) Fulya Gülbahar (Social Expert)
2) Hüseyin Tavaslıoğlu (Energy Systems Engineer)
3) Orhan Kenan Sülahi (Energy Systems Engineer)
4) Cem Akkuş (Occupational Health and Safety Specialist)
5) Mehmet Tuğran Atay (Environmental Expert)

PROJECT IMPLEMENTATION UNIT PARTICIPANTS

1) Ganime Güzel (Environmental Expert)
2) Semahat Dicle Maybek (Social Expert)
3) Tülün Yıldırım (OHS Specialist)
4) Cuma Baz (Occupational Health and Safety Consultant)
5) Elif Şeker (Sociologist)

Explanation: The stakeholder engagement meeting was held on the digital platform (https://meet.google.com/qhy-mqzb-ers) Video recording was made with the information and approval of the participants.

Stakeholder Engagement Meeting Presentation



KAMU BİNALARINDA DEPREM DAYANIMI & ENERJİ VERİMLİLİĞİ PROJESİ

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

WORLD BANK GROUP

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; **Boğaziçi Üniversitesi Kandilli Kampüsü'nde** yer alan **YENİ JEOFİZİK BİNASI** (1.100 m²) yapısal güçlendirme ve enerji verimliliği odaklı iyileştirme çalışmaları hakkında bilgi verecektir.

Yapım Aşaması

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

Yapısal Güçlendirme

- Mevcut taşıyıcı sistem güçlendirmesi, elektrik sistemi imalatları,
- Yapısal güçlendirme faaliyetleri sebebiyle düşeme, tavan, duvar, kaplama onarımları

Enerji Verimliliği

- Cephe ve çatı temel yalıtımı
- Binek taşıyıcı sistem motor/kompresör ölçümleri
- Yalıtım ve ısıtıcı elemanları, aydınlatmaların enerji yenilenmesi
- VRV dönüşümü
- Aydınlatma elemanında (ışıkkaynağı) mevcut bağlantıda gerçekleşecek ihtiyaç, elektrik tesisatı güncellemesi (hepsi ayrıntılı değerlendirilecektir) ihtiyaç olduğu
- Üç fazlı mevcut sistemin güç ve aydınlatma (tek fazlı) mevcut beslemeleri ayrılarak tespit edilecek)
- Ünitelerde ve otomasyon sistemi ihtiyacı (mevcut elektrik sistemine entegre edilecek)
- Mekanik tesisatın onarımı ve enerji bilgisi değerlendirmesi

Yapısal Güçlendirme

Taşıtıcı Sistem Güçlendirme

Güçlendirme perdeleri ve kolon mantoları yapılacak akslardaki duvarlar işaretlenerek en üst kattan başlanacak şekilde, balyoz ve kırıcı marifetiyle yıkılacaktır. Duvar yıkımı öncesi zarar görme sirki barındıran; kapı, pencere, vitrifiye, tezgâh, elektrik ve mekanik tesisat ekipmanları söküleceklerdir ve Faydalanıcı kurum tarafından gösterilen alanlarda geçici muhafaza edilecektir.

Yapısal Güçlendirme

Taşıtıcı Sistem Güçlendirme

Sökümden sonra güçlendirme elemanlarının temellere bağlanması amacıyla perde ve kolon mantosu çevresinin açılması için subasman betonunun kırılması ve temel içi dolgusunun kazılması gerekmektedir. Bu kırım ve kazı işlemleri el ile (kırıcı ve balyoz yardımıyla) ve/veya yapı içerisine 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 içerisine sıkılması ve önceden hazırlanan ankraj demirinin delik içerisine sokulması şeklinde yapılır.

Yapısal Güçlendirme

Taşıtıcı 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 kuş ağzı da denilen kalıptan imal edilen huniler içerisinden kalıp içerisine "kendiliğinden yerleşen beton" (ince agregalı, süper akışkanlaştırıcı katkılı beton) dökülür.

Yapısal Güçlendirme

İnce İşler

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

01

Enerji Verimliliği Odaklı Çalışmalar

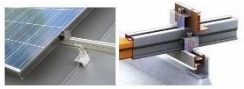
Çatı Üzeri Güneş Enerji Santralleri

Kandilli Kampüsü içinde yer alan Yeni Jeofizik Binası çatısına güneş enerji santrali kurulumu gerçekleştirilecektir.

- Yapılan hesaplamalar söz konusu sistemin yılda yaklaşık olarak 44.274,20 kWh/yıl elektrik üretim potansiyeli barındırdığını göstermektedir.

Panel Sayısı: 92 Ad.
Sistem Kapasitesi: 33,75 kWp

02



Enerji Verimliliği Odaklı Çalışmalar

Isıtma ve Soğutma Sistemleri

- Bina özelinde 2 adet duvar tipi 115 kW kapasiteli yoğuşmalı kazan tesisi ve yeni ısı merkezinin kurulması önerilmiştir.

02

Enerji Verimliliği Odaklı Çalışmalar

Dış Kapı ve Pencere Değişimi

- Bina dış cephelerinde bulunan demir kapıların yerine ısı yalıtımlı alüminyum doğramalı ikameleri (4,32m2) ile değişimi ve PVC kapıların 4x16x4 çift camlı ve termal yalıtımlı kapılar ile değişimi sağlanacaktır. (8,64 m2 uygulama alanı)
- Mevcutta bulunan 4x12x4 ölçülerindeki PVC pencere sistemlerinin PVC doğramaya profil ile 4+4 mm kalınlıkta 16 mm ara boşluklu ilk camı güneş ve ısı kontrol kaplamalı çift camlı pencere ünitesi ile değişimi gerçekleştirilecektir.

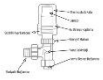
02

Enerji Verimliliği Odaklı Çalışmalar

Termostatik Vana Tesisi

Proje kapsamına giren tüm yapıların radyatör peteklerinin besleme kısmına termostatik vana tesisi önerilmektedir. (71 Vana, 8 Adet yedek)

02



Enerji Verimliliği Odaklı Çalışmalar

Aydınlatma Elemanları LED Dönüşümü

Boğaziçi Üniversitesi Kandilli Kampüsü Yeni Jeofizik Binası'nda, benzer aydınlatma şiddeti ve renk sıcaklığına sahip **LED aydınlatma armatürleri (204 adet)** ile değiştirilecek ve Koridor, WC gibi mahallere **hareket sensörü (26 adet) uygulaması** yapılacaktır.

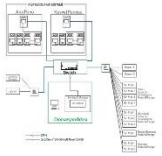
02

Enerji Verimliliği Odaklı Çalışmalar

Otomasyon Sistemi

Bütün yapıları kapsayacak şekilde; enerji izleme sistemi *(ısıtma sistemi, domestik sıcak su üretimi, sirkülasyon motor &pompaları, güneş enerji santrali)* ve mekanik otomasyon sisteminin, EN ISO 50001 Enerji Yönetim Sistem şartlarına uygun biçimde kurulması ve etkinliğinin sağlanması sureti ile toplam enerji tüketiminde ~%0,29 elektrik, ~%2,49 oranında doğalgaz tasarrufu elde edilebileceği hesaplanmıştır.

02



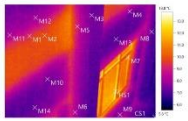
Enerji Verimliliği Odaklı Çalışmalar

Cephe Yalıtımı

Dış cephe kontrolleri neticesinde; yapıların hesaplamaların, yalıtımlı bölümlerde dahi TS 825 asgari şartlarının karşılanmadığını göstermiştir. Bu çerçevede;

- Dış Havaya Açık Cephe Duvarlarına (810m2) 10cm kalınlığında Us0,035Wm2/K şartını sağlayan taş yünü cephe kaplaması tesisi gerçekleştirilecektir

02



Enerji Verimliliği Odaklı Çalışmalar

Yapılan hesaplamalar neticesinde Boğaziçi Üniversitesi Kandilli Kampüsü Yeni Jeofizik Binası özelinde belirlenen önlem senaryolarının hayata geçirilmesi ile toplam enerji tüketiminde 61,48% oranında tasarruf elde edilebilecek, yaklaşık 115,43 **ton/yıl sera gaz emisyonu engellenebilecektir.** Söz konusu renovasyonlar ve yenilenen sistemlerin EN ISO 50001 Enerji Yönetim Sistem şartlarına uygun biçimde işletilmesi ile yıllık **77.325,01 kWh elektrik, 373.053,37 kWh doğalgaz** tasarrufu sağlanabilecektir. Söz konusu tasarrufun maddi boyutu yaklaşık 755.377,27₺/yıl seviyesindedir.

02

T.C. ÇEVRE, ŞEHİRCİLİK VE İKLİM DEĞİŞİKLİĞİ BAKANLIĞI

THE WORLD BANK

TÜMAŞ ATLASCert exergia

İş Sağlığı & Güvenliği

Yapım sürecine ilişkin, iş sağlığı ve güvenliği planları hazırlanmıştır. **Yüklenici firmanın;**

- Tarafımızca hazırlanan İŞ SAĞLIĞI GÜVENLİĞİ PLANI doğrultusunda, sorumlu olduğu bütün çalışmaları kapsar mahiyette İŞ SAĞLIĞI GÜVENLİĞİ PLANI ve Risk Analizini hazırlaması ve Müşavir onayına sunması zaruridir. Ancak söz konusu plan, analizlerin uygun görülmesi sonrasında çalışmalar başlayacaktır.

Paydaşlarımızın bu çalışmalara ilişkin dikkat etmeleri gereken konular şunlardır:

- Mobil vinç, kompresör vb. iş makinelerinin tamamının periyodik muayene raporlarının temin edilmiş olması ve makineler içinde hazır bulundurulması zaruridir. Söz konusu makineler, yetkili operatörler tarafından kullanılabilir. Operatörler yetki belgelerini hazır bulundurmalı ve saha kontrolleri, denetimleri esnasında yetkili İSG uzmanlarının talepleri doğrultusunda beyan edebilmelidir.

İş Sağlığı Güvenliği

- Sahada kullanılan her türlü elektrikli cihaz/ekipmanın elektrik açıdan güvenli olduğunu gösterir **PAT testleri** yapılmış olmalıdır. Söz konusu ekipmanların tamamında cihaz üzerlerinde uygunluğu gösterir etiketler yer almalıdır.
- Ancak uygun **Mesleki Yeterlilik Belgesine** sahip çalışanların sahaya girmelerine izin verilecektir.
- Bütün çalışanların görevleri çerçevesinde uygun **kişisel koruyucu ekipmanlara** sahip olmalı ve etkin olarak kullanmalıdır.
- Bütün çalışanların, **«Temel İSG Eğitimini», «Risk Analizi Eğitimini»** almış olması zaruridir.
- Yüksekte çalışacak personellerin **«Yüksekte Çalışma Eğitimi»** almış olması zaruridir.
- Bütün çalışanların **«EKED - Etiketle Kilitle Emniyete Al Dene Eğitimini»** almış olması zaruridir.
- Çalışanların «İŞ SAĞLIĞI GÜVENLİĞİ PLANI» içinde belirtilen diğer ilgili eğitimleri çalışma öncesinde alması zaruridir.
- İş iskelelerinin **TS EN 12811-1** standart şartlarını karşılaması esastır. Söz konusu iş iskelelerinde çalışacak bütün personellerin yüksekte çalışma eğitimi almış olmaları, paraşüt tipi emniyet kemeri ve düşme engelleyici ekipmanları kullanmaları zaruridir.
- Kampüs içinde İŞ SAĞLIĞI GÜVENLİĞİ PLANI içinde belirtilen **«TRAFİK EYLEM PLANINA»** uygun hareket edilmelidir.
- Yüklenici firma; bu çalışma sahası özelinde acil durum eylem planları geliştirmeli ve bütün çalışanlarını kapsar mahiyette tatbikatlar gerçekleştirmelidir.

İş Sağlığı Güvenliği

Çalışanların tamamı İŞ SAĞLIĞI GÜVENLİĞİ PLANI içinde belirtilen kişisel koruyucu donanımları disiplinli şekilde kullanmakla yükümlüdür. Söz konusu donanımları uygun şekilde taşımayan/kullanmayanların çalışmalarına izin verilmeyecektir.

Örnek kişisel koruyucu donanımlar;

- Baret - TS EN 397+A1
- Kulak Tıkacı - TS EN 352-2
- Koruyucu Gözlük - TS EN ISO 16321-3
- Genel Amaçlı İş Eldiveni - TS EN ISO 21420
- İş Ayakkabısı - TS EN ISO 20347
- Yarım Yüz Maskesi - TS EN 140
- Paraşüt Tipi Emniyet Kemeri - TS EN 361 (Sadece yüksekte çalışan personeller)

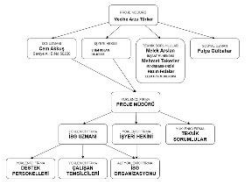
İş Sağlığı Güvenliği

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

Trafik Eylem Planı

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

Sağlık & Güvenlik Organizasyonu



Çevresel Etkiler

- Proje sahası; **Boğaziçi Üniversitesi Kandilli Kampüsü alanı içerisindedir**. Kampüs dışında yer alan diğer binaların inşaat süreçlerinden **doğrudan etkilenmeleri** söz konusu değildir. Faaliyet alanı çevresi aşağıda gösterilmiştir.

Proje Kapsamına Giren Binaların Müşhir Etki Alanı ve Yakın Çevresi Görünümü

Çevresel Etkiler

- İnşaat çalışmaları sırasında, bölgede hâlihazırda mevcut olan kanalizasyon, elektrik ve su şebekeleri kullanılacaktır.
- Evsel atıklar, belediye hizmetlerinden faydalanılarak bertaraf edilecek, diğer atıklar için ise geçici depolama alanları oluşturulup lisanslı firmalarca bertarafının yapılması sağlanacaktır. Proje özelinde herhangi bir altyapı hizmet alımı gerekmesi durumunda (kanalizasyon hatlarında tıkanma sonucu taşma (Vidanjör hizmeti alımı), uzun süreli elektrik kesintisi (mobil jeneratör), uzun süreli su kesintisi (su tankeri ile tozla mücadele vb.) mevcut altyapı imkânları (jeneratör vb.) değerlendirilecek ve ilgili yönetmeliklere uygun olarak gerçekleştirilecektir.

Çevresel Etkiler

Proje kapsamında; Müşavirin, Yüklenici firma personellerine vereceği eğitimler sonucunda, yüklenici firmanın kurumsal kapasitesinin gelişmesi beklenmektedir. Bu eğitimler aşağıda listelenmiştir.

- **Çevresel ve Sosyal Etkiler**
- **Atık Yönetimi**
- **Çevresel Acil Durumlara Tepki**
- **Enerji Verimliliği**
- **Şikayet Mekanizması (ŞM)**

T.C. ÇEVRE, ŞEHİRCİLİK VE İKLİM DEĞİŞİKLİĞİ BAKANLIĞI

THE WORLD BANK

TÜMAŞ ATLAScert exergia

Çevresel Etkiler

Atık Yönetimi

İnşaat, Hafriyat Atıkları:

- Sökülen faaliyetleri sonucunda binaya ait zimmetli malzeme oluşması durumunda bina yönetimine çıkan malzemenin **teslim edildiğine dair belge** alınacaktır.
- İnşaat/yıkıntı 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 edileceğine dair Belediyesinden resmi yazı alınarak İdareye sunulacaktır.

Çevresel Etkiler

Atık Yönetimi

Tehlikeli Atıklar;

Tehlikeli atıkların yönetimi, **Atık Yönetimi Yönetmeliği** uyarınca gerçekleştirilecektir.

- Proje sahasında tehlikeli atıkların geçici olarak depolanması durumunda atıklar; **sağlam, sızdırmaz, emniyetli ve uluslararası kabul görmüş standartlara uygun konteynerlerde ve proje alanı içerisinde muhafaza edilecek,** konteynerlerin üzerinde **tehlikeli atık ibaresine** yer verilecek ve depolanan maddenin **atık kodu, miktarı, içeriği, özellikleri, koruma koşulları ve depolama tarihi** konteynerler üzerinde belirtilecektir. Tehlikeli maddeler **azami 6** ay geçici olarak depolanabilir. *(Geçici depolama alanları yüklenici firma tarafından mevzuata uygun olarak Üniversite İdaresinden izin alınarak belirlenecek ve müşavire söz konusu alanlar bildirilecektir.)*
- Zararlı maddelerin saklandığı konteynerler ve atık yağlar toprağa dökülme ve sızıntıyı önlemek için **sızdırmaz beton alanlara** yerleştirilecektir.
- Zehirli içeriğe sahip boyalar, eritici madde (solvent) ya da kurşun bazlı kimyasallar **kullanılmayacaktır.**

Çevresel Etkiler

Atık Yönetimi

Tehlikeli Atıklar;

- Şantiye sahasında oluşması muhtemel tehlikeli **kimyasal madde ve atıkların** Çevre Şehircilik ve İklim Değişikliği Bakanlığı çevrimiçi programı **Entegre Çevre Bilgi Sistemi (E-ÇBS)** üzerinden atık yönetimi uygulaması kullanılarak **lisanslı bertaraf** tesislerine gönderilecektir.
- Çalışma sahalarında **döküntü sızıntı emici ped ketleri** hazır bulundurulacaktır. Görevli bütün personeller **tehlikeli kimyasal sızıntı ve döküntüsüne ilişkin korunma ve acil durum eğitimine** tabi tutulacaktır.
- Orta ve büyük ölçekli çevresel kazaların oluşması halinde, kaza araştırması yapılacak ve raporlanacaktır.
- Tadilat/inşaat çalışmaları sırasında sökülen kullanılmış **floresan lambalar** ruhsatlı tesislerde bertaraf edilecektir. Malzemenin taşınmasına ve bertarafına ilişkin gerekli belgeler, inşaat şantiyesinde tutulacak ve istenirse ÇŞİDB ve Dünya Bankası'na ibraz edilecektir.

Çevresel Etkiler

Atık Yönetimi

Evsel Atıklar;

- Oluşacak evsel nitelikli atıklar kaynağında ayrıştırılacak (plastik, cam, kağıt, vb.) ve değerlendirilebilir olanların geri dönüşümü sağlanacaktır. Atıkların uygun biçimde **ayrıştırılması** için çalışanlara **eğitim** verilecektir.
- Geri kazanımı mümkün olmayan atıklar, ağzı kapalı sıhhi çöp bidonlarında biriktirilecek, Yetkili Belediyenin katı atık toplama sistemi aracılığıyla düzenli depolama sahalarına gönderilecektir.

Ambalaj Atıkları;

- **Kontamine** olmamış **geri dönüştürülebilir** atıkların *(plastik, cam, kağıt, vb.)* geri dönüşümü sağlanacaktır. Atıkların uygun biçimde ayrıştırılması için **çalışanlara eğitim** verilecektir.
- Tehlikeli maddeler ile kontamine olmuş atıkların tamamı, **tehlikeli atık statüsünde** değerlendirilecektir.

Sosyal Etkiler

Paydaşlarımıza aktarmak istediğimiz hususlar şunlardır;

- Söz konusu çalışmaların, bina dayanımını olumsuz etkilemesi söz konusu değildir.
- Güçlendirme ve renovasyon çalışmalarınsırasında, kullanıcı ve diğer paydaşların çalışma sahalarına yaklaşma yolları hususunda yapılan uyarılara dikkate alarak destek vermenizi rica ediyoruz.
- Güçlendirme ve Renovasyon çalışmaları sonrası; çalışma sahalarında gerekli düzenlemeler, görevli personeller tarafından gerçekleştirilecektir. Bu konuya ilişkin şikayetlerinizi lütfen bize bildirin.
- Projede görev alan çalışanların, hiç bir koşul altında paydaşlar ile tartışmaması hususunda gerekli uyarılar yapılacaktır. Böyle bir durumla karşılaşılması halinde öneri ve şikayet mekanizmaları vasıtasıyla bizlere ulaşmanızı 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 yaklaşıma aykırı hareket edenlerin, projede görev almasına ya da görevlerinin devamlılığına müsaade edilmeyecektir.

Sosyal Etkiler

Proje kapsamında, Müşavirin Yüklenici personeline vereceği eğitimler sonucunda yüklenici firmanın kurumsal kapasitesinin gelişmesi beklenmektedir. Bu eğitimler aşağıda listelenmiştir.

- Çevresel ve Sosyal Etkiler
- Paydaş Katılım/Bilgilendirme Faaliyetleri
- Şikayet Mekanizması (ŞM)
- Cinsiyet Eşitliği / Cinsiyet Temelli Şiddet/Cinsel Sömürü/Cinsel Saldırı/Cinsel Taciz
- Davranış Kuralları
- Tarihi Mirasın Korunması

Yüklenici firmaların uymaları gereken iş sağlığı ve güvenliği kuralları ile genel çevresel sosyal etkiler/önlemler; bu proje özelinde hazırlanan İSG PLANI ve ÇEVRESEL ve SOSYAL YÖNETİM PLANI içinde açıklanmıştır.

Öneri Şikayet Sistemi

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

(Bu eylem için akıllı telefonunuzda QR kod uygulaması olmalıdır. Söz konusu uygulama yoksa, herhangi bir internet tarayıcısının çubuğuna şikayet formu orijin adresini yazabilirsiniz.)

Öneri Şikayet Sistemi

Öneri ve şikayetlerinizin; içeriği ne olursa olsun, nasıl kaleme alınırsa alınsın bizim için değerli olduğunu bilmenizi istiyoruz. Genel etik ilkelere uygun ileteceğiniz öneri ve şikayetlerinizden dolayı olumsuz herhangi bir durumla karşılaşmayacağınızı, eleştirilmeyeceğinizi garanti ediyoruz. Öneri ve şikayetlerinizi hangi yöntemle iletirseniz *iletin (şikayet kutuları), mail , internet formları, yüz yüze sözlü ya da telefon)* hepsi aynı şekilde değerlendirilir, tamamı gizli bilgi statüsündedir, tarafsız bir kurul tarafından incelenir.

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

İlgi ve anlayışınız için teşekkür ederiz!

Öneri Şikayet Sistemi

Çevre, Şehircilik ve İklim Değişikliği Bakanlığı'nın (ÇŞİDB) hem telefon hem de web sitesi aracılığıyla erişilebilen bir 'Alo181' yardım hattı vardır. Bu yardım hattı aynı zamanda çalışanları, çözüm ortakları ve daha geniş zümreler için bakanlık düzeyinde bir şikâyet mekanizması işlevi görür. ÇŞİDB tarafından sağlanan tüm çevre ve şehir 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.

Çağrı Merkezi	**: Alo 181**
Telefon	**: 0312 586 4858**
E-Mail	**: yigmkadev@csb.gov.tr**
Şikayet Formu	**: https://kadevoneri.csb.gov.tr/oneri.jsp**

T.C. ÇEVRE, ŞEHİRCİLİK VE İKLİM DEĞİŞİKLİĞİ BAKANLIĞI

THE WORLD BANK

TÜMAŞ ATLASCert exergia