

# Environmental and Social Safeguard Due Diligence Report

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## Regional: BANPU Electric Tuktuks and Battery Project

Prepared by IBIS Environmental and Social Asia Consulting Pte. Ltd. for Banpu NEXT Co., Ltd. for the Asian Development Bank (ADB).

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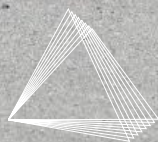
TAXI

# FINAL REPORT

Environmental and Social Due Diligence (ESDD) for Banpu Project

Thailand and China

Banpu NEXT Co., Ltd. and the Asian Development Bank



IBIS

# I FINAL REPORT

Environmental and Social Due Diligence (ESDD) for Banpu Project



**For and on behalf of:** Banpu NEXT Co., Ltd. and the Asian Development Bank

**Project Location:** Thailand and China

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# EXECUTIVE SUMMARY

## Introduction

Asian Development Bank (“ADB”) is considering a potential non-sovereign operation loan to the proposed project, Banpu Electric Tuktuks and Electric Battery Project (the “Project”) for BANPU Public Company Limited (BANPU) (“Banpu”, “the Company” or “the Client”), to finance/refinance in green businesses and projects under Banpu’s subsidiary, Banpu Next BPN (“BPN”). Specifically, the loan is intended to be used in financing subprojects under BPN as follows (“the subprojects”):

- Financing of purchase of 1,500 electric three-wheelers (e-tuktuks) to be operated by Urban Mobility Tech Co., Ltd. (“UMT”) under the brand “MuvMi” and financing/refinancing working capital of UMT. (BPN has 39.3% shareholding of UMT);
- Financing Banpu Next Green Leasing Co., Ltd.’s (wholly owned subsidiary of BPN) for the purchasing of materials and installation of e-tuktuk charging stations to support e-tuktuks expansion; and
- Providing financing to the electric battery company Durapower Holdings Pte. Ltd (Durapower Holdings) with existing battery manufacturing facility in China, which is 100% owned by Suzhou Durapower Technology Co., Ltd. (Suzhou Durapower) (BPN has 65% shareholding of Durapower Holdings).

ADB has commissioned IBIS Environmental and Social Consulting Asia Pte. Ltd. (“IBIS”) to conduct an Environmental & Social Due Diligence review (“ESDD” or “the Assessment”) to assess whether:

- The Company’s environmental and social management system (ESMS) is sufficient to identify, screen, categorise, manage, address, monitor and report all relevant E&S risks and impacts of its business and operations that will receive ADB finance; and
- The proposed activities to be financed using ADB proceeds (i.e. e-tuktuks and e-tuktuks charging stations in Thailand, and electric battery manufacturing in China) comply with the Applicable Standards.

## Objectives

The overarching objectives of the ESDD includes the following:

- (i) Conduct an audit of the ESMS of the Company and its implementation at corporate and in relevant subsidiary businesses (i.e. BPN, UMT/MuvMi Hero and Durapower) that will receive ADB finance;
- (ii) Conduct an environmental and social compliance audit (ESCA) on the Project and relevant subprojects, including all studies, reports and activities undertaken through document reviews,

site visits for the e-tuktuk and battery manufacturing infrastructure and facilities, and consultations with relevant internal and external stakeholders;

- (iii) Conduct an E&S desktop review of the electric battery manufacturing expansion at the existing facility in China (including a site visit to this existing facility in China);
- (iv) Assess the gaps against the Applicable Standards and prepare the corresponding timebound corrective action plan (CAP) to ensure that environment, health, safety, involuntary resettlement, distinct and vulnerable indigenous peoples, labor, and other social issues will be addressed adequately.

### Applicable Standards

The scope of work of the Assessment was undertaken in line with the Applicable Standards as follows:

- Relevant and applicable national E&S laws and regulations in Thailand and China fully in force at the time of authorisation of the Proposal relating to the relevant operations;
- Relevant international conventions and protocols relating to environmental and social issues, as fully transposed into national legislation;
- ADB Safeguard Policy Statement (SPS, 2009), including Safeguard Requirements (SR) 1 on Environment, SR2 on Involuntary Resettlement (IR), and SR 3 on Indigenous Peoples (IP);
- ADB's Social Protection Strategy (2001);
- ADB's Gender and Development Policy (1998);
- ADB's Access to Information Policy (2018);
- Applicable World Bank Group (WBG) Environmental, Health and Safety (EHS) Guidelines (including general and applicable industry-specific guidelines); and
- The International Labor Organization (ILO) conventions covering core labor standards and the basic terms and condition of employment.

### Site Visits

The details of the site visits are presented in *Table E-1* below.

**Table E-1 Site Visits**

DATE	LOCATION	AGENDA
<b>Thailand Site Visit (13 – 14 July 2023)</b>		
13 July 2023	<u>Banpu office</u> Thanapoom Tower, 1550 New Petchburi Road, Makkasan, Ratchathewi, Bangkok 10400, Thailand	<ul style="list-style-type: none"> <li>• Management interview with representatives from the Banpu Global Corporate Sustainability team, HSEC team, Human Resources department and Procurement department</li> <li>• Management interview with representative from BPN</li> </ul>

DATE	LOCATION	AGENDA
14 July 2023	<p>UMT/MuvMi Hero office (including the training centre, maintenance workshop and a sample of e-tuktuk charging stations)</p> <p>33 Pradiphat 17 Alley, Phaya Thai, Bangkok 10400, Thailand;</p> <p>Vibhavadi Rangsit, Samsen Nai, Phaya Thai, Bangkok 10400, Thailand</p>	<ul style="list-style-type: none"> <li>• Management interview with the UMT founders and management team, including representatives from the health and safety department, Human Resources department and Procurement department</li> <li>• Site walkaround of the UMT/MuvMi Hero training centre (including research and development (R&amp;D) activities), e-tuktuk maintenance workshop (co-located with the showroom of Thai Rung Union Car PCL) and e-tuktuk charging stations (located within carparks of buildings).</li> </ul>
<b>China Site Visit (20 July 2023)</b>		
20 July 2023	<p>Suzhou Durapower manufacturing facility</p> <p>No.12 Fuhua Rd., Changshu Economic Develop Zone Changshu, Jiangsu, 215513 China</p>	<ul style="list-style-type: none"> <li>• Management interview with the Suzhou Durapower site team, including representatives from the health and safety department, Human Resources department and Procurement department</li> <li>• Site walkaround of the existing Suzhou Durapower battery manufacturing facility</li> </ul>

### Transaction Categorisation

As part of the Audit, there is a need to provide an opinion on the categorisation of the proposed transaction, based on the ADB SPS. Following the documentation review, visits to sites and consultation with relevant stakeholders, the proposed transaction with Project Banpu is classified as follows:

**Table E-2 Proposed Transaction Categorisation**

SAFEGUARD REQUIREMENT	CATEGORY	RATIONALE
Environment	B	Based on the type, nature and context of the operations it is considered that Category B is appropriate at this time. When considered in aggregate, the operations of the e-tuktuks and battery manufacturing facility related to the use of proceeds do have an aggregated environmental impact that is particularly associated with environmental management (namely hazardous waste management), occupational health & safety (OHS), and community health & safety (H&S).
Involuntary Resettlement	C	Based on the type, nature and context of the operations and potential developments, it is considered that Category C is appropriate at this time. The operations of the e-tuktuks, e-tuktuk charging stations and battery manufacturing facility related to the use of proceeds are mainly established in commercial buildings or industrial zones. Land expropriation and involuntary resettlement are indicated not to have been issues to-date in the operations or anticipated not to be an issue relating to the use of



SAFEGUARD REQUIREMENT	CATEGORY	RATIONALE
		proceeds.
Indigenous Peoples	C	Based on the type and nature of operations, it is considered that Category C is appropriate at this time. Given the nature of the Company's operations (in relation to the planned use of proceeds), these inevitably are established in areas where there are unlikely to be indigenous peoples, or direct impacts on indigenous peoples, or anticipated to be an issue relating to the use of proceeds.

### Corporate ESMS Audit

There are comprehensive E&S policies at the Banpu corporate level that cover a broad range of topics (i.e. Environmental, Human Rights, Occupational Health and Safety, Community Engagement, Waste Management, Resettlement Management, Biodiversity, Indigenous Peoples etc.). Further, BPN has developed more detailed work procedures for additional guidance on E&S management that are specific to the business activities of BPN (covering renewable energy development as well as E-mobility business). There is a defined global corporate sustainability organisational structure at the Banpu corporate level that supports in ensuring that all of Banpu's subsidiaries (where Banpu has management control) adhere to Banpu's policies and procedures.

It should be noted that Banpu's policies generally apply to Banpu and its subsidiaries where Banpu has management control (i.e. more than 50% shareholding). In the context of the planned use of proceeds:

- Banpu currently does not require UMT to adhere to Banpu's policies since Banpu has less than 50% shareholding in UMT.
- Banpu has just recently become a majority shareholder in Durapower Holdings so an integration process is still to come to ensure that Durapower Holdings (and the manufacturing facility owned by Suzhou Durapower) aligns with Banpu's policies.
- There are no currently structured reporting requirements on E&S performance between UMT/Suzhou Durapower and Banpu.

Currently during the investment screening process, E&S risks are not assessed for projects that are deemed to be "green" (i.e. related to renewable energy, replacement of fossil fuels, whilst noting there is no formal definition for "green" projects). For Banpu's investment into both Durapower and MuvMi, E&S aspects were not considered during the investment screening process.

### Site Compliance Audits

In relation to the three site compliance audits, IBIS identified E&S compliance risks (against the respective host-country requirements and also the wider set of E&S Safeguards). Measures to address these gaps have been provided in the CAP. Main E&S risks for each are provided below:

- E&S screening procedures/risk register;
- Hazardous materials and waste management;
- Stakeholder engagement and external communication procedures;
- Occupational and community health and safety;
- Labour and working conditions including working hours and overtime.

In general, there needs to be monitoring and reporting procedures between the corporate and site level relevant to the planned use of proceeds, and more activity-specific work procedures at the subsidiary level.

A CAP has been prepared to assist in addressing the key gaps identified and moving towards alignment with the E&S Safeguards.

**Table E-3 Corrective Action Plan (CAP)**

NO.	ASPECT	COMMENTARY	CORRECTIVE ACTION	DELIVERABLES	RESPONSIBILITY	TIMELINE	INDICATIVE BUDGET/ RESOURCES
<b>1</b>	<b>Corporate ESMS – BANPU/BPN</b>						
1a	E&S Screening, Categorization and Risk Assessment	<p>Banpu has a Work Procedure for the Investment Committee (IC) – Investment Decision Process (No: TH-SBD-SPA-WP-03 Rev: 04) to establish a standard work process for investment decisions made by the IC. The content of the investment approval report is focused on the financial analysis, although there are guidelines requiring a description of any environmental concerns, an E&amp;S impact analysis and a mitigation plan for the key E&amp;S risks identified.</p> <p>During the site visit interviews with Banpu, it was discussed that generally for greenfield projects, the investment approval report would include a screening of E&amp;S impacts such as whether there would be any land acquisition and involuntary resettlement. For projects deemed to be “environmentally friendly” or “green” (i.e. renewable energy development, replacement of fossil fuels, noting that there is no formal definition), however, it was noted that E&amp;S impacts and mitigation were generally not assessed at the investment decision stage. Specifically, for Banpu’s investment into both Durapower Holdings and UMT, E&amp;S aspects were not considered during the investment screening process.</p>	<p>Develop and implement procedures for E&amp;S Screening, Categorisation and Risk Assessment including:</p> <ul style="list-style-type: none"> <li>(i) An E&amp;S screening procedure against ADB’s Prohibited Investment Activities List (PIAL) applicable to activities that will utilize ADB loan proceeds.</li> <li>(ii) An E&amp;S categorisation procedure compliant with ADB Safeguard Policy Statement (2009) applicable to activities that will utilize ADB loan proceeds.</li> <li>(iii) An E&amp;S risk and impact assessment procedure to identify environmental, health, safety, labour and community risks and impacts from projects and investments that will utilize ADB loan proceeds.</li> </ul> <p>The E&amp;S screening, categorisation and risk assessment procedures will form part of BANPU and BPN’s ESMS.</p>	Screening, categorisation and risk assessment procedures compliant with ADB SPS (2009).	BANPU	Prior to disbursement.	Management time.
				Screening and categorisation will be carried out for Durapower expansion prior to finalization of investment.	BPN/ Durapower	Finalisation of Durapower investment decision.	Management time.
				E&S risk and impact assessment will be carried out for Durapower expansion prior to commencement of construction.	BPN/ Durapower	Prior to commencement of Durapower factory expansion construction.	Depending on the requirements of the item 2a, the risk and impact assessment may be carried out as part of the EIA or as standalone process.
1b	E&S Monitoring and Reporting	<p>ADB will require, as per requirements of the SPS (2009) for BANPU to report on its E&amp;S management and performance, in particular where ADB loan will be utilized.</p> <p>Monitoring of subsidiary E&amp;S performances is limited to subsidiaries where BANPU holds a greater than 50% of total shares and has management control. This would mean that UMT is excluded from the scope of the Banpu’s monitoring and reporting, whilst Durapower Holdings should be included in future monitoring and reporting. At the time of the ESDD, neither Durapower nor UMT have been included in BANPU’s E&amp;S monitoring.</p>	<p>Establish routine and non-routine reporting requirements to ADB (including any ADB specific metrics) by BANPU.</p> <p>Include E&amp;S monitoring requirements specific for Durapower and UMT (to be discussed with Durapower and UMT) in relation to the planned uses of proceeds from ADB’s loan.</p>	Agreed E&S monitoring scope and template with ADB, and with Durapower and UMT (Agreed template to be appended to the finance document).	Banpu / BPN / Durapower / UMT	Prior to disbursement	Management time.
1c	E&S Policies and Procedures Adoption by Subsidiaries	<p>BANPU and BPN implement environmental, health, safety and social management policies and procedures, including environment, occupational health and safety (OHS), climate change, sustainability, human rights and community related policies, and specific operational management procedures. Subsidiaries including Durapower and UMT also implement their own environmental and social policies and procedures.</p> <p>As BANPU holds &gt;50% stakes of Durapower, BANPU plans to cascade/integrate their E&amp;S policies and procedures with</p>	<p>Banpu to cascade/integrate the company’s ESMS/E&amp;S policies and procedures with Durapower’s ESMS/E&amp;S policies and procedures. Specifically as identified during the ESDD, Durapower shall:</p> <ul style="list-style-type: none"> <li>• Enhance its HR Policy to include explicit statements on core labor standards and respective national labor laws, covering all</li> </ul>	Plan on how BPN and Durapower Holdings/Suzhou Durapower will work to align with Banpu’s policies and procedures.	Banpu/ BPN / Durapower	Prior to disbursement.	Management time.
				HR Policy with explicit statements on core labor standards and respective	Banpu/ BPN / Durapower	Within six months after signing.	Management time.

NO.	ASPECT	COMMENTARY	CORRECTIVE ACTION	DELIVERABLES	RESPONSIBILITY	TIMELINE	INDICATIVE BUDGET/ RESOURCES
		<p>Durapower's management of their activities. At the time of the ESDD, the integration has not been formally planned or commenced.</p> <p>As BANPU is a minority shareholder of UMT, BANPU does not have a policy to cascade, integrate or monitor UMT's E&amp;S management or performance.</p>	<p>types of employees.</p> <ul style="list-style-type: none"> <li>Enhance its internal and external grievance redress mechanisms allowing submission of anonymous grievance.</li> <li>Develop and implement stakeholder engagement plan.</li> </ul> <p>Recommendation for ESMS at UMT has been provided separately for UMT to independently implement in 3a.</p>	<p>national labor laws.</p> <p>Internal and external grievance redress mechanisms allowing submission of anonymous grievances</p> <p>Stakeholder identification and engagement plan.</p>			
1d	E&S organisational structure	E&S reporting lines between BPN and investee companies (in the context of the planned used of proceeds) are unclear.	Agree upon E&S contact points and reporting organisation structure between BANPU/BPN with Durapower and UMT/MuvMi Hero.	List of E&S focal persons and E&S roles and responsibilities, organisation charts where possible.	Banpu / BPN / Durapower	Prior to disbursement.	Management time.
1e	Hazardous Materials and Waste Management - Banpu Next Green Leasing	<p>There is no formal management plan for hazardous materials and waste (i.e. electrical components of the charging stations, new and old/spoilt batteries associated with the e-tuktuks) that provides a standardised, good practice approach to the proper handling, storage, transport and disposal of electronic and hazardous waste and materials. Note that BPN has developed an e-waste management guideline which provides simplified flow-charts on how to handle the e-waste generated from the E-mobility business of BPN but there are no specific procedures (e.g. site requirements, designated area, proper signage, proper ventilation, proper temperatures avoiding excessive heat, fire safety, leak containment) for storage and handling of the hazardous waste itself.</p> <p>BPNGL currently stores the e-tuktuk batteries at a third party logistics centre (operated by BISCO) and relies on BISCO to manage the onsite storage of the batteries. Regarding the disposal of hazardous waste, BPN has a service agreement in place with a license hazardous waste collector to collect and dispose of batteries, solar panels and electronic equipment. A sample hazardous waste manifest for the disposal of solar photovoltaic panels by BPN was provided for review.</p>	Develop a waste management plan (covering non-hazardous and hazardous waste) to include handling, labelling, storage, transport and disposal procedures applicable to BPNGL's energy service provider scope (i.e. the construction and operation of the e-tuktuk charging stations, storage of new and old/spoilt batteries associated with the e-tuktuks).	Waste management plan for non-hazardous and hazardous waste.	BPNGL	Within three months after signing.	Management time.
1f	Health and Safety	For potential emergency during installation and inspection of the charging station, BPNGL reportedly implements a "buddy system" for field staff performing routine inspection of the charging station. An informal protocol to call the BPN head office or the respective line manager/supervisor for support during an emergency accident is in place. However, there was no formal emergency response plan developed including emergency contact number and communication protocol.	Develop a formal, simple emergency preparedness and response plan commensurate to the risks and operations of BPNGL's energy service provider scope.	Emergency preparedness and response plan	BPNGL	Within three months after signing.	Management time.

NO.	ASPECT	COMMENTARY	CORRECTIVE ACTION	DELIVERABLES	RESPONSIBILITY	TIMELINE	INDICATIVE BUDGET/ RESOURCES
<b>2</b>	<b>Battery Manufacturing Facility – Suzhou Durapower</b>						
2a	Environmental, Health and Safety and Social Assessment and Management	<p>An EIA was first prepared by Suzhou Durapower in 2010 in line with Chinese EIA Law, although for a different site and a revised EIA report was subsequently prepared in April 2020 when Suzhou Durapower moved its operations to the current site. The revised EIA report, which was approved on 21 May 2020, accounted for changes in the production process, equipment, layout, use of raw materials and pollution prevention mitigation measures that were applicable to the current factory set up and operations.</p> <p>Suzhou Durapower plans to expand its production capacity, which includes expanding the existing operations of the current facility as well as the construction of a second production building on the existing land plot (adjacent to the current building). The associated assessments, including the EIA, are reportedly under preparation. However, details on how Suzhou Durapower intends to expand the capacity of the existing facility are not available at this stage and consequently, it cannot be confirmed if an updated EIA will be required for the existing facility. Typically, a change in the production process (e.g. more and new equipment, more raw materials etc.) would require a re-assessment of the environmental risks and whether existing mitigation measures remain adequate.</p> <p>The facility implements an integrated environmental, occupational health and safety management system (certified to the requirements of GB/T 24001-2016/ISO 14001:2015 / GB/T 45001-2020/ISO 45001:2018). The system scope, EHS risk and impact registers, management, monitoring and reporting procedures, organization capacity and training will need to be reviewed and updated to include the expanded operations.</p>	<p>Provide details of the expansion plan of the factory in Suzhou.</p> <p>Confirm the regulatory requirements for environmental, occupational health and safety assessments that will be required for the Reassessment of the environmental risks and existing mitigation measures related to the planned expansion</p>	Facility expansion plan and details.	Suzhou Durapower	Prior to commencement of expansion construction.	Management time.
				Confirmation of the list of required environmental, health, safety related assessments, for the proposed expansion.			
				List of applicable permits and approval that need to be obtained prior to construction and operations. If possible, include status of application and provide a copy.	Suzhou Durapower	Permits and approvals obtained as per required timelines.	Management time.
				Draft updated / supplementary EIA and EMP or any equivalent supplementary reports (if required)	Suzhou Durapower	Prior to commencement of expansion operations.	Management time.
				Updated environmental, occupational health and safety management system for plant operations prior to commencement of expansion operations.			
2b	Waste Management	Based on observations during the site visit, the recyclable waste is sorted and stored at a centralised waste collection area on-site. The rain cover for old or waste machines dismantled from the production line was not properly covered, leaving some of the machinery exposed to rain.	The storage of recyclable waste on-site can be improved to prevent surface runoff and contamination of waste machinery oil or corrosion.	Improved waste management storage on-site	Suzhou Durapower	Within six months after signing.	Minor cost.
<b>3</b>	<b>E-tuktuk Operations – UMT/MuvMi Hero</b>						
3a	E&S Policies and Procedures	UMT has an environmental policy with the aim to enhance resource efficiency and minimise environmental impacts associated with the operations.	<p>Develop and implement environmental and social policies and procedures covering the following:</p> <ul style="list-style-type: none"> <li>E&amp;S Risk Assessment Tool and Risk Register</li> <li>Land acquisition and lease tool to avoid IR</li> </ul>	Plan on how UMT will prepare and update policies and procedures.	BPN/UMT	Prior to disbursement.	Management time.
				E&S risk assessment tool	BPN/UMT	Within three months after signing.	Management time.
				Land acquisition and lease tool			

NO.	ASPECT	COMMENTARY	CORRECTIVE ACTION	DELIVERABLES	RESPONSIBILITY	TIMELINE	INDICATIVE BUDGET/ RESOURCES
			impacts and impacts to vulnerable groups. <ul style="list-style-type: none"> <li>• <b>Enhanced HR Policy</b> explicitly complying with core labor standards and national labor laws</li> <li>• <b>E&amp;S organisation</b> to manage E&amp;S procedures implementation, E&amp;S monitoring and reporting.</li> <li>• <b>E&amp;S Monitoring and Reporting Procedure</b></li> </ul>	Enhanced HR Policy Organisational structure identifying E&S focal persons Risk Register E&S Training plan E&S monitoring and reporting procedure	BPN/UMT	Within six months after signing.	Management time.
3b	Management Plans (MuvMi Hero)	It was identified during the ESDD that UMT/MuvMi Hero do not have formal processes to manage specific environmental, health, safety, labor and community aspects of their activities as indicated in the recommendations.	Develop and implement environmental and social plans and procedures to manage specific EHS and Social issues, including covering the following: <ul style="list-style-type: none"> <li>• <b>Waste Management Plan</b> to include both non-hazardous and hazardous waste generated from the e-tuktuk operation, maintenance and end of life disposal.</li> <li>• <b>Emergency Preparedness and Response Plan</b> for the maintenance workshop and training centre.</li> <li>• <b>Personal Protective Equipment Program</b> for the maintenance workshop.</li> <li>• <b>Stakeholder Engagement Process</b></li> <li>• <b>External and Internal Grievance Redress Procedures</b></li> <li>• <b>Supplier and Contractor Procurement and Management Procedure</b> that takes into consideration E&amp;S requirements.</li> </ul>	Waste management plan Emergency Preparedness and Response Plan for the maintenance workshop and training centre. PPE Program for the maintenance workshop. Stakeholder engagement process Internal GRM External GRM Supplier and contractor procurement and management process	BPN/UMT	Within six months after signing.	Management time.



# 1 INTRODUCTION

## 1.1 OVERVIEW

Asian Development Bank (“ADB”) is considering a potential non-sovereign operation loan to the proposed project, Banpu Electric Tuktuks and Electric Battery Project (the “Project”) for BANPU Public Company Limited (BANPU) (“Banpu”, “the Company” or “the Client”), to finance/refinance in green businesses and projects under Banpu’s subsidiary, Banpu Next (“BPN”).

Specifically, the loan is intended to be used in financing subprojects under BPN as follows (“the subprojects”):

- Financing of purchase of 1,500 electric three-wheelers (e-tuktuks) to be operated by Urban Mobility Tech Co., Ltd. (“UMT”) under the brand “MuvMi” and financing/refinancing working capital of UMT. (BPN has 39.3% shareholding of UMT);
- Financing Banpu Next Green Leasing Co., Ltd’s (a wholly owned subsidiary of BPN) for the purchasing of materials and installation of e-tuktuk charging stations to support the expansion of the operations of e-tuktuks; and
- Providing financing to the electric battery company Durapower Holdings Pte. Ltd (Durapower Holdings) with existing battery manufacturing facility in China, which is 100% owned by Suzhou Durapower Technology Co., Ltd. (Suzhou Durapower) (BPN has 65% shareholding of Durapower Holdings).

ADB has commissioned IBIS Environmental and Social Consulting Asia Pte. Ltd. (“IBIS”) to conduct an Environmental & Social Due Diligence review (“ESDD” or “the Assessment”) to assess whether:

- The Company’s environmental and social management system (ESMS) is sufficient to identify, screen, categorise, manage, address, monitor and report all relevant E&S risks and impacts of its business and operations that will receive ADB finance; and
- The proposed activities to be financed using ADB proceeds (i.e. e-tuktuks and e-tuktuk charging stations in Thailand, and electric battery manufacturing in China) comply with the Applicable Standards (as detailed in *Section 1.3*).

## 1.2 OBJECTIVES OF THE ASSESSMENT

The overarching objectives of the ESDD includes the following:

- (i) Conduct an audit of the ESMS of the Company and its implementation at corporate and in relevant subsidiary businesses (i.e. BPN, UMT/MuvMi Hero and Suzhou Durapower) that will receive ADB finance;
- (ii) Conduct an environmental and social compliance audit (ESCA) on the Project and relevant subprojects, including all studies, reports and activities undertaken through document reviews, site visits for the e-tuktuk, e-tuktuk charging stations and battery manufacturing infrastructure and facilities, and consultations with relevant internal and external stakeholders;
- (iii) Conduct an E&S desktop review of the electric battery manufacturing expansion at the existing facility in China (including a site visit to this existing facility in China);
- (iv) Assess the gaps against the Applicable Standards and prepare the corresponding timebound corrective action plan (CAP) to ensure that environment, health, safety, involuntary resettlement, distinct and vulnerable indigenous peoples, labor, and other social issues will be addressed adequately.

Specific objectives under the corporate ESMS audit as part of this Assessment include the following:

- Review and assess the adequacy of the Company's and its subsidiaries' ESMS for all stages of project development, construction, and operation. This will include available policies and procedures, engagement strategies, available E&S management and monitoring plans, grievance mechanisms, as well as any other relevant documents. The review should focus on:
  - Assessing the Company's and its subsidiaries' ability to identify, screen, categorise, manage, address, monitor and report relevant E&S risks and impacts of its business and operations, in particular, the issues identified in the ADB Safeguard Requirements 1 to 3 (ADB SPS), and ADB Social Protection requirements;
  - Assessing the Company's, and its relevant subsidiaries', compliance record with ADB SPS, ADB Social Protection Requirements, and applicable laws and regulations of the jurisdictions in which the project operates that pertain to E&S matters, including those laws implementing host country obligations under international law;
  - Assessing the Company's and its subsidiaries' organisational staffing and structure;
  - Identifying the Company's and its subsidiaries' main stakeholder groups and current stakeholder engagement activities; and
  - Confirming if the Company and/or its subsidiaries implement formal environmental, health, safety or labor management systems that are externally certified to international standards such as ISO14001 (an environmental management system standard), ISO45001 (an occupational health & safety management system standard), ISO14064 (requirement for quantifying and reporting greenhouse gases (GHG)), SA8000 (as social standard), etc.

- Review the Company's and its subsidiaries' past and present implementation of E&S management and monitoring mechanisms, for both project development/construction and operation stages, including but not limited to the following issues:
  - Pollution prevention and abatement;
  - Sustainable resource management (including water and other key resources);
  - Emergency and response and preparedness;
  - Waste management including construction and hazardous wastes;
  - H&S management (including workplace exposures and community H&S impacts);
  - Labour and influx management;
  - Workers' accommodation management; and
  - E&S monitoring at both corporate and subproject levels, and confirming the Company's current monitoring and reporting requirements.
- Review the screening for site selection process, land/land use acquisition process, resettlement or compensation policies, and stakeholder engagement process in consideration of:
  - Permanent and temporary land acquisition including user rights, compensation for economic and physical displacement, and compensation for restrictions on land use, access to natural resources and impacts on livelihood;
  - Impacts to distinct and vulnerable Indigenous Peoples; and
  - Impacts on natural or critical habitat, cultural heritage, etc.
- Review the Company's and its relevant subsidiaries' policies and practices towards Indigenous Peoples, including screening procedures. Review past transactions that involved dealings with Indigenous Peoples, if any.
- Review and propose needed/required actions on contractor and/or supplier management to ensure E&S social compliance with applicable environmental, health, and safety regulations and standards, occupational H&S management and availability of training.
- Identify specifically how occupational H&S will be managed throughout the various stages of project, particularly the construction and operation.
- Review the Company's and its relevant subsidiaries' human resource (HR) policies and practices in relation to ADB Social Protection requirements and national and local labor laws and regulations, including an assessment on the applicability of such policies and practices to contractors and other third-party employees working on the sub-project during construction and operations.
- Review policies and practices in purchasing and procurement of goods and services, including selection procedures. Determine if contracts have adequate provisions on labor and working conditions. Describe the Company's and its subsidiaries' risk review process on forced and child labor in the supply chain. Assess compliance with applicable national labor laws and internationally recognized core labor standards.
- Identify and review the Company's and its relevant subsidiaries' main stakeholder groups, typical stakeholder engagement activities, grievances redress mechanism, and current Company's corporate social responsibility (CSR) activities; and determine the extent to which

stakeholder consultation and participation activities are integrated into the Company's business process.

- Review the Company's and its relevant subsidiaries' gender and development policies; and
- Determine any other E&S issues relevant to the Company's and/or its subsidiaries' operations.

Objectives to be met under the Assessment of the subprojects includes the following:

- Review the past and present activities of the subsidiaries (i.e. BPN, UMT/MuvMi Hero and Suzhou Durapower), including on-site assessment at relevant subproject facilities, to identify past or present concerns related to environment, land/land use acquisition and involuntary resettlement, Indigenous Peoples impacts, labor and gender aspects, and stakeholder engagement against the Applicable Standards.
- Assess the roll-out of and compliance to the corporate ESMS and related policies and determine if these are sufficient to manage risks and impacts, specifically:
  - Review and assess key project documents such as internal planning documents, project documents submitted to authorities and their subsequent feedback and approval to ensure the subprojects' compliance with national laws and regulations and ADB's SPS and other social requirements. The related documents include but may not be limited to the following: environmental and social audit and monitoring report, environmental and social impact assessment (ESIA), environmental acceptance completion (or equivalent document), environmental and social management plan, ESMS or similar policies, operational controls and procedures.
  - Review occupational and community H&S aspects including fire safety, emergency response, natural hazards identification and climate risks considerations;
  - Describe the details of site setting including sensitive receivers.
- Determine whether the land/land use acquisition process undertaken meets the ADB SPS Safeguards Requirement 2 (on involuntary resettlement), through carrying out the following:
  - Document activities related to land/land use acquisition including identification, valuation, negotiation, payment and other support to land/land use owners or affected persons; compliance to legal requirements; and stakeholder consultation;
  - Determine use of the land prior to land/land use acquisition, including number of formal land/land use owners and informal land users;
  - Identify if there are any land legacy issues such as court cases, grievances, adverse claimants, or pending payments or compensation, among others;
  - Identify any affected persons due to physical or economic displacements;
  - Determine if the land/land use acquisition or operation of the facility resulted to or will result to physical or economic displacement, whether full or partial, temporary or permanent; and
  - Determine extent of impact including reduction in livelihood, and restrictions or loss of access to assets or common facilities.

- Determine the ethnic profile of the areas where the relevant subproject facilities are located and if identified ethnic groups meet ADB's SPS Safeguards Requirement 3 (on Indigenous Peoples). Determine whether the construction and operations of subprojects have resulted in or would entail positive and/or negative impacts on distinct and vulnerable Indigenous Peoples, or ethnic minorities.
- Assess the labour and working conditions through carrying out the following:
  - Review the HR policies and practices including the key contractors and subcontractors during construction and operation.;
  - Review workers management and audit reports during construction.;
  - Review workers' statistics for current operations (where available), which would include among others, total number of workers, number of migrant workers and local workers, location of assignment, number of direct employees and third-party employees, age of workers etc.;
  - Determine the workforce requirements for the expansion of subprojects, the terms of employment, and measures to ensure that the labour performance and practices comply with applicable national labour laws and ILO core labour standards;
  - Determine if a workers' grievance redress mechanism (GRM) has been installed and functional.
- Assess the stakeholder engagement approach of the relevant subsidiaries, through carrying out the following:
  - Identify relevant stakeholders to the subproject, including civil society organisations (CSO) or non-governmental organisations (NGO);
  - Identify conducted activities during subproject preparation up to the present and determine if stakeholder policies at the corporate level are properly being implemented at the subproject level. This should include activity dates, objectives, location, participants, and key discussion points, where available;
  - Determine if sufficient activities have been conducted to share information and solicit feedback related to land/land use acquisition, IP, potential impacts to nearby communities, and community H&S, with reference to the Applicable Standards; and
  - Determine if an external GRM has been installed and functional.

### 1.3 REFERENCE FRAMEWORK

The scope of work of the Assessment was undertaken in line with the Applicable Standards as follows:

- Relevant and applicable national E&S laws and regulations in Thailand and China fully in force at the time of authorisation of the Proposal relating to the relevant operations;
- Relevant international conventions and protocols relating to environmental and social issues, as fully transposed into national legislation;

- ADB Safeguard Policy Statement (SPS, 2009), including Safeguard Requirements (SR) 1 on Environment, SR2 on Involuntary Resettlement (IR), and SR 3 on Indigenous Peoples (IP);
- ADB's Social Protection Strategy (2001);
- ADB's Gender and Development Policy (1998);
- ADB's Access to Information Policy (2018);
- Applicable World Bank Group (WBG) Environmental, Health and Safety (EHS) Guidelines (including general and applicable industry-specific guidelines); and
- The International Labor Organization (ILO) conventions covering core labor standards and the basic terms and condition of employment.

## 1.4 COMPLIANCE RISK RANKING

In order to assist with setting out the context of non-compliances identified, a colour-coded risk ranking has been provided for the findings. The criteria for each of these is provided in the table below. The risk rankings consider the potential risks and impacts reasonably associated with the components under review (i.e. Corporate ESMS or site compliance audit).

**Table 1-1 Compliance Risk Ranking**

DEFINITION	COMPLIANCE RISK LEVEL	
No significant issues identified with respect to alignment with Safeguards Requirements, or an item that appears to be not applicable and as such does not have an identified compliance risk.		None identified
Item of non-alignment with Safeguards Requirements, however, is unlikely to create a material E&S impact, although should be rectified as a compliance matter.		Low
Item of non-alignment with Safeguards Requirements and is required to have additional documentation, improved management measures or allocation of responsibilities to reduce the risk, and if left unaddressed has the potential to escalate to a high-risk issue.		Medium
Item with potentially limited E&S risk/impacts that are few in number, generally site specific, largely reversible and are likely to be able to be managed through mitigation measures.		



DEFINITION	COMPLIANCE RISK LEVEL	
<p>Clear significant item of non-alignment with Safeguards Requirements that has the potential (or has already) to lead to a significant adverse E&amp;S impact(s).</p> <p>Has the potential (or has already) to lead to adverse media and/or NGO attention.</p> <p>Has the potential to trigger legal action, may lead to a major environmental incident, or may result in fatalities/serious injuries or have irreversible E&amp;S impacts (e.g. clearance of natural forests).</p> <p>May require significant expenditure (&gt;USD500k) to address the gap and align with the E&amp;S Safeguards.</p>		High

## 1.5 REPORT STRUCTURE

This Assessment report is structured as follow:

- **Section 1 Introduction** – This section briefly introduces this Assessment and its objectives, presents the reference framework for the Assessment, outlines report structure and presents limitations encountered during the course of the Assessment;
- **Section 2 Methodology and Approach** – This section presents the methodology and approach undertaken by IBIS for the Assessment;
- **Section 3 Project Description** – This section provides a brief introduction to Banpu, BPN, UMT/MuvMi Hero and Durapower Holdings/Suzhou Durapower, focussing on the use of proceeds;
- **Section 4 Project Categorisation** – This section provides an opinion on the categorisation of the proposed transaction based on the ADB SPS;
- **Section 5 Corporate ESMS Audit** – This section presents the findings from the compliance audit on the Company's ESMS at the corporate level, which includes an assessment of the systems, processes, and procedures in place to identify and manage E&S impacts;
- **Section 6 Site Compliance Audits** – This section details the observations and findings from compliance audits conducted during site visits to the subproject facilities, i.e. the e-tuktuk facilities under UMT in Thailand and the existing Suzhou Durapower battery manufacturing facility in China;
- **Section 7 Corrective Action Plan** - This section summarises key findings of the Assessment and consolidates these findings in the form of a Corrective Action Plan (CAP);
- **Section 8 Conclusion** – This section provides summary of the Assessment; and
- Annexes which provide supplementary information, including:
  - A list of key documents reviewed (*Annex A: Key Documents Reviewed*);
  - A reputational risk review (RRR) (*Annex B: Reputational Risk Review*);
  - A list of management interviewees (*ANNEX C: List of Key Interviewees*); and

- A photolog (*Annex D: Site Visit Photolog*), in which photographs taken during visits to the Company's sites are presented.

## 1.6 LIMITATIONS

The Assessment was carried out in general accordance with IBIS' proposal dated 11 July 2023.

All conclusions and recommendations made represent the professional opinions of the IBIS consultants involved with the Assessment, and the results of this report should not be considered a legal interpretation of existing regulations.

The Assessment focused on identifying those E&S issues that are likely of greatest significance for the transaction. The Assessment does not form a detailed compliance review, nor should it be considered a first-hand collection of baseline E&S data.

IBIS assumes no responsibility or liability for errors in the public data utilised, information provided by the Company (and subsidiaries), or statements from sources outside of IBIS, or developments resulting from situations outside the scope of this project. We make no warranties, expressed or implied, including, without limitation, as to merchantability or fitness for a particular purpose.

This report has been produced for the benefit of ADB and the Company, and IBIS will accept no liability of any kind from any third parties to whom this report or associated information is made available to (directly or indirectly). No reliance is provided directly or indirectly to any third party unless this has been agreed in writing with IBIS in the form of a reliance letter and a fee paid.

All data and information provided were assumed to be accurate and up to date.

## 2 METHODOLOGY AND APPROACH

### 2.1 OVERVIEW

The Assessment was conducted in a staged approach which is further detailed below. The following activities were undertaken:

- Task 1: Project Initiation;
- Task 2: Document Review;
- Task 3: Interviews with the Company and Subsidiaries;
- Task 4: Site Visits; and
- Task 5: Evaluation and Reporting.

### 2.2 TASK 1: PROJECT INITIATION

A kick-off teleconference call was held with the Company and ADB on the 30 June 2023 to discuss the planning and implementation of the Assessment.

### 2.3 TASK 2: DOCUMENT REVIEW

IBIS conducted a desktop review of available E&S documents in relation to the Company's E&S management at the corporate, subsidiary and site levels. The documents were provided to IBIS via a SharePoint. The documents reviewed are summarised in *Annex A: Key Documents Reviewed*.

In addition, IBIS also conducted a review of publicly available information associated with E&S risks for the Company and relevant subsidiaries (i.e. Banpu, BPN, UMT/MuvMi Hero and Suzhou Durapower). The reputational risk review (RRR) is presented in *Annex B: Reputational Risk Review*.

### 2.4 TASK 3: INTERVIEWS WITH THE COMPANY

With reference to the actual Assessment process and timeline, a series of management interviews were held with the Company and the subsidiaries during the site visit and subsequently via teleconference (for Suzhou Durapower and BPN) after completing the site visits. The management interviews sought to gain a better understanding of the internal ESMS implementation at the corporate, subsidiary and site levels. It also provided an opportunity to clarify questions from the site visits and document review. The list of interviewees is provided in *Annex C: List of Key Interviewees*.

## 2.5 TASK 4: SITE VISITS

IBIS conducted visits to the subproject facilities, i.e. the e-tuktuk facilities under UMT in Thailand and the existing Suzhou Durapower battery manufacturing facility in China. Details of the site visits are presented in *Table 2-1* below.

**Table 2-1 Site Visit Details**

DATE	LOCATION	AGENDA
<b>Thailand Site Visit (13 – 14 July 2023)</b>		
13 July 2023	<u>Banpu office</u> Thanapoom Tower, 1550 New Petchburi Road, Makkasan, Ratchathewi, Bangkok 10400, Thailand	<ul style="list-style-type: none"> <li>• Management interview with representatives from the Banpu Global Corporate Sustainability team, HSEC team, Human Resources department and Procurement department</li> <li>• Management interview with representative from BPN</li> </ul>
14 July 2023	<u>UMT/MuvMi Hero office (including the training centre, maintenance workshop and a sample of e-tuktuk charging stations)</u> 33 Pradiphat 17 Alley, Phaya Thai, Bangkok 10400, Thailand; Vibhavadi Rangsit, Samsen Nai, Phaya Thai, Bangkok 10400, Thailand	<ul style="list-style-type: none"> <li>• Management interview with the UMT founders and management team, including representatives from the health and safety department, Human Resources department and Procurement department</li> <li>• Site walkaround of the UMT/MuvMi Hero training centre (including research and development (R&amp;D) activities), e-tuktuk maintenance workshop (co-located with the showroom of Thai Rung Union Car PCL) and e-tuktuk charging stations (located within carparks of buildings).</li> </ul>
<b>China Site Visit (20 July 2023)</b>		
20 July 2023	<u>Suzhou Durapower manufacturing facility</u> No.12 Fuhua Rd., Changshu Economic Develop Zone Changshu, Jiangsu, 215513 China	<ul style="list-style-type: none"> <li>• Management interview with the Suzhou Durapower site team, including representatives from the health and safety department, Human Resources department and Procurement department</li> <li>• Site walkaround of the existing Suzhou Durapower battery manufacturing facility</li> </ul>

In general, each site visit consisted of:

- Meetings with relevant employees such as the management representatives, Health, Safety, Environment, Community Engagement (HSEC) managers, Human Resources representative, and Procurement representative to discuss the management of E&S issues;
- Review of site-held E&S documents;
- Visual observations of the sites' operations and activities; and

- Interviews with stakeholders (where possible and appropriate), mainly employees engaged by the subproject activities.

Photographs taken during each of the site visit are presented in *Annex D: Site Visit Photolog*.

## **2.6 TASK 5: REPORTING**

Based on the findings from Tasks 1 to 4 above, this report has been prepared to document the findings of the Assessment, along with corrective actions in the form of the CAP to support the Company (and relevant subsidiaries) in aligning with the Applicable Standards.

## 3 PROJECT DESCRIPTION

### 3.1 OVERVIEW

Whilst ADB's potential loan to the Project is intended to be used in financing two specific subprojects, i.e. (i) the purchase of 1,500 electric 3-wheelers (e-tuktuks) to be operated by UMT and (ii) financing to support the existing Suzhou Durapower battery manufacturing facility in China, E&S management is cascaded down various levels to reach the subproject level and the approach differs for the e-tuktuks (wherein BPN does not own over 50% of the UMT shareholding and thereby does not have operational control) and the battery manufacturing facility (wherein BPN owns more than 50% of the Durapower Holdings shareholding and thereby has operational control). It is also understood that ADB's potential loan to the Project is intended to include financing of installation and operation of additional e-tuktuk charging stations by Banpu Next Green Leasing Co., Ltd. (BNGL). *Figure 3-1* below illustrates the relationship between Banpu, BPN, the subsidiaries and the subproject activities.

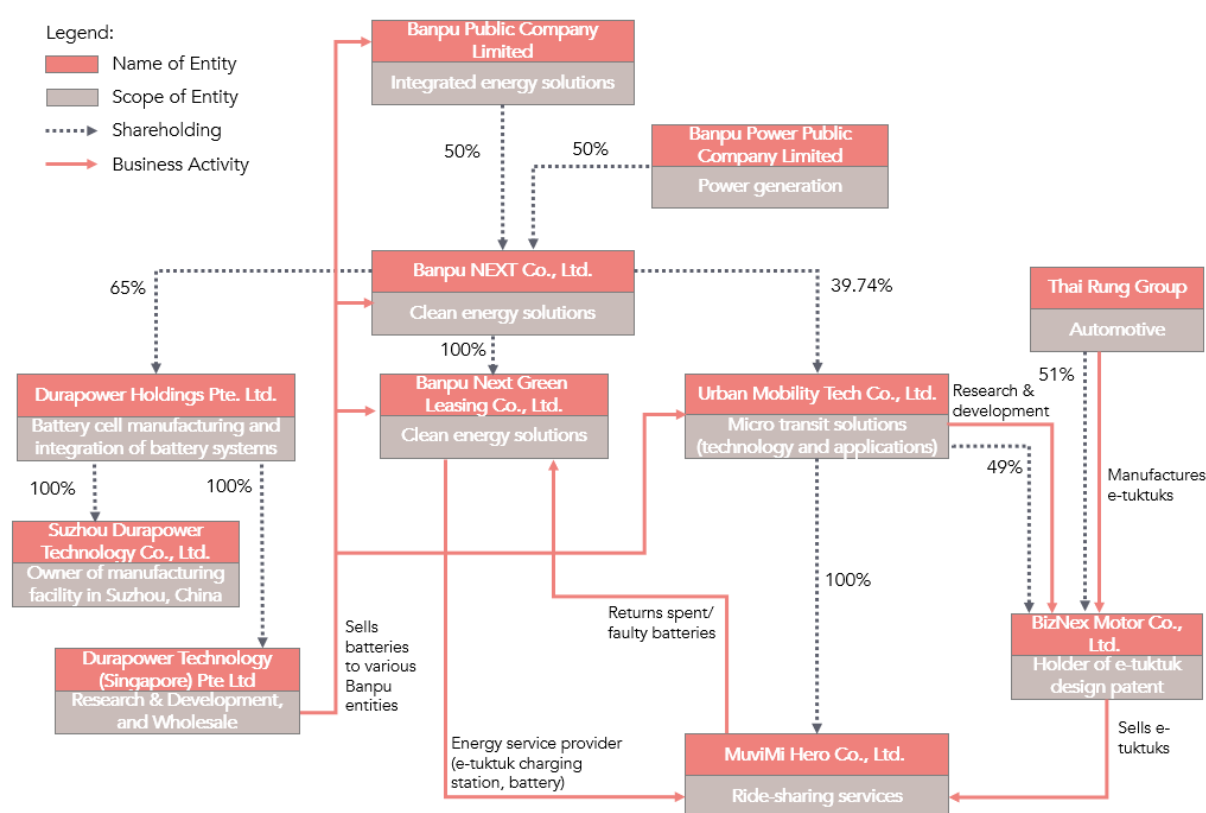


Figure 3-1 Overview of Relationship between Banpu, BPN and the Subsidiaries

### 3.2 BANPU

Banpu was established on 16 May 1983 as “Ban Pu Coal Company Limited” to subcontract a coal mining operation at Banpu Mine located in Li district, Lamphun province, Thailand, and later changed



its name on 29 July 1993 to “Banpu Public Company Limited.” With 40 years in operations, Banpu is currently an international versatile energy provider operating in Thailand, Indonesia, China, Australia, Lao PDR, Mongolia, Japan, the United States of America and Vietnam. Today, Banpu is involved in three core groups of businesses:

- **Energy Resources:** Coal and gas including related operations such as marketing, trading, logistics, fuel procurement, and transmission;
- **Energy Generation:** Thermal and renewable power plants; and
- **Energy Technology:** Solar rooftop and solar floating, energy storage systems (ESS), energy trading, e-mobility, and smart city & energy management.

### 3.3 BPN AND BANPU NEXT GREEN LEASING (BNGL)

BPN is a subsidiary of Banpu (which owns 50% of BPN; the other 50% of BPN is owned by another Banpu subsidiary, Banpu Power Public Company Limited). Founded on 27 February 2020, BPN is a leading smart clean energy solution provider in Asia Pacific with a vision of “Innovating Infinite Energy Solutions to All”. BPN aims to create business growth in line with future energy trends and smart city development and respond to the lifestyle of modern consumers with customers in mind. BPN offers a variety of “Smart Energy Solutions” covering the following five themes:

- Smart Data Analytics & Energy Management;
- Smart Energy Generation;
- Smart Energy Storage;
- Smart Energy Utilization; and
- Smart Circular Economy.

In line with the vision and business growth of BPN, BPN has invested in leading companies in different countries, including

- UMT, a Thai startup that operates e-tuktuk service under the brand “MuvMi”; and
- Durapower Holdings, a company specialized in design, manufacturing, and system integration of lithium-ion battery (LiB) technology for automobiles and energy storage systems.

Banpu Next Green Leasing Co., Ltd. (BNGL) is a 100% owned subsidiary under BPN which is an entity acting as an energy service provider for the e-tuktuk business. BNGL does not have any employees. Staff involved in the construction and operation of the e-tuktuk charging stations (i.e. a team of about 10 technicians) are employed under BPN, and follow Banpu’s policies and BPN work procedures. There are currently more than 20 e-tuktuk charging stations in the areas where MuvMi operates (i.e. within Bangkok). BNGL typically leases the land for the charging stations and a few parking lots for the e-tuktuks directly from the land owner, except in the case of MuvMi mega hubs wherein the area for the

e-tuktuk parking lots is much larger than the charging station so MuvMi Hero Co., Ltd. (MuvMi Hero) would lease the land for the mega hubs.

BNGL also supplies the batteries for the e-tuktuks, and collects spent or spoilt batteries from the e-tuktuks. BNGL leases a warehouse unit from a third-party warehouse operator to store the batteries and other equipment/spare parts,

### **3.4 UMT/MUVMI HERO**

UMT is a startup that developed and operates the MuvMi e-tuktuk service and its booking application (app). UMT started its business in 2016 the goal of creating a micro transit solution that is conveniently accessible, affordable, clean, and safe. MuvMi is an on-demand ridesharing service comprising e-tuktuks specifically designed for urban areas (design-patented) and an algorithm that groups passengers travelling in similar destinations together. With reasonable pricing compared to other on-demand transit options, MuvMi has served over 4.5 million passenger trips with over 400 e-tuktuks since 2018. Besides individual consumers, companies also use MuvMi e-tuktuk services as shuttle buses for their staff.

BIZ NEX Motor (BIZ NEX) is a joint venture between UMT (with 49% shareholding) and Thai Rung Group, Thailand's leading comprehensive automotive group (with 51% shareholding). BIZ NEX owns the patent for the e-tuktuks which are used by UMT, and currently engages Thai Rung to manufacture and assemble the e-tuktuks. UMT purchases the e-tuktuks from BIZ NEX through its 100% owned subsidiary, MuvMi Hero Co., Ltd. (MuvMi Hero).

MuvMi Hero is set up to oversee the e-tuktuk operations. In addition to purchasing the e-tuktuks, MuvMi Hero is responsible for the employment and training of the e-tuktuk drivers and managers (i.e. Head of Drivers (HOD) and Driver Managers (DM)), as well as addressing feedback from drivers and users of the MuvMi app and ridesharing service. UMT can be seen as the entity overseeing the technology aspect of the MuvMi app and also employs staff overseeing other business functions including Human Resources, Procurement, and Legal departments.

UMT/MuvMi Hero currently operates several facilities in Thailand including multiple offices, a R&D and e-tuktuk driving training centre, and an e-tuktuk servicing and maintenance workshop (*Figure 3-2*).

UMT plans to increase its fleet of e-tuktuks to 1,000 within 2023, and up to 5,000 in the next five years. This would include purchasing the e-tuktuks, purchasing the tuktuk vehicle registration plate from the

open market (i.e. existing tuktuk license plate holders) and employing more drivers to operate the e-tuktuks.

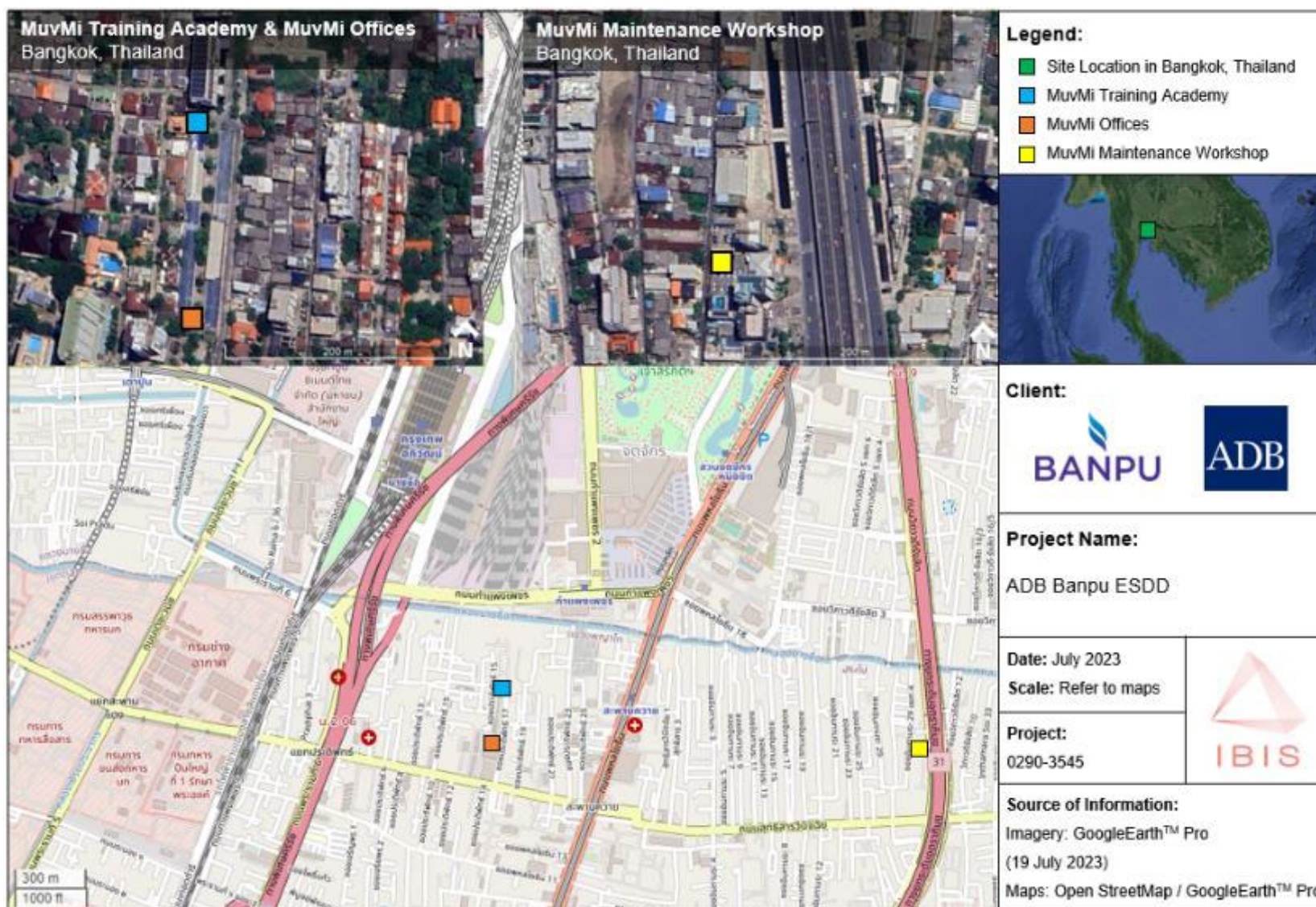


Figure 3-2 Locations of UMT/MuvMi Hero Facilities in Bangkok, Thailand

### 3.5 SUZHOU DURAPOWDER/DURAPOWDER HOLDINGS

Headquartered in Singapore, Durapower Holdings specialises in the design, manufacturing, and integration of Lithium-ion Battery (LIB) materials, battery cell manufacturing and integration of battery systems, which are installed in a variety of applications worldwide including electric vehicles, hybrid electric vehicles and plug-in hybrid electric vehicles (PHEVs) and various scales of stationery storage solutions for on- and off-grid applications.

Durapower Holdings owns a battery cell manufacturing facility in Suzhou, China under Suzhou Durapower. The environmental impact assessment (EIA) for the battery cell manufacturing facility was first approved on 21 June 2010 and construction commenced in May 2013. Construction was completed in 2014 whilst equipment installation commenced in April 2019. Due to changes in the production process, equipment, layout, use of raw materials and pollution prevention mitigation measures, a revised EIA report was prepared (dated April 2020) to reevaluate the environmental impacts and mitigation which was approved on 21 May 2020. The facility has a total design capacity of 60 million ampere-hours (Ah) in annual output of lithium battery system for vehicles. The facility occupies a land area of 33,185m<sup>2</sup> (*Figure 3-3*) with a 2-storey building that has a footprint of about 17,500m<sup>2</sup> (*Figure 3-4* and *Figure 3-5*).

Suzhou Durapower is preparing to expand its production capacity, which includes expanding the existing operations of the current facility as well as the construction of a second production building on an existing land plot (adjacent to the current building). The associated assessments, including the EIA, are reportedly under preparation. However, details on how Suzhou Durapower intends to expand the capacity of the existing facility are not available at this stage and consequently, it cannot be confirmed if an updated EIA will be required for the existing facility. Typically, a change in the production process (e.g. more and new equipment, more raw materials etc.) would require a re-assessment of the environmental risks and whether existing mitigation measures remain adequate.



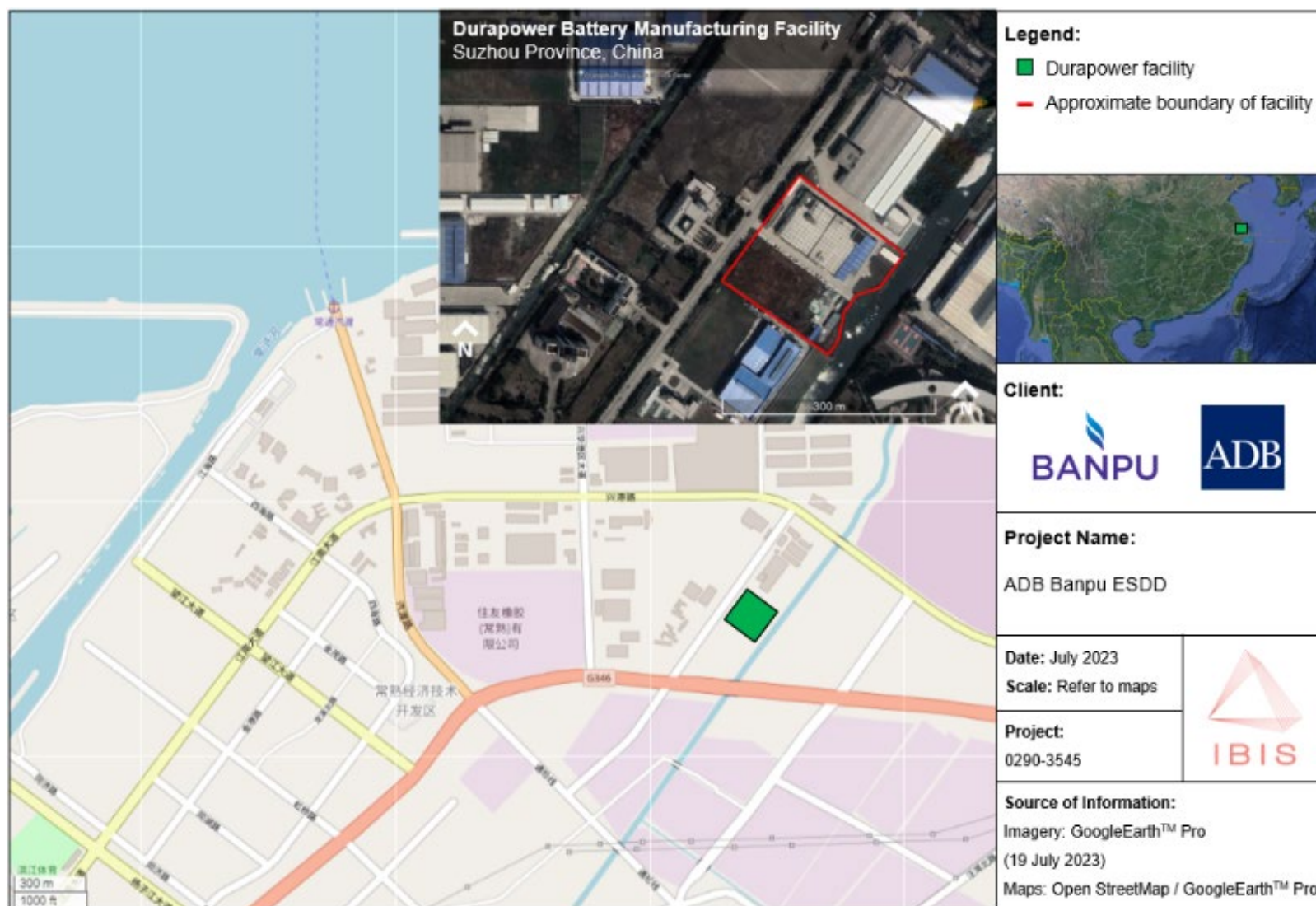


Figure 3-3 Location of Suzhou Durapower Battery Manufacturing Facility in China



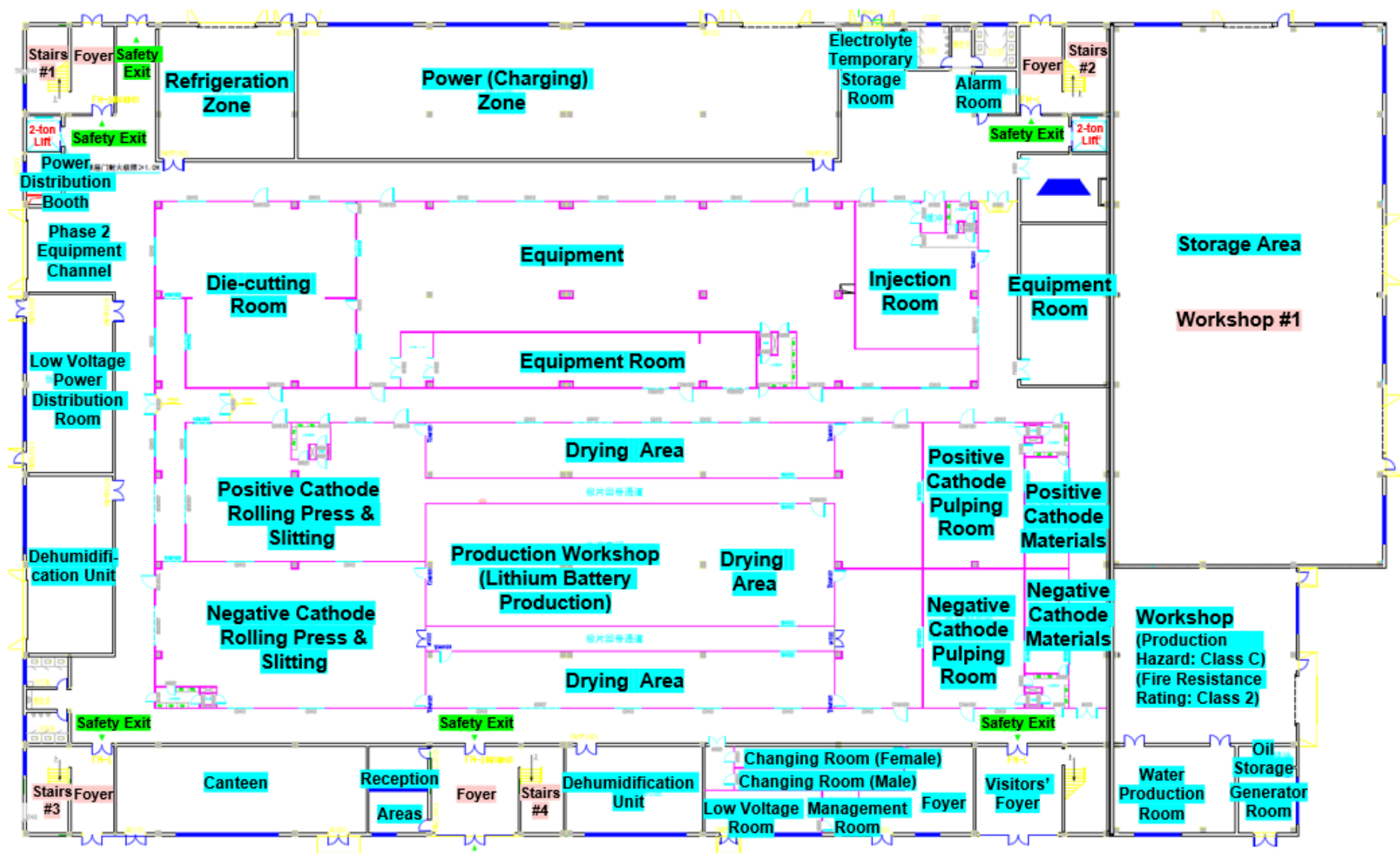


Figure 3-4 Level 1 Floorplan of Suzhou Durapower Battery Manufacturing Facility in China

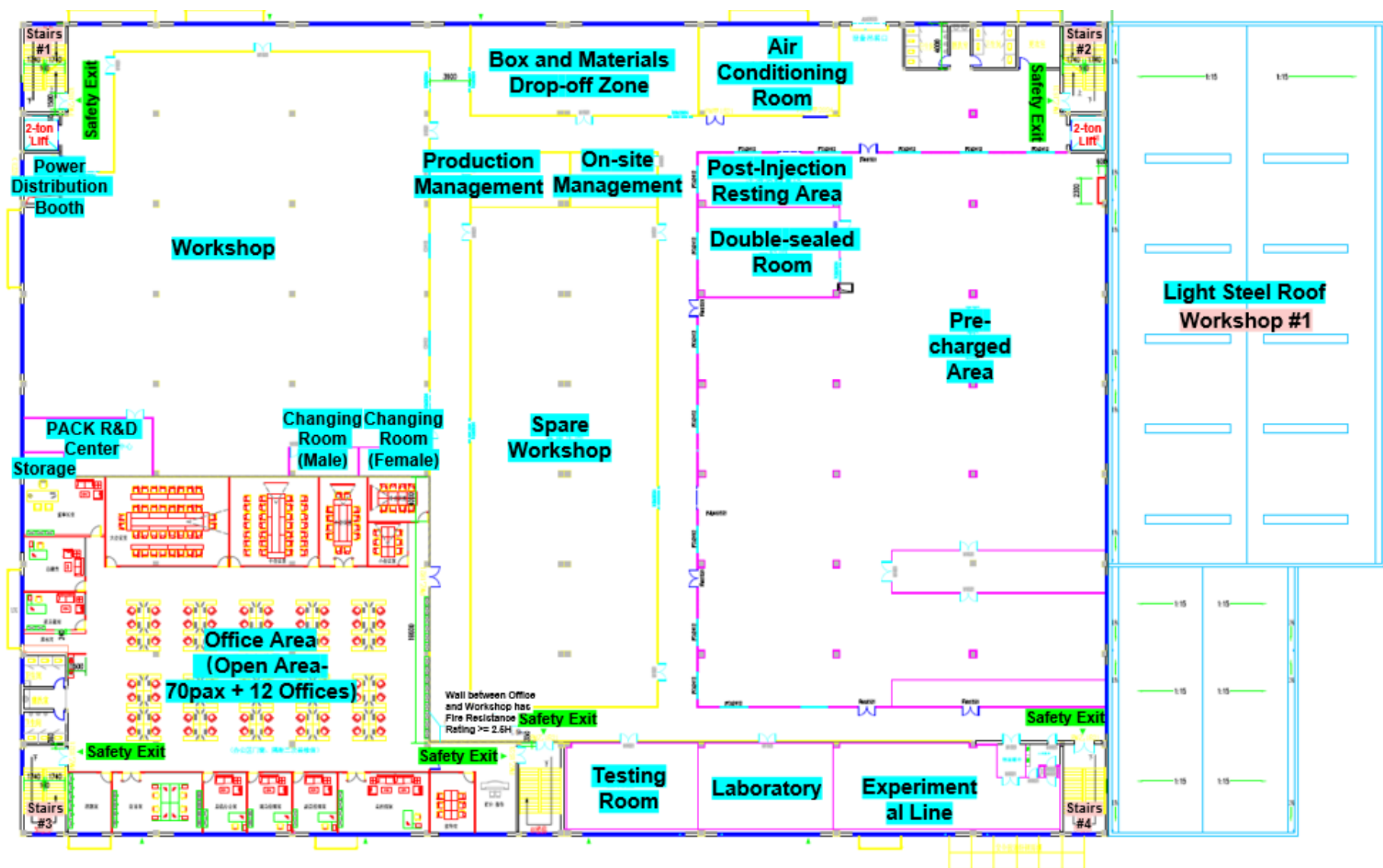


Figure 3-5 Level 2 Floorplan of Suzhou Durapower Battery Manufacturing Facility in China

## 4 PROJECT CATEGORISATION

As part of the Assessment, there is a need to provide an opinion on the categorisation of the proposed transaction, based on the ADB SPS. Following the review of documentation, observations made during the site visits, and consultation with relevant stakeholders, the proposed transaction is classified as follows in *Table 4-1*.

**Table 4-1 Proposed Transaction Categorisation**

SAFEGUARD REQUIREMENT	CATEGORY	RATIONALE
Environment	B	Based on the type, nature and context of the operations it is considered that Category B is appropriate at this time. When considered in aggregate, the operations of the e-tuktuks and battery manufacturing facility related to the use of proceeds do have an aggregated environmental impact that is particularly associated with environmental management (namely hazardous waste management), occupational health & safety (OHS), and community health & safety (H&S).
Involuntary Resettlement	C	Based on the type, nature and context of the operations and potential developments, it is considered that Category C is appropriate at this time. The operations of the e-tuktuks, e-tuktuk charging stations and battery manufacturing facility related to the use of proceeds are mainly established in industrial zones and commercial areas. Land expropriation and involuntary resettlement are indicated not to have been issues to-date in the operations or anticipated not to be an issue relating to the use of proceeds.
Indigenous Peoples	C	Based on the type and nature of operations, it is considered that Category C is appropriate at this time. Given the nature of the Company's operations (in relation to the planned use of proceeds), these inevitably are established in areas where there are unlikely to be indigenous peoples, or direct impacts on indigenous peoples, or anticipated to be an issue relating to the use of proceeds.

## 5 CORPORATE ESMS AUDIT

### 5.1 OVERVIEW OF THE CORPORATE ESMS STRUCTURE

#### 5.1.1 Banpu

E&S aspects of Banpu's business operations are covered under Banpu's global corporate sustainability structure which has four key teams – (i) Health, Safety, Environment, Community Engagement (HSEC). (ii) Corporate Sustainability, (iii) Sustainability Assurance and (iv) Decarbonisation (*Figure 5-1*). E&S risk assessments are carried out under the Corporate Sustainability (Sustainability Risk & Strategy) team whilst the HSEC team has oversight of HSEC compliance of Banpu's operating assets (i.e. assets which Banpu has more than 50% shareholding and thereby operational control). E&S monitoring and auditing is carried out annually by the Sustainability Assurance team.

In terms of ESMS documents, Banpu has several corporate level policies and manuals including the following:

- Environmental Policy;
- Human Rights Policy;
- Human Rights Due Diligence Manual;
- Standard Practice Manual on Stakeholder Engagement;
- Standard Practice Manual for Community Complaint Management;
- Human Resources Management Policy (including a Human Rights Policy, Non-Discrimination and Anti-Harassment Policy, Recruitment and Selection Policy, Compensation Policy, Employee Relations Policy and Training and Development Policy);
- Occupational Health and Safety Policy;
- Safety Risk Assessment;
- Accident Investigation Procedure;
- Supplier Code of Conduct;
- Sustainable Supply Chain Policy;
- Climate Change Policy;
- Waste Management Policy;
- Standard Practice Manual on Waste Management - General Waste;
- Standard Practice Manual on Waste Management - Mineral Waste ;
- Water Management Policy;
- Standard Practice Manual on Water Management;
- Community Development/Engagement Policy;
- Guideline on the Community Consultative Committee;
- Standard Practice Manual on Resettlement Management;
- Standard Practice Manual on Community Engagement Work;
- Standard Practice Manual of Monitoring, Evaluation and Reporting of Community Engagement Work;

- Work Procedure for Community Engagement Management Review at Country's Community Function;
- Work Procedure for Joint Management Review at Operational Sites with Country's Community Function;
- Biodiversity Policy;
- Guideline for Engagement with Indigenous Peoples;
- Work Procedure for Investment Committee- Investment Decision Process ;
- Corporate Governance Policy and Code of Conduct;
- Whistleblower Policy;
- Business Continuity Policy; and
- Sustainable Development Policy.

It should be noted that Banpu is involved in a broad range of operations (i.e. coal and minerals mining, renewable energy development, energy storage systems, e-mobility etc.) and these above mentioned policies are intended to serve as overarching guidance for subsidiaries to develop project/site specific procedures. In general, these policies apply only to subsidiaries where Banpu has more than 50% shareholding and thereby operational control. With reference to the planned use of proceeds, this means that Banpu's policies apply to BPN but not to UMT and the e-tuktuk operations since BPN has less than 50% shareholding for UMT. As for Durapower, BPN was previously a minority shareholder (i.e. less than 50% shareholding) and only recently became a majority shareholder earlier in 2023, therefore Durapower does not currently follow Banpu's policies but the intent is for Durapower to eventually comply with Banpu's policies.

## Organizational Structure

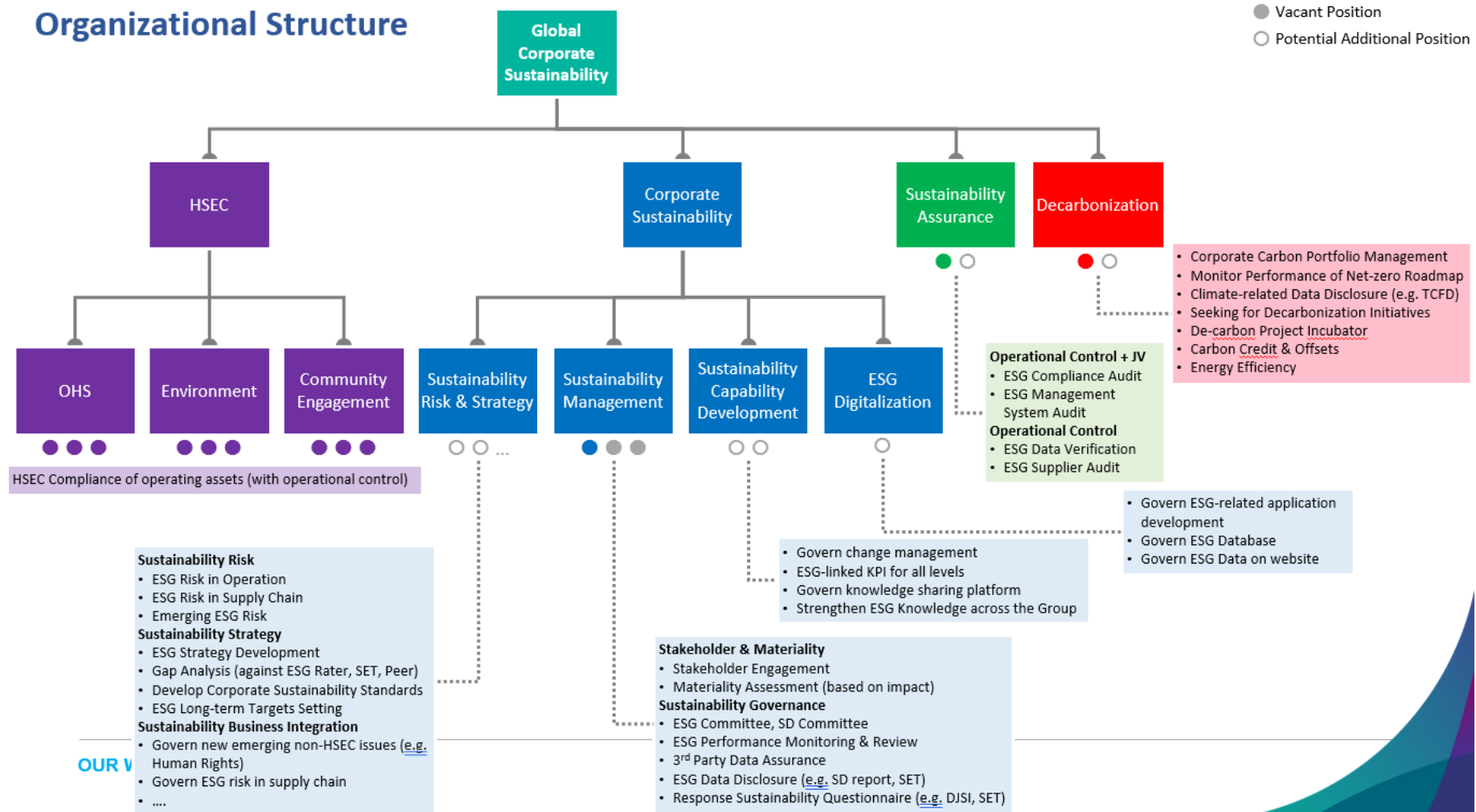


Figure 5-1 Organisational Structure of Banpu Global Corporate Sustainability

### 5.1.2 BPN

BPN has operations in various countries with designated business heads in Australia, China, Indonesia, Japan, USA and Vietnam, and a Business Development team focussed on Thailand. There are also dedicated teams within BPN focussing on specific business areas such as Energy Generation and Trading and E-Mobility (*Figure 5-2*). With reference to the planned use of proceeds, EHS management of the e-tuktuk operations (mainly the operation of the e-tuktkuk charging stations) falls under the Product and Services team of the E-Mobility section led by the Operation Services Manager. The Operations Services Manager reports to the Health, Safety and Environment Manager under the overarching Finance and Business Support team on EHS matters of the E-Mobility business (*Figure 5-3*).

BPN fully adopts Banpu's policies and has developed work procedures specific to its operations. These work procedures include the following:

- Work Procedure on Legal and Other Requirement;
- Work Procedure on Personal Protective Equipment (PPE);
- Work Procedure on Machine Safety;
- Safety, Occupational Health and Work Environment Manual;
- Occupational Health and Safety Regulations for Contractors Vendors, Deliverers, Visitors;
- Vendor Evaluation for Health and Safety Assessment; and
- Work Procedure on Contractor Management.

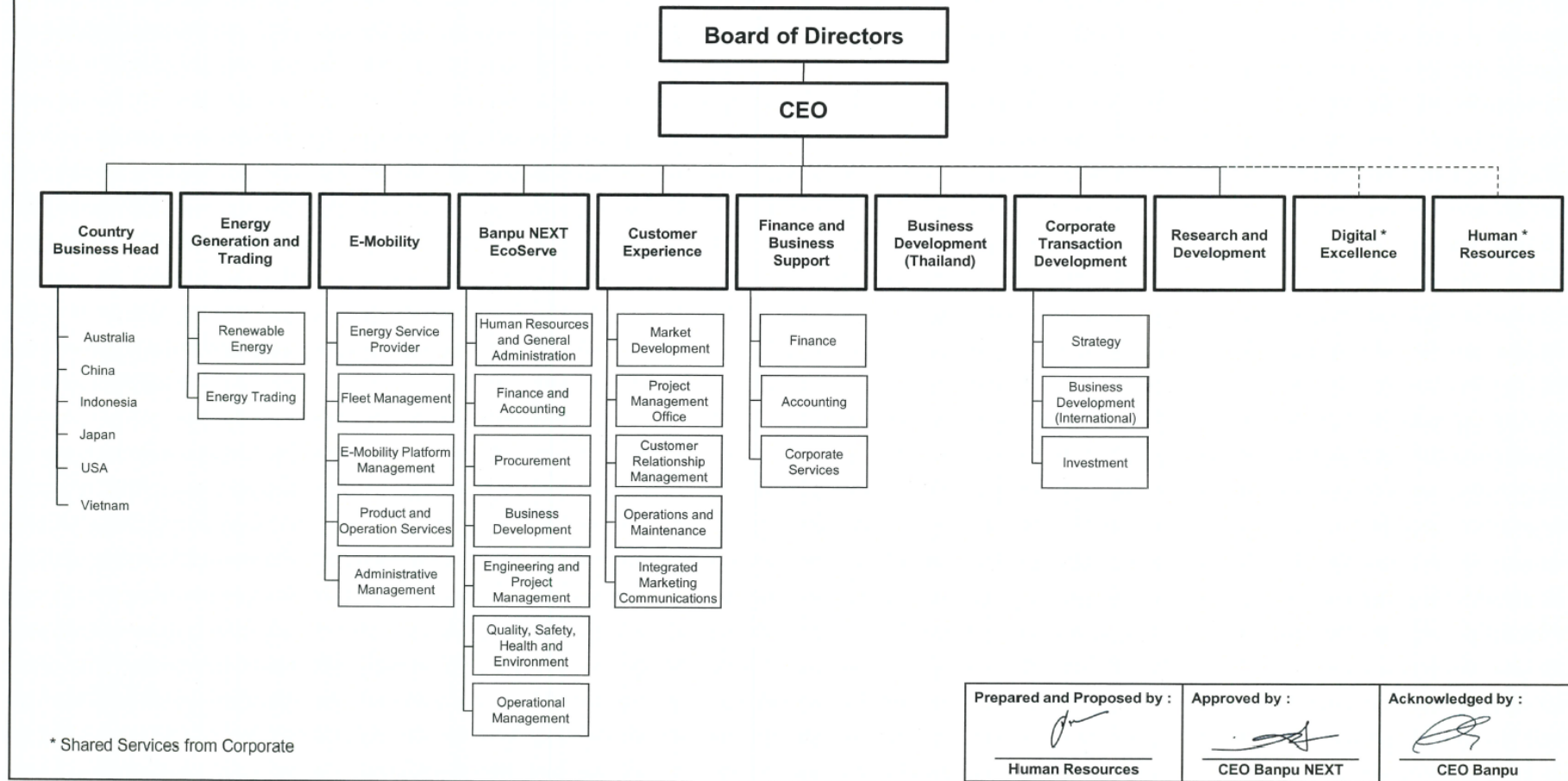
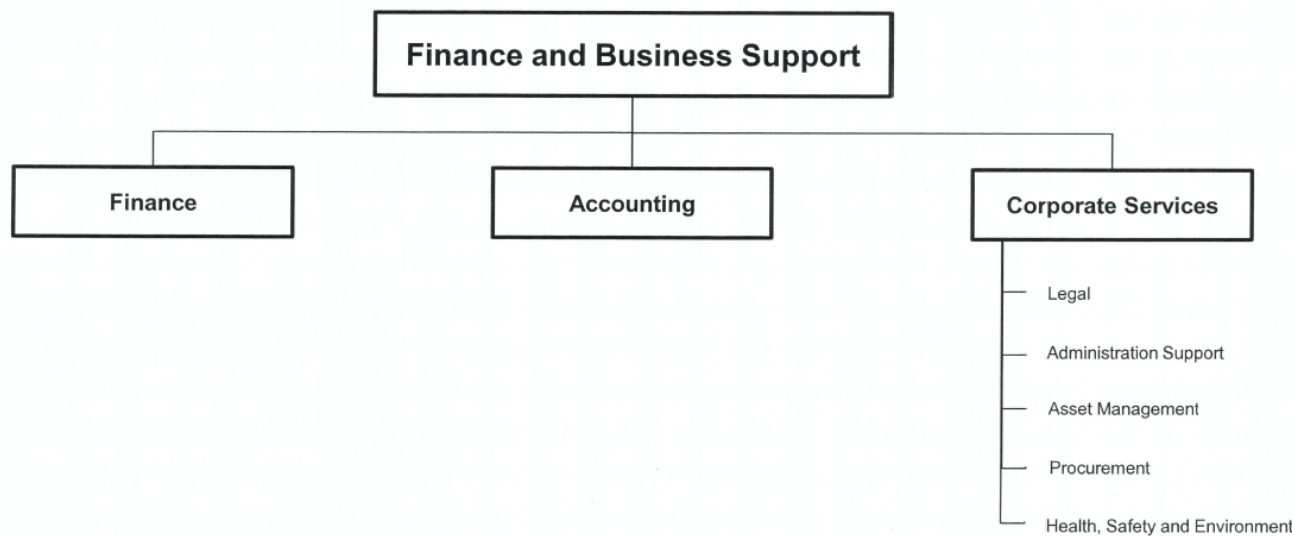


Figure 5-2 Banpu NEXT Organisation Chart



## Organizational Structure Finance and Business Support

Announcement No. 13/2022  
Effective Date: January 1, 2023



Prepared and Proposed by :

Human Resources

Approved by :

CEO Banpu NEXT

Figure 5-3 Banpu NEXT Health, Safety and Environment Function under Corporate Services

## 5.2 REPUTATIONAL RISK REVIEW

A review of publicly available information associated with E&S risks for the Company was conducted, and the findings are presented in *Annex B: Reputational Risk Review*. Based on the Reputational Risk Review (RRR), no E&S issues or concerns associated with the Company were identified from the internet search.

## 5.3 ASSESSMENT OF CORPORATE ESMS AND POLICIES

*Table 5-1* and *Table 5-2* below present the findings from the Corporate ESMS Audit comprising of the Banpu policies and manuals and BPN work procedures.

Note that in the sections below, references to ADB's Safeguard Principles/ Requirements are presented in abbreviations in view of space constraints, as such the full documents should be referred to where further detail is required<sup>1</sup>.

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<sup>1</sup> <https://www.adb.org/sites/default/files/institutional-document/32056/safeguard-policy-statement-june2009.pdf>

**Table 5-1 Assessment of Corporate ESMS and Policies**

REF	ADB'S SAFEGUARD PRINCIPLES/ REQUIREMENTS	REFERENCE	COMMENTARY/ FINDINGS	RISK RANKING	CORRECTIVE ACTION
<b>1</b>	<b>Environmental &amp; Social Policies</b>				
	Ensuring that E&S Safeguard requirements are incorporated into the ESMS including to comply with ADB SPS and host-country environmental & social laws and regulations (including those laws implementing host country obligations under international law).	ADB Safeguard Policy Statement, V. Safeguard Policy Statement	<p>Banpu has developed several E&amp;S related policies (as listed in <i>Section 5.1.1</i>) which are also disclosed on Banpu's website. Banpu's Environmental Policy commits to:</p> <ul style="list-style-type: none"> <li>Fully comply with relevant current environmental legislation, company standards, as well as monitor developments;</li> <li>Manage resources (i.e. energy, water, land) efficiently;</li> <li>Identify potential environmental impacts and assess environmental risks;</li> <li>Manage environmental impacts and set tangible targets for high potential impact to minimize impacts with appropriate action plans by implementing appropriate environmental best practices;</li> <li>Ensure continual improvement by providing sufficient resources to develop and maintain environmental management system; and</li> <li>Communicate and build capacity of stakeholders through communicating environmental aims and objectives to employees and supply chain.</li> </ul> <p>The Environmental Policy applies to Banpu and Banpu's subsidiaries where Banpu has management control and will be applied during due-diligence and/or mergers and acquisition process, where appropriate. In addition, this policy will be promoted to Banpu's joint ventures and supply chain.</p> <p>Banpu also has a Human Rights policy which is guided by the Universal Declaration of Human Rights (UDHR), United Nations Guiding Principles on Business and Human Rights (UNGPs), the International Labor Organization (ILO) Declaration on Fundamental Principles and Rights at Work and local regulations.</p> <p>In general, Banpu's E&amp;S policies cover key E&amp;S issues with a focus on ensuring compliance with local E&amp;S regulations. Please see <i>Table 5-2</i> commentary on specific E&amp;S aspects, i.e.</p>		None identified.

REF	ADB'S SAFEGUARD PRINCIPLES/ REQUIREMENTS	REFERENCE	COMMENTARY/ FINDINGS	RISK RANKING	CORRECTIVE ACTION
			health and safety, land acquisition and involuntary resettlement, Indigenous Peoples (IPs).		
<b>2</b>	<b>Screening, Categorisation and Review</b>				
	<p>Ensuring that policy requirements are implemented throughout the lifecycle of projects including screening of projects, categorisation (according to the ADB SPS), impact assessment and development of management and mitigation programs. This is in order to manage and address all relevant social and environmental risks and impacts of its business and operations, in particular the issues identified in Safeguard Requirements 1 to 3.</p> <p>Use a screening process for each proposed project, as early as possible, to determine the appropriate extent and type of environmental assessment so that appropriate studies are undertaken commensurate with the significance of potential impacts and risks.</p>	<p>ADB Safeguard Policy Statement, V.</p> <p>ADB SPS, H. General Corporate Finance, 17 (i) (ii)</p> <p>ADB SPS, Requirements 1 to 3</p> <p>ADB Prohibited Investment Activities List</p>	<p>Banpu has a Work Procedure for the Investment Committee (IC) – Investment Decision Process (No: TH-SBD-SPA-WP-03 Rev: 04) to establish a standard work process for investment decisions made by the IC. The Work Procedure will be implemented by Banpu and its subsidiaries, to assist the Chief Executive Officer (CEO) in evaluating new opportunities and allocating resources in Banpu's interests.</p> <p>Based on the work procedure, the IC consists of the CEO, Head of Mining Business, Head of Power Business, Chief Financial Officer (CFO), Head of Corporate Development and Head of Corporate Services. Depending on the nature of the opportunity and the potential E&amp;S risks, the IC may seek the input of the HSEC team when preparing the investment approval report.</p> <p>The content of the investment approval report is focussed on the financial analysis, although there are guidelines requiring a description of any environmental concerns, an E&amp;S impact analysis and a mitigation plan for the key E&amp;S risks identified.</p> <p>During the site visit interviews with Banpu, it was discussed that generally for greenfield projects, the investment approval report would include a screening of E&amp;S impacts such as whether there would be any land acquisition and involuntary resettlement. For projects deemed to be "environmentally friendly" or "green" (i.e. renewable energy development, replacement of fossil fuels, noting that there is no formal definition), it was noted that E&amp;S impacts and mitigation were generally not assessed at the investment decision stage. Specifically, for Banpu's investment into both Durapower Holdings and UMT, E&amp;S aspects were not considered during the investment screening process.</p> <p>Considering the nature of the activities under the planned use of proceeds (i.e. purchase of e-tuktuks and the existing battery manufacturing facility), E&amp;S risks can be considered low.</p>		<p>Develop and implement procedures for E&amp;S Screening, Categorisation and Risk Assessment including:</p> <p>(i) An E&amp;S screening procedure against ADB's Prohibited Investment Activities List (PIAL) applicable to activities that will utilise ADB loan proceeds.</p> <p>(ii) An E&amp;S categorisation procedure compliant with ADB Safeguard Policy Statement (2009) applicable to activities that will utilise ADB loan proceeds.</p> <p>(iii) An E&amp;S risk and impact assessment procedure to identify environmental, health, safety, labour and community risks and impacts from projects and investments that will utilise ADB loan proceeds.</p> <p>The E&amp;S screening, categorisation and risk assessment procedures will</p>

REF	ADB'S SAFEGUARD PRINCIPLES/ REQUIREMENTS	REFERENCE	COMMENTARY/ FINDINGS	RISK RANKING	CORRECTIVE ACTION
			<p>However, there should still be screening processes in place to ascertain the E&amp;S impacts and mitigation where required.</p> <p>In relation to the ADB Prohibited Investment Activities List (PIAL), direct activities assessed as part of this work (under the planned use of proceeds) have not identified any activities under the PIAL.</p>		form part of Banpu and BPN's ESMS.
<b>3 Organisational Structure and Staffing</b>					
	<p>Ensure that there is sufficient institutional or organisational arrangements to effectively implement the ESMS. Including providing training and capacity development as required.</p>	<p>ADB Safeguard Policy Statement, V.</p> <p>ADB SPS, Environmental Safeguards, 4.</p> <p>ADB SPS, Environmental Safeguards, 3.</p>	<p>E&amp;S aspects of Banpu's business operations are covered under Banpu's global corporate sustainability structure which has four key teams – (i) Health, Safety, Environment, Community Engagement (HSEC). (ii) Corporate Sustainability, (iii) Sustainability Assurance and (iv) Decarbonisation. Managers are assigned within each team, supported by section managers and supervisors as needed to oversee sustainability management of Banpu. The Sustainability Assurance team is responsible for reviewing whether all of Banpu's subsidiaries adhere to Banpu's policies and procedures, through annual audits involving sample checks of compliance reports from the projects of each subsidiary.</p> <p>There is also an Environmental Social and Governance (ESG) Committee (comprising of three independent directors in 2022) which is responsible for:</p> <ul style="list-style-type: none"> <li>• Overseeing Banpu's policies and practices, as well as targets and performance with respect to ESG matters;</li> <li>• Reviewing and monitoring the stakeholder engagement and materiality assessment process;</li> <li>• Reviewing and monitoring management practice of major ESG risk; and</li> <li>• Overseeing Banpu's public disclosures in relation to ESG matters.</li> </ul> <p>For BPN, EHS management of the e-tuktuk operations (mainly the operation of the e-tuktkuk charging stations) falls under the Product and Services team of the E-Mobility section led by the Operation Services Manager, who reports to the Health, Safety and Environment Manager under the overarching Finance and</p>		<p>Agree upon E&amp;S contact points and reporting organisation structure between Banpu/BPN with Durapower and UMT/MuvMi Hero.</p>

REF	ADB'S SAFEGUARD PRINCIPLES/ REQUIREMENTS	REFERENCE	COMMENTARY/ FINDINGS	RISK RANKING	CORRECTIVE ACTION
			<p>Business Support team on EHS matters of the E-Mobility business.</p> <p>It is noted that the Banpu policies and procedures generally only apply to subsidiaries where Banpu has operational control and therefore, BPN is not directly involved in E&amp;S management of UMT and there is no formal E&amp;S reporting requirements from UMT to BPN.</p> <p>In the case of Durapower Holdings, as BPN had recently become a majority shareholder, BPN is still in the process of integrating management procedures between Durapower Holdings and BPN.</p>		
<b>4</b>	<b>Training Requirements</b>				
	Organise training to strengthen the capacity to manage environmental and social risks as part of the implementation of the ESMS.	ADB Safeguard Policy Statement, V.	<p>Banpu's Human Resources Management Policy includes a Training and Development Policy which specifies that the Human Resource Development is responsible for preparing the following for each employee/employee level:</p> <ul style="list-style-type: none"> <li>• A Training Roadmap which serves as a clear guideline on job training and development for each employee's level;</li> <li>• An annual Training and Development Plan including budget (which is 5% of the total salary of the employee); and</li> <li>• A medium term (two-year) training plan.</li> </ul> <p>The training provided is understood to include regulatory requirements, Quality, Safety, and Environmental (QSE) management standards and other functional and leadership competencies. The Human Resource Department will also arrange, handle, monitor, evaluate and record the outcome of employees' training and development.</p> <p>Banpu also has an induction training programme for new employees which covers HSEC topics including OHS, Environment, Community Engagement, Sustainability Assurance as well as introduction of the Banpu Orientation App which provides access to HSEC policies and procedures, includes a quiz on HSEC topics and can be used by staff to report unsafe acts.</p>		BPN and Durapower Holdings/Suzhou Durapower will need to prepare and implement a plan to align with Banpu's policies and procedures.

REF	ADB'S SAFEGUARD PRINCIPLES/ REQUIREMENTS	REFERENCE	COMMENTARY/ FINDINGS	RISK RANKING	CORRECTIVE ACTION
			Banpu's E&S policies and manuals are available through the Banpu Policy & Procedure Center (i.e. an intranet) which is currently accessible to all subsidiaries within Thailand. There are plans to expand the accessibility to subsidiaries in other countries.		
<b>5 Monitoring and Reporting</b>					
	<p>Implement E&amp;S Safeguards and to prepare periodic monitoring reports on the performance of their implementation including;</p> <p>Establish and maintain procedures to monitor the progress of implementation of safeguard plans;</p> <p>Verify the compliance with safeguard measures and their progress toward intended outcomes;</p> <p>Document and disclose monitoring results and identify necessary corrective and preventive actions in the periodic monitoring reports;</p> <p>Follow up on these actions to ensure progress toward the desired outcomes;</p> <p>Retain qualified and experienced external experts or qualified NGOs to verify monitoring information for projects with significant impacts and risks;</p> <p>Use independent advisory panels to monitor project implementation for highly complex and sensitive projects; and</p>	ADB SPS, B. Policy Delivery Process, 57. Monitoring and Reporting	<p>The Sustainability Assurance team is responsible for ensuring that all of Banpu's subsidiaries adhere to Banpu's policies and procedures, through monthly updates as well as annual audits involving sample checks of compliance reports from the projects of each subsidiary.</p> <p>Banpu discloses its annual reports and sustainability reports on its website (<a href="https://www.banpu.com/investor-relations/publications/sustainability-report">https://www.banpu.com/investor-relations/publications/sustainability-report</a>) and therefore information relating to environment and social matters are provided in the public domain.</p> <p>The latest 2022 Sustainability Report was prepared with reference to the GRI Standards and additional indicators from the GRI 12: Coal sector 2022 and the G4 electric utility sector disclosures. The scope of the Sustainability Report included business entities in which Banpu holds a greater than 50% of total shares and has management control. This would mean that UMT is excluded from the scope of the sustainability report, whilst Durapower Holdings should be included in future sustainability reports.</p> <p>A sample of a monthly reporting from BPN to Banpu was provided for review. The reporting appears to follow a non-structured format and included a broad range of project updates such as site assessments being conducted for solar projects and charging station, finalisation of OHS and environmental compliance checklist and addition of OHS health check-up programmes for applicable (at-risk) employees.</p> <p>In addition, a sample of the audit findings from BPN was provided for review, which included the gaps identified,</p>		<p>Enhance the monitoring and reporting procedures to:</p> <ul style="list-style-type: none"> <li>Establish routine and non-routine reporting requirements to ADB (including any ADB specific metrics); and</li> <li>Include E&amp;S monitoring requirements specific for UMT and Durapower Holdings (to be discussed with UMT and Durapower Holdings) in relation to the planned use of proceeds from ADB's loan.</li> </ul>

REF	ADB'S SAFEGUARD PRINCIPLES/ REQUIREMENTS	REFERENCE	COMMENTARY/ FINDINGS	RISK RANKING	CORRECTIVE ACTION
	Submit periodic monitoring reports on safeguard measures as agreed with ADB.		<p>corrective actions recommended and monitoring to track the implementation of the corrective action until closure.</p> <p>BPN also monitors OHS performance of its businesses, and a sample of the OHS tracker for the E-Mobility business was provided for review. There were four incidents/unsafe observations reported in 2023 regarding the charging stations and charging equipment. Corrective actions were recommended and tracked to closure.</p>		



**Table 5-2 Assessment of Key E&S Topics at the Corporate Level**

REF	ADB'S SAFEGUARD PRINCIPLES/ REQUIREMENTS	REFERENCE	COMMENTARY/ FINDINGS	RISK RANKING	CORRECTIVE ACTION
<b>1</b>	<b>Pollution Prevention and Abatement</b>				
	<p>Apply pollution prevention and control technologies and practices consistent with international good practices as reflected in internationally recognised standards such as the World Bank Group's Environmental, Health and Safety Guidelines. Adopt cleaner production processes and good energy efficiency practices. Avoid pollution, or, when avoidance is not possible, minimize or control the intensity or load of pollutant emissions and discharges, including direct and indirect greenhouse gases emissions, waste generation, and release of hazardous materials from their production, transportation, handling, and storage. Avoid the use of hazardous materials subject to international bans or phaseouts. Purchase, use, and manage pesticides based on integrated pest management approaches and reduce reliance on synthetic chemical pesticides.</p>	ADB Safeguard Requirement 1: Environment	<p>Banpu has a Waste Management Policy that is applicable to Banpu and all its subsidiaries where Banpu has management control. Overarching objectives regarding waste prevention and minimisation, recycling and proper disposal are described in this policy.</p> <p>The waste management policy is further supported by two Standard Practice Manuals on Waste Management, one for general waste and one for mineral waste. The Standard Practice Manual for general waste covers both non-hazardous and hazardous waste, and provides detailed guidance on waste management hierarchy, key waste management steps, waste identification and waste disposal methods. Table 2 of the manual lists down hazardous waste from the Energy Generation and Energy Technology business groups, which includes e-waste (e.g. inverters, transformers and other electrical/electronic equipment) and used vehicle batteries. Specifically, the manual prescribes that a waste manifest must be prepared for the hazardous waste being transferred and disposed of.</p> <p>It is noted from the manual that sites would establish their work procedure (WP) and/or work instruction (WI) (if applicable), and waste management plan as well as implement waste management program for general waste.</p> <p>At the BPN level, a waste management guideline for the E-Mobility business was provided for review which comprised mainly of flowcharts showing the general steps to take for handling hazardous waste from each business (i.e. MuvMi e-tuktuks, charging stations, electric cars). There were no specific procedures (i.e. site requirements, designated area, proper signage, proper ventilation, proper temperatures to avoid excessive heat, fire safety, leak containment, etc.) for storage and handling of the hazardous waste itself, which is understood to be the responsibility of BPN subsidiaries to prepare.</p>		None required at the corporate level, however, please see site-specific commentary in <i>Section 6</i> .

REF	ADB'S SAFEGUARD PRINCIPLES/ REQUIREMENTS	REFERENCE	COMMENTARY/ FINDINGS	RISK RANKING	CORRECTIVE ACTION
<b>2</b>	<b>Biodiversity Conservation and Sustainable Natural Resource Management</b>				
	Do not implement project activities in areas of critical habitats, unless (i) there are no measurable adverse impacts on the critical habitat that could impair its ability to function, (ii) there is no reduction in the population of any recognized endangered or critically endangered species, and (iii) any lesser impacts are mitigated. If a project is located within a legally protected area, implement additional programs to promote and enhance the conservation aims of the protected area. In an area of natural habitats, there must be no significant conversion or degradation, unless (i) alternatives are not available, (ii) the overall benefits from the project substantially outweigh the environmental costs, and (iii) any conversion or degradation is appropriately mitigated. Use a precautionary approach to the use, development, and management of renewable natural resources.	ADB Safeguard Requirement 1: Environment	<p>Banpu has a Biodiversity Policy that is applicable to Banpu and all its subsidiaries wherein Banpu has management control. It is also mentioned that this policy will be promoted to Banpu's joint ventures and throughout Banpu's supply chain.</p> <p>Based on the Biodiversity Policy, biodiversity impacts will be assessed in all operations and new projects, and a biodiversity management plan will be developed for all operations/projects identified as a high biodiversity value in the area. It is noted, though, that the policy did not refer to any specific international E&amp;S standards in defining some of the key biodiversity terms used (i.e. net positive impact, offset).</p> <p>With reference to the intended use of proceeds, the nature and location of the current operations of the Project render this topic not applicable. The Project has no significant direct demand on natural resources for its operations. None of the Project's existing sites are considered to be located in areas of critical or protected habitats. With respect to future developments, the nature of the business is such that the locations are likely to be in urban environments with relatively small footprints. As a result, the likelihood of encountering critical habitats is very low.</p>		None required.
<b>3</b>	<b>Health &amp; Safety</b>				
	There is an importance of providing safe and healthy working conditions to prevent accidents, injuries and disease. It asserts on the establishment of emergency preparedness and response measures to avoid or minimize risks to health and safety of individuals and communities.	<p>Safeguard Requirement 1: Environment</p> <p>Social Protection Strategy</p>	<p>Banpu has an Occupational Health and Safety Policy that is applicable to Banpu and all its subsidiaries wherein Banpu has management control. The policy covers the health and safety of employees, contractors and visitors (to Banpu's operations). Commitments include requirements to perform occupational health and safety (OHS) risk assessment for all operational activities and provide employees with OHS knowledge/training.</p> <p>In addition, there is a guideline developed by Banpu on how to carry out a Safety Risk Assessment. Completed Safety Risk</p>		None required at the corporate level, however, please see site-specific commentary in <i>Section 6</i> .

REF	ADB'S SAFEGUARD PRINCIPLES/ REQUIREMENTS	REFERENCE	COMMENTARY/ FINDINGS	RISK RANKING	CORRECTIVE ACTION
	<p>Social Protection Strategy. The strategy recommends the project proponent provides a safe and healthy working environment for its employees as well as its contractors/ subcontractors to comply with the national labour laws and take measures to comply with the core labour standards. It stresses on accounting for risks inherent to the project activities by identifying hazards, providing preventive and protective measures and trainings to staff, documenting near miss incidents and accidents and an Emergency Response Plan (ERP) to handle potential emergencies. The ADB SPS mandate that the identified Occupational Health and Safety issues must be identified, assessed, and addressed in an EIA for proposed projects.</p>		<p>Assessment forms for BPN's businesses where it has operational control (i.e. e-tuktuk, e-ferry, charging stations) were also provided for review which identified the risks and mitigations for the risks. For the e-tuktuk Safety Risk Assessment, this focussed on the battery, motor operation and charging software.</p> <p>An Accident Investigation Procedure has been prepared by Banpu to deal with accidents, and includes guidance on setting up an investigation team, investigating the accident and proper record keeping.</p> <p>At the BPN level, there are several work procedures developed to managed OHS for employees and contractors, including the following:</p> <ul style="list-style-type: none"> <li>• Safety, Occupational Health and Work Environment Manual;</li> <li>• Occupational Health and Safety Regulations for Contractors Vendors, Deliverers, Visitors;</li> <li>• Work Procedure on Personal Protective Equipment (PPE);</li> <li>• Work Procedure on Machine Safety;</li> <li>• Work Procedure on Contractor Management; and</li> <li>• Vendor Evaluation for Health and Safety Assessment.</li> </ul> <p>These work procedures have been developed to align with Banpu's policies as well as regulatory requirements. A sample work permit/inspection checklist for carrying out electrical system connection works at an electric vehicle charging station was also provided for review.</p> <p>In terms of emergency preparedness and response procedures, the Safety, Occupational Health and Work Environment Manual provides guidance on response team and procedures as well as site provisions (e.g. emergency exits signages). The expectation is for the subsidiaries to develop emergency prepares and response plans specific to their operations and activities.</p>		

REF	ADB'S SAFEGUARD PRINCIPLES/ REQUIREMENTS	REFERENCE	COMMENTARY/ FINDINGS	RISK RANKING	CORRECTIVE ACTION
<b>4</b>	<b>Physical Cultural Resources</b>				
	Conserve physical cultural resources and avoid destroying or damaging them by using field-based surveys that employ qualified and experienced experts during environmental assessment. Provide for the use of "chance find" procedures that include a pre-approved management and conservation approach for materials that may be discovered during project implementation.	Safeguard Requirement 1: Environment	<p>Whilst Banpu has a Guideline for Engagement with Indigenous Peoples which covers cultural heritage of Indigenous Peoples, there is no separate guideline specific to protection of cultural resources or a chance find procedure which is particularly relevant for construction activities.</p> <p>With reference to the planned use of proceeds, the nature of the operations of the Project mean that this topic not applicable. The core operations of the Project are unlikely to impinge on areas of significant cultural heritage value. With respect to future developments, the nature of the business is such that the locations are likely to be in urban environments with relatively small footprints. As a result, the likelihood of encountering cultural heritage is considered to be very low. It may be prudent to include a policy on protection of cultural resources or a chance find procedure in the Work Procedure on Contractor Management.</p>		None required. Also see overarching commentary and recommendations regarding E&S Screening, Categorisation and Risk Assessment in <i>Table 5-1</i> .
<b>5</b>	<b>Land Acquisition and Resettlement Safeguards</b>				
	SPS Appendix 2 Safeguard Requirements 2: Involuntary Resettlement para 25 indicates that the client is encouraged to acquire land and other assets through a negotiated settlement wherever possible, based on meaningful consultation with affected persons, including those without legal title to assets. A negotiated settlement will offer adequate and fair price for land and/or other assets. The client will ensure that any negotiations with displaced persons openly address the risks of asymmetry of information and bargaining power of the parties involved in such transactions. For this purpose, the borrower/client will	Safeguard Requirement 2: Involuntary Resettlement	<p>In Banpu's Human Rights Policy, Banpu commits to avoid causing or contributing on adverse human rights impacts through our activities and seek to prevent and mitigate such impacts. Specifically, the Human Rights Policy recognises the Right to Adequate Housing and Livelihoods commits to take steps to prevent or mitigate any potential or actual impacts of Banpu's operations on these rights, including by ensuring that Banpu's operations do not lead to forced evictions, involuntary resettlement, land grabbing, or loss of livelihoods.</p> <p>Banpu also has a Standard Practice Manual on Resettlement Management which applies to all business units under the operation of Banpu-owned or operated facilities. The manual provides guidance of reaching an agreement with the affected communities, engaging qualified experts, conducting consultations, developing and implementing a resettlement plan and monitoring the outcomes of the resettlement plan.</p>		None required. See also site-specific commentary in <i>Section 6</i> .

REF	ADB'S SAFEGUARD PRINCIPLES/ REQUIREMENTS	REFERENCE	COMMENTARY/ FINDINGS	RISK RANKING	CORRECTIVE ACTION
	engage an independent external party to document the negotiation and settlement processes. The borrower/client will agree with ADB on consultation processes, policies, and laws that are applicable to such transactions; third-party validation; mechanisms for calculating the replacement costs of land and other assets affected; and record-keeping requirements.		<p>Based on discussions during the site visit, it is understood that resettlement is more applicable in other, greenfield projects and investments of Banpu.</p> <p>In the context of the planned use of proceeds, the e-tuktuk facilities (i.e. offices, maintenance and repair workshop, training and R&amp;D centre) are situated on land leased directly by UMT/MuvMi Hero and not Banpu. E-tuktuks are being stored at the workshop and training centre. Involuntary resettlement is likely to be of a low risk (i.e. opening new offices or facilities for the e-tuktuks are likely to be in urban areas and within existing buildings with relatively small footprint).</p>		
<b>6</b>	<b>Identifying and Managing Impacts on Indigenous Peoples</b>				
	<p>Screen all projects to determine whether or not they have potential impacts on Indigenous Peoples.</p> <p>For projects with impacts on Indigenous Peoples, an Indigenous Peoples plan will be prepared. The plan's level of detail and comprehensiveness will be commensurate with the degree of impacts.</p> <p>The degree of impacts is determined by evaluating (i) the magnitude of the impact on Indigenous Peoples' customary rights of use and access to land and natural resources; socioeconomic status; cultural and communal integrity; health, education, livelihood systems, and social security status; or indigenous knowledge; and (ii) the vulnerability of the affected Indigenous Peoples.</p>	Safeguard Requirement 3 – Indigenous Peoples	<p>With reference to Banpu's Human Rights Policy, Banpu commits to respect the rights, interests, aspirations, culture and natural resource-based livelihoods of Indigenous Peoples in project design, development and operation. Banpu will apply the mitigation hierarchy to address adverse impacts and deliver sustainable benefits for Indigenous Peoples, and will work to obtain the Free, Prior and Informed Consent (FPIC) of Indigenous Peoples where significant adverse impacts are likely to occur.</p> <p>Banpu has a Guideline for Engagement with Indigenous Peoples which is applied to all business units under the operation of Banpu-owned or operated facilities. The guideline outlines key steps in collecting baseline information to inform decision making and building relationships with the local communities. It is noted that there is no reference to specific guidance on involvement with Indigenous Peoples (e.g. FPIC process or information disclosure to the Indigenous Peoples).</p> <p>An example of an Aboriginal Cultural Heritage Management Plan from Centennial Coal Company (i.e. a subsidiary of Banpu) for its coal operations in New South Wales was provided for review, although this is not related to the intended use of proceeds for this Project.</p>		None required.

REF	ADB'S SAFEGUARD PRINCIPLES/ REQUIREMENTS	REFERENCE	COMMENTARY/ FINDINGS	RISK RANKING	CORRECTIVE ACTION
			Given the nature of the relevant operations being considered, impacts on indigenous peoples are not considered applicable and are therefore screened out.		
<b>7</b>	<b>Main Stakeholder Groups and Stakeholder Engagement</b>				
	<p>Engage with communities, groups, or people affected by proposed projects, and with civil society through information disclosure, consultation, and informed participation in a manner commensurate with the risks to and impacts on affected communities. This:</p> <p>Begins early in the project preparation stage and is carried out on an ongoing basis throughout the project cycle;</p> <p>Provides timely disclosure of relevant and adequate information that is understandable and readily accessible to affected people;</p> <p>Is undertaken in an atmosphere free of intimidation or coercion;</p> <p>Is gender inclusive and responsive, and tailored to the needs of disadvantaged and vulnerable groups;</p> <p>Enables the incorporation of all relevant views of affected people and other stakeholders into decision making, such as project design, mitigation measures, the sharing of development benefits and opportunities, and implementation issues.</p>	<p>ADB SPS, B. Policy Delivery Process, 53, Consultation and Participation</p> <p>ADB's Public Communications Policy 2011</p>	<p>At the Banpu level, stakeholder engagement is carried out at the corporate level based on the international AA1000 Stakeholder Engagement Standard (AA1000SES) and reported in its sustainability reports. Based on the 2022 sustainability report, a broad range of stakeholders were identified, including employees, communities, customers, governments, suppliers, contractors, financial institutions, business partners, shareholders, investors and media and NGOs. Method of engagement for each stakeholder group are described, along with the identification of material topics and stakeholder interests.</p> <p>Banpu has a Community Engagement (Development) Policy that is applicable to Banpu and all its subsidiaries wherein Banpu has management control. It is also mentioned that this policy will be promoted to Banpu's joint ventures and throughout Banpu's supply chain. Several manuals and work procedures have also been developed by Banpu to support the policy, including the following:</p> <ul style="list-style-type: none"> <li>• Standard Practice Manual on Stakeholder Engagement;</li> <li>• Standard Practice Manual on Community Engagement Work;</li> <li>• Standard Practice Manual of Monitoring, Evaluation and Reporting of Community Engagement Work;</li> <li>• Work Procedure for Community Engagement Management Review at Country's Community Function; and</li> <li>• Work Procedure for Joint Management Review at Operational Sites with Country's Community Function.</li> </ul> <p>Based on the interviews during the site visit, it is understood that Banpu aims to design and implement community development programmes that truly create positive impact in the areas where Banpu operates in. The corporate social responsibility (CSR)</p>		None required at the corporate level, however, please see site-specific commentary in <i>Section 6</i> .

REF	ADB'S SAFEGUARD PRINCIPLES/ REQUIREMENTS	REFERENCE	COMMENTARY/ FINDINGS	RISK RANKING	CORRECTIVE ACTION
			<p>activities that Banpu has carried out are published in their annual reports and sustainability reports.</p> <p>In terms of identifying and managing project/site-specific impacts to local communities, Banpu has a Guideline for Community Consultative Committee (CCC) which is intended to be a group comprising local residents, interest groups, government agencies and company representatives who can support and provide a meaningful and effective communications and discussions with the community affected by the project/operation. Not every project will require a CCC (depending on the nature of the project). The CCC is intended to be an additional communication channel for information sharing, consultation and grievance management.</p>		
<b>8</b>	<b>Gender and Development</b>				
	<p>The Gender &amp; Development Policy recognises the need to improve the status of women and to promote their potential role in development practices. The strategy of the policy is based on the consideration of social justice and gender equity that investment in women is vital to achieving economic efficiency and growth. The key elements of the policy relates to the following:</p> <p><i>Gender Sensitivity:</i> Focuses on how the operations of the project proponent will affect women and men, and to take into account women's needs and perspectives in planning its operations.</p> <p><i>Gender Analysis:</i> Focuses on the systematic assessment of the impact of a project on men and women, and</p>	Gender & Development Policy 1998	<p>Banpu does not currently have any specific gender policies, however, there is a Human Rights policy and a Non-Discrimination and Anti-Harassment Policy (as part of the Human Resources Management Policy) that commits that:</p> <ul style="list-style-type: none"> <li>• Banpu will not discriminate against any individual or group on the basis of sex and other characteristics.</li> <li>• Banpu will respect the rights of vulnerable groups including women and other groups.</li> <li>• Banpu will promote diversity and inclusion in their operations and strive to create a workplace that is free from harassment, bullying, and any other form of discrimination.</li> <li>• Banpu will ensure that all employees and contractors are provided with equal opportunities for training and development, promotion, and remuneration as well as opportunities for input and feedback.</li> </ul> <p>Banpu's sustainability report includes a section on the proportion of female employees across its businesses (within the scope of the sustainability report) which is 14.5% of the total employees in 2022. The sustainability report also noted that due to the different business characteristics in each country, such as open-pit mining in Indonesia and underground mining in</p>		None required.



REF	ADB'S SAFEGUARD PRINCIPLES/ REQUIREMENTS	REFERENCE	COMMENTARY/ FINDINGS	RISK RANKING	CORRECTIVE ACTION												
	<p>on the economic and social relationship between them.</p> <p><i>Gender Planning:</i> Focuses on specific strategies that aim to bring about equal opportunities for men and women.</p> <p><i>Gender Mainstreaming:</i> Focuses on the consideration of gender issues in all aspects of the project proponent's operations, accompanied by efforts to encourage women's participation in the decision-making process in development activities.</p> <p><i>Agenda Setting:</i> Focuses on the formulation of strategies to reduce gender disparities and in developing plans and targets for women's and girls' education, health, legal rights, employment, and income-earning opportunities.</p>		Australia, the proportion of female employees varies across the business sectors. The proportion of female employees in the mining business is 4.4%, and 13.9% in the thermal power business.														
9 Labour and Social Protection																	
	<p>The ADB's SPS requires incorporation of social dimensions, such as core labour standards and gender issues, which are included in ADB's Social Protection Strategy. This also requires compliance with applicable labour laws in relation to projects by:</p> <p>Carrying out activities consistent with the intent of ensuring legally permissible equal opportunity, fair treatment and non-discrimination in relation to recruitment and hiring, compensation, working conditions</p>	<p>Social Protection Strategy (2001)</p> <p>ADB Gender and Development Policy (1998)</p> <p>Public Communication Policy (PCP) (2011)</p>	<p>As some overarching context, Thailand has ratified seven out of the ten fundamental ILO conventions:</p> <table><tr><th>CONVENTION</th><th>DATE</th><th>STATUS</th></tr><tr><td>C029 - Forced Labour Convention, 1930 (No. 29)</td><td>26 February 1969</td><td>In Force</td></tr><tr><td>C087 - Freedom of Association and Protection of the Right to Organise Convention, 1948 (No. 87)</td><td>-</td><td>Not ratified</td></tr><tr><td>C098 - Right to Organise and Collective Bargaining Convention, 1949 (No. 98)</td><td>-</td><td>Not ratified</td></tr></table>	CONVENTION	DATE	STATUS	C029 - Forced Labour Convention, 1930 (No. 29)	26 February 1969	In Force	C087 - Freedom of Association and Protection of the Right to Organise Convention, 1948 (No. 87)	-	Not ratified	C098 - Right to Organise and Collective Bargaining Convention, 1949 (No. 98)	-	Not ratified		None required.
CONVENTION	DATE	STATUS															
C029 - Forced Labour Convention, 1930 (No. 29)	26 February 1969	In Force															
C087 - Freedom of Association and Protection of the Right to Organise Convention, 1948 (No. 87)	-	Not ratified															
C098 - Right to Organise and Collective Bargaining Convention, 1949 (No. 98)	-	Not ratified															

REF	ADB'S SAFEGUARD PRINCIPLES/ REQUIREMENTS	REFERENCE	COMMENTARY/ FINDINGS			RISK RANKING	CORRECTIVE ACTION
	<p>and terms of employment for its workers (including prohibiting any form of discrimination against women during hiring and providing equal work for equal pay for men and women engaged by the client/borrower; and</p> <p>Not restricting its workers from developing a legally permissible means of expressing their grievances and protecting their rights regarding working conditions and terms of employment; and</p> <p>Engaging contractors and other providers of goods and services: who do not employ child labour or forced labour; who have appropriate management systems that will allow them to operate in a manner which is consistent with the intent of (a) ensuring legally permissible equal opportunity and fair treatment and non-discrimination for their workers and (b) not restricting their workers from developing a legally permissible means of expressing their grievances and protecting their rights regarding working conditions and terms of employment; and (c) whose subcontracts contain provisions, which are consistent with the two preceding paragraphs above.</p>		<p>C100 - Equal Remuneration Convention, 1951 (No. 100)</p> <p>C105 - Abolition of Forced Labour Convention, 1957 (No. 105)</p> <p>C111 - Discrimination (Employment and Occupation) Convention, 1958 (No. 111)</p> <p>C138 - Minimum Age Convention, 1973 (No. 138) Minimum age specified: 14 years</p> <p>C155 - Occupational Safety and Health Convention, 1981 (No. 155)</p> <p>C182 - Worst Forms of Child Labour Convention, 1999 (No. 182)</p> <p>C187 - Promotional Framework for Occupational Safety and Health Convention, 2006 (No. 187)</p>	<p>8 February 1999</p> <p>2 December 1969</p> <p>13 June 2017</p> <p>11 May 2004</p> <p>-</p> <p>16 February 2001</p> <p>23 March 2016</p>	<p>In Force</p> <p>In Force</p> <p>In Force</p> <p>In Force</p> <p>Not ratified</p> <p>In Force</p> <p>In Force</p>		
			<p>In turn, Banpu has also developed a number of its own policies and requirements, including a Human Rights Policy with commitments on the following aspects:</p> <ul style="list-style-type: none"> <li>• Freedom of Association and Rights to Collective Bargaining;</li> <li>• Non-discrimination, Diversity, Equity, and Inclusion;</li> <li>• Prevention of Human Trafficking, Forced Labor, and Child Labor;</li> <li>• Right to Life, Security, and Health;</li> <li>• Right to Adequate Housing and Livelihoods; and</li> <li>• Respect Indigenous Peoples.</li> </ul> <p>In terms of third-party suppliers, the Company has a Supplier Code of Conduct which requires suppliers to comply Banpu's requirements across the following aspects: Business Ethics,</p>				

REF	ADB'S SAFEGUARD PRINCIPLES/ REQUIREMENTS	REFERENCE	COMMENTARY/ FINDINGS	RISK RANKING	CORRECTIVE ACTION
			Labor and Human Rights, Occupational Health and Safety, Environment, Community and Society, Business Continuity, and Supply Chain Collaboration. The supplier questionnaire provided for review indicated that potential suppliers of Banpu will need to read and agree with the Supplier Code of Conduct before being considered for doing business with Banpu.		
<b>10 Grievance Redress Mechanism</b>					
	<p>Establish and maintain a grievance redress mechanism to receive and facilitate resolution of affected peoples' concerns and grievances regarding the project's environmental, affected persons and Indigenous Peoples concerns.</p> <p>The grievance redress mechanism should be scaled to the risks and impacts of the project. It should address affected people's concerns and complaints promptly, using an understandable and transparent process that is gender responsive, culturally appropriate, and readily accessible to all segments of the affected people.</p>	ADB Safeguards 1: Environmental, 2: Involuntary Resettlement and 3: Indigenous Peoples	<p>Banpu has a Standard Practice Manual for Community Complaint Management that is applied to all business units under the operation of Banpu-owned or operated facilities. This Community Complaint Management can be considered a grievance mechanism to handle and resolve possible disputes or grievances from local communities. A flowchart is provided with supporting guidance on receiving, handling, investigating and resolving a grievance. Templates are also provided for recording grievances and maintaining a grievance log.</p> <p>In addition, Banpu has a Whistleblower Policy that applies to Banpu company and affiliates companies in Thailand. It shall be adapted to Banpu's overseas subsidiaries and affiliates as deem fit. Based on the interviews during the site visit, there was one recent anonymous whistleblower case regarding the reporting of a Banpu employee running their own business whilst being a full-time employee of Banpu. The Human Resources department had investigated the case and deemed that the reported employee was not in violation of its employment rules and regulations.</p>		None required.

## 6 SITE COMPLIANCE AUDITS

As part of the Assessment, IBIS conducted visits to facilities related to the planned use of proceeds. Details on the findings from each Site are provided in the sections below.

### 6.1 UMT/MUVMI HERO AND E-TUKTUK OPERATIONS

#### 6.1.1 Site Visit

A visit was undertaken to the UMT/MuvMi Hero facilities (i.e. offices, training and R&D centre and maintenance and repair workshop) on 14 July 2023. The following key management personnel led the site presentation and/or walkover:

- Dr. Krisada (Mick) Kritayakirana, Co-founder and CEO;
- Mr. Supapong (Ty) Kitiwattanasak, Co-founder;
- Mr. Pipat Tangsiripaisan, Co-founder;
- Mr. Nithi (Bank) Rattanachinda, Corporate Assistant;
- Representatives from UMT and MuvMi Hero's Human Resources and Health and Safety Teams.

Collectively, the representatives from UMT/MuvMi Hero are referred to as "Site Representatives" in this subsection.

The site visit commenced with a site presentation of E&S management by UMT/MuvMi Hero at the main office (UMT also has several other smaller offices within the same premises with the growth of the company since incorporation). This was followed by a site visit to the R&D and e-tuktuk driving training centre (which also has a "mega hub" or a large-scale e-tuktuk charging station). Subsequently, the site visit continued to the repair and maintenance workshop for the e-tuktuks and ended with a visit to two e-tuktuk charging stations in the vicinity.

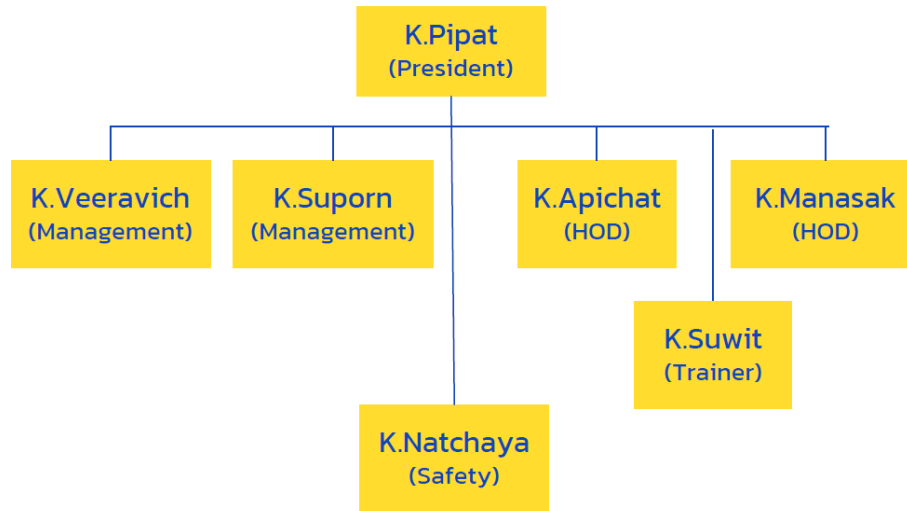
E-tuktuks were parked at both the R&D and e-tuktuk driving training centre as well as the maintenance workshop. This included e-tuktuks that have been newly assembled but are awaiting the procurement of tuktuk vehicle registration plates before the e-tuktuks can be mobilised on the roads.

#### 6.1.2 Summary of Compliance to E&S Legislation

There was no consolidated permit register provided for review to demonstrate a consolidated system for tracking all permits, licenses and lease agreements (including the validity period) required for the business operations. Due to the nature of operations of UMT/MuvMi Hero, E&S permits and licenses are generally limited (i.e. there have been no EIA requirements or waste discharge permitting requirements for UMT/MuvMi Hero's premises and activities). UMT/MuvMi Hero typically leases the land/premises from the land/building owner.

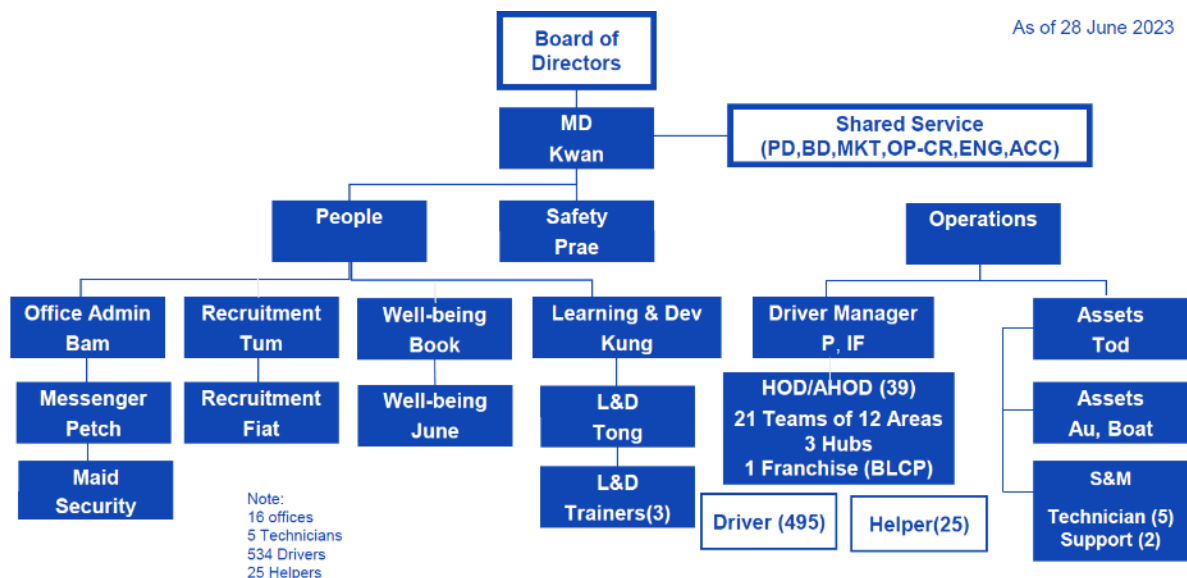
### 6.1.3 E&S Management Systems

An E&S Committee has been established at the UMT level which provides oversight of E&S management for all of UMT's operations and carries out monthly meetings to ensure UMT's policies and standards are being adhere to (Figure 6-1).



**Figure 6-1 UMT E&S Committee Structure**

At the MuvMi Hero level, there is a defined organisation structure covering the labour aspects, health and safety, driver management and asset (i.e. including the e-tuktuks) management (Figure 6-2).



Note. HOD = Head of Driver; AHOD – Assistance Head of Driver

**Figure 6-2 MuvMi Hero Organisational Structure**

Whilst there is no formal E&S management system in place, there are management procedures in place to oversee, environmental, social, health and safety issues for UMT/MuvMi Hero, including:

There are E&S related policies developed at both the UMT and MuvMi Hero levels, as follows:

#### UMT

- Environmental Policy;
- Business Ethics Policy;
- Policy on Management System Standards; and
- Employment Rules and Regulations.

#### MuvMi Hero

- Safety Policy;
- Transportation Policy;
- Drug-free Policy ;
- People Policy (covering Employment terms, Human Rights, Labour practices, Employee Code of Conduct);
- Privacy Policy, including Recruitment Privacy Policy and Consent for Use of Personal Information (in line with local regulations); and
- Employment Rules and Regulations, and supporting Human Resources procedures on recruitment and salary increment.

### 6.1.4 Reputational Risk Review

A review of publicly available information associated with E&S risks for UMT and MuvMi Hero was conducted, and the findings are presented in *Annex B: Reputational Risk Review (RRR)*. Based on the RRR, no E&S issues or concerns associated with UMT and MuvMi Hero were identified from the internet search to the date when the review was undertaken.

### 6.1.5 Assessment of the Site's E&S Implementation

The findings for UMT and MuvMi Hero are summarised in the following tables:

- Table 6-1 Compliance Review on ADB's Safeguard Requirement 1 – Environment;
- Table 6-2 Compliance Review on ADB's Safeguard Requirement 2 – Involuntary Resettlement;
- Table 6-3 Compliance Review: Safeguard Requirements 3 – Indigenous Peoples; and
- Table 6-4 Compliance Review: Labour and Working Conditions

Note that in the sections below regarding ADB's Safeguard Principles/Requirements are an abbreviated inclusion of the requirements in view of space constraints, as such the full documents should be referred to where further detail is required.

**Table 6-1 Compliance Review: ADB Safeguard Requirement 1 – Environment**

REF	ADB'S SAFEGUARD PRINCIPLES/REQUIREMENTS	REFERENCE	COMMENTARY/ FINDINGS	RISK RANKING	CORRECTIVE ACTION
<b>1</b>	<b>Environmental Assessment</b>				
	<p>Use a screening process for each proposed project, as early as possible, to determine the appropriate extent and type of environmental assessment so that appropriate studies are undertaken commensurate with the significance of potential impacts and risks.</p> <p>Conduct an environmental assessment for each proposed project to identify potential direct, indirect, cumulative, and induced impacts and risks to physical, biological, socioeconomic (including impacts on livelihood through environmental media, health and safety, vulnerable groups, and gender issues), and physical cultural resources in the context of the project's area of influence. Assess potential transboundary and global impacts, including climate change. Use strategic environmental assessment where appropriate.</p> <p>Examine alternatives to the project's location, design, technology, and components and their potential environmental and social impacts and document the rationale for selecting the particular alternative proposed. Also consider the no project alternative.</p>	<p>Environmental Safeguard, Policy Principles 1, 2 and 3</p>	<p>UMT/MuvMi Hero currently operates at the following premises:</p> <ul style="list-style-type: none"> <li>• Offices;</li> <li>• A R&amp;D and e-tuktuk driving training centre (which also has a mega hub and parking for e-tuktuks);</li> <li>• A repair and maintenance workshop for the e-tuktuks (including parking for e-tuktuks); and</li> <li>• Mega hubs within Bangkok (the charging station portion of the mega hub remains under the operation of BNGL, but the area for e-tuktuk parking is relatively larger than the charging station in these mega hubs and therefore the overall land area is leased by MuvMi Hero).</li> </ul> <p>These areas and business activities reportedly do not require any EIA. UMT leases the land/premises from the land/building owner.</p> <p>UMT has an environmental policy with the aim to enhance resource efficiency and minimise environmental impacts associated with the operations. However, there are no formal environmental risk assessments or screening procedures in place to identify the potential environmental risks and impacts from UMT/MuvMi Hero's operations. Whilst recognising that the risks are generally low given the nature of the operations, nonetheless, there are environmental impacts associated with the business activities (i.e. hazardous materials and hazardous waste, solid waste, surface water runoff) that should be identified and appropriately mitigated and managed in a systematic manner, especially since there are plans to expand the operations which would also affect the magnitude of any potential environmental impacts.</p> <p>No activities under the ADB Prohibited Investment Activities List have been identified at the UMT/MuvMi Hero sites.</p>		<p>UMT/MuvMi Hero to develop an E&amp;S Risk Assessment Tool for its operations covering key environmental, social, health and safety risks and impacts relevant to its operations. The risk register should be updated whenever there are changes to the existing/routine activities, or expanded to include new activities/components (e.g. a solar powered "mega hub" charging station).</p> <p>As an overarching recommendation, UMT/MuvMi Hero to develop a plan for preparing and updating the policies and procedures, as well as an E&amp;S training plan for the newly developed/enhanced policies and procedures.</p>



REF	ADB'S SAFEGUARD PRINCIPLES/REQUIREMENTS	REFERENCE	COMMENTARY/ FINDINGS	RISK RANKING	CORRECTIVE ACTION
<b>2</b>	<b>Environmental Planning and Management</b>				
	Avoid, and where avoidance is not possible, minimize, mitigate, and/or offset adverse impacts and enhance positive impacts by means of environmental planning and management. Prepare an environmental management plan (EMP) that includes the proposed mitigation measures, environmental monitoring and reporting requirements, related institutional or organizational arrangements, capacity development and training measures, implementation schedule, cost estimates, and performance indicators. Key considerations for EMP preparation include mitigation of potential adverse impacts to the level of no significant harm to third parties, and the polluter pays principle.	Environmental Safeguard, Policy Principle 4	There is no formal environmental management plan developed by UMT/MuvMi Hero, given limited E&S impacts associated with the operations. There are some environmental management practices in place to manage the disposal and recycling of general wastes and hazardous waste, although the handling of hazardous waste could be better managed (see Ref #7 Pollution Prevention and Abatement below for further commentary). There is merit in establishing an environmental management plan commensurate to the risks of the business operations, particularly regarding management of non-hazardous and hazardous waste generated from the e-tuktuk operation, maintenance and end of life disposal.		UMT/MuvMi Hero to develop a waste management plan for non-hazardous and hazardous waste generated from the e-tuktuk operation, maintenance and end of life disposal.
<b>3</b>	<b>Consultation and Participation</b>				
	Carry out meaningful consultation with affected people and facilitate their informed participation. Ensure women's participation in consultation. Involve stakeholders, including affected people and concerned nongovernment organizations, early in the project preparation process and ensure that their views and concerns are made known to and understood by decision makers and taken into account. Continue consultations with stakeholders throughout project implementation as necessary to address issues related to environmental assessment. Establish a grievance redress mechanism to receive and facilitate	Environmental Safeguard, Policy Principle 5	<p>There is no formal stakeholder engagement plan developed by UMT/MuvMi Hero, although there are stakeholder engagement practices in place. Based on the site visit interviews, it is understood that UMT/MuvMi recognises the importance of stakeholder engagement in their business activities and reportedly do actively engage with relevant stakeholders every time they are looking to develop a new service area for the e-tuktuks. This involves consultations with the existing local tuktuk associations, relevant authorities and any communities or businesses around the planned e-tuktuk charging station.</p> <p>There is currently no formal external grievance mechanism, however there are procedures being practiced. MuvMi Hero has established an external communication channel wherein a contact number is displayed on the e-tuktuk itself. There are also contact details on the company website. MuvMi Hero staff will sort through the grievances/reports and filter to the</p>		<p>Develop a stakeholder engagement process including guidance procedures and templates for proper documentation.</p> <p>Formalise an external complaint handling procedure that builds on the existing practices and consolidates a standardise approach (e.g. when to contact the complainant for more information and provide a feedback to the</p>

REF	ADB'S SAFEGUARD PRINCIPLES/REQUIREMENTS	REFERENCE	COMMENTARY/ FINDINGS	RISK RANKING	CORRECTIVE ACTION
	resolution of the affected people's concerns and grievances regarding the project's environmental performance.		appropriate personnel for response. Generally these complaints are associated with three aspects: (i) operations (e.g. service areas, accessibility, waiting time), (ii) system (i.e. user interface of the application) and (iii) driver behaviour. MuvMi Hero has a tracking system in place to ensure that corrective actions are implemented and tracked to closure.		complainant, timeline for each step).  The external complaint handling procedure should allow for anonymous grievances to be raised and addressed.
<b>4</b>	<b>Information Disclosure</b>				
	Disclose a draft environmental assessment (including the EMP) in a timely manner, before project appraisal, in an accessible place and in a form and language(s) understandable to affected people and other stakeholders. Disclose the final environmental assessment, and its updates if any, to affected people and other stakeholders.	Environmental Safeguard, Policy Principle 6	Given limited E&S impacts associated with the UMT/MuvMi Hero's operations (and no EIA or other environmental monitoring requirements), there are no environmental related disclosures carried out by the company.		None required.
<b>5</b>	<b>Monitoring &amp; Reporting</b>				
	Implement the EMP and monitor its effectiveness. Document monitoring results, including the development and implementation of corrective actions, and disclose monitoring reports.	Environmental Safeguard, Policy Principle 7	<p>As noted earlier (see Ref #2), there is no formal environmental management plan developed by UMT/MuvMi Hero, given limited E&amp;S impacts associated with the operations.</p> <p>There are also no reporting requirements between UMT/MuvMi Hero and BPN since BPN owns less than 50% of its shareholding and is not considered a majority shareholder. However, based on the site visit interviews, UMT/MuvMi Hero has agreed to periodically inform BPN on any incidents/accidents associated with its operations.</p> <p>An E&amp;S Committee has been established at the UMT level which provides oversight of E&amp;S management for all of UMT's operations and carries out monthly meetings to ensure UMT's policies and standards are being adhere to.</p> <p>At the MuvMi Hero level, there is a defined organisation structure covering the labour aspects, health and safety, driver</p>		<p>Please refer to Ref #1, as well as recommendations under the corporate level audit.</p> <p>In addition, suggest that UMT discusses and agrees with BPN on an E&amp;S Monitoring and Reporting Procedure, and an E&amp;S organisation (with E&amp;S focal persons identified) to manage E&amp;S procedures implementation, E&amp;S monitoring and reporting.</p>

REF	ADB'S SAFEGUARD PRINCIPLES/REQUIREMENTS	REFERENCE	COMMENTARY/ FINDINGS	RISK RANKING	CORRECTIVE ACTION
			<p>management and asset (i.e. including the e-tuktuks) management</p> <p>These is currently no designated E&amp;S focal point defined (which would help support on monitoring and reporting requirements to ADB through Banpu, in relation to the planned use of proceeds from ADB's loan).</p> <p>Information regarding monitoring and reporting of H&amp;S related incidents and accidents are discussed further below (see Ref #8).</p>		
<b>6</b>	<b>Biodiversity Conservation and Sustainable Natural Resources Management</b>				
	<p>Do not implement project activities in areas of critical habitats, unless (i) there are no measurable adverse impacts on the critical habitat that could impair its ability to function, (ii) there is no reduction in the population of any recognized endangered or critically endangered species, and (iii) any lesser impacts are mitigated. If a project is located within a legally protected area, implement additional programs to promote and enhance the conservation aims of the protected area. In an area of natural habitats, there must be no significant conversion or degradation, unless (i) alternatives are not available, (ii) the overall benefits from the project substantially outweigh the environmental costs, and (iii) any conversion or degradation is appropriately mitigated. Use a precautionary approach to the use, development, and management of renewable natural resources.</p>	<p>Environmental Safeguard, Policy Principle 8</p>	<p>The premises of UMT/MuvMi are located within Bangkok city and do not overlap with any national protected areas or internationally recognises important biodiversity areas. UMT/MuvMi Hero also has no significant demand on natural resources for its operations (and is focused on reducing its carbon footprint through its adoption of electric powered tuktuks). With respect to future developments, the nature of the business is such that the locations are likely to be in urban environments with relatively small footprints. As a result, the likelihood of encountering biodiversity receptors is very low.</p> <p>Overall, the nature and location of the current operations of UMT/MuvMi Hero render this topic not applicable.</p>		None required.

REF	ADB'S SAFEGUARD PRINCIPLES/REQUIREMENTS	REFERENCE	COMMENTARY/ FINDINGS	RISK RANKING	CORRECTIVE ACTION
<b>7</b>	<b>Pollution Prevention and Abatement</b>				
a	<p>Pollution Prevention, Resource Conservation</p> <p>Apply pollution prevention and control technologies and practices consistent with international good practices as reflected in internationally recognized standards such as the World Bank Group's Environmental, Health and Safety Guidelines. Adopt cleaner production processes and good energy efficiency practices. Avoid pollution, or, when avoidance is not possible, minimize or control the intensity or load of pollutant emissions and discharges, including direct and indirect greenhouse gases emissions, waste generation, and release of hazardous materials from their production, transportation, handling, and storage. Avoid the use of hazardous materials subject to international bans or phaseouts.</p>	Environmental Safeguard, Policy Principle 9	<p>Based on the site visit findings, environmental impacts associated with the e-tuktuk operations and the current management procedures include the following:</p> <ul style="list-style-type: none"> <li>Hazardous materials and waste: There is no formal management plan for hazardous materials and waste (i.e. chemicals, lubricants, brake fluid from the vehicles, used batteries from the vehicles). Some practices were observed on-site with areas for improvement, i.e. there are designated areas for storing the wastes but there was no labelling of the area or containers. Also, in the case of used brake fluid from the vehicles, UMT reportedly collects this on-site at the maintenance workshop and sells it to a local business owner for recycling. No waste disposal contracts or service agreements for waste collection were available for review.</li> <li>Solid waste: Separated waste containers for general waste were noted provided at all UMT/MuvMi premises with the aim of recycling waste where possible. No waste disposal contracts or service agreements for waste collection were available for review.</li> <li>Surface run-off: Washing of e-tuktuks are reportedly carried out at designated carwash areas and UMT/MuvMi Heo does not carry out any vehicle washing activities within its premises, so contamination in the surface runoff is a low risk.</li> </ul>		Please refer to Ref #1.
b	Wastes	Environmental Safeguard, Policy Principle 9	There is no formal waste management plan (covering both non-hazardous and hazardous waste) with procedures on proper storage and disposal.		Please see Ref #1.
c	Hazardous Materials	Environmental Safeguard,	There is limited use of hazardous materials expected from the maintenance activities of e-tuktuk including lubrication oil, paint,		Please see Ref #1.

REF	ADB'S SAFEGUARD PRINCIPLES/REQUIREMENTS	REFERENCE	COMMENTARY/ FINDINGS	RISK RANKING	CORRECTIVE ACTION
		Policy Principle 9	etc. As such there are no management procedures in place for the safe storage and use of hazardous materials.		
d	Pesticide Use and Management	Environmental Safeguard, Policy Principle 9	Based on the site visit findings, no pesticides were reportedly stored on-site and no pesticides are routinely required for the site operations and activities.		None required.
e	Greenhouse Gas Emissions	Environmental Safeguard, Policy Principle 9	<p>MuvMi Hero is the first company in the public transportation sector (in Thailand) to register with the Thailand Voluntary Emission Reduction Program (T-VER), which is a GHG emission reduction program, developed by the Thailand Greenhouse Gas Management Organization (TGO) to promote and support all sectors to voluntarily participate in GHG emission reduction program. Participants can sell the reduction unit or carbon credit, called "TVER", within the voluntary domestic market. In this regard, TGO has prescribed rules and procedures for project development, GHG emission reduction methodology, and certification of emission reduction credit. All projects participating in the T-VER program must reduce GHG emission and/or result in carbon sequestration within Thailand's jurisdiction.</p> <p>Whilst there was no estimation of GHG emissions from the e-tuktuk operations, UMT has estimated the amount of accumulated GHG reduction from its e-tuktuk operations (compared against other fuel-powered transportation i.e. passenger car) from January 2022 to date at about 1,500 tCO<sub>2</sub>. UMT has targeted to increase its accumulated GHG reductions emissions to 2,700 tCO<sub>2</sub> equivalent by 2028.</p> <p>It is noted that besides through the use of electricity, the e-tuktuk operations aim to improve energy efficiency through the promotion of ride-sharing and reducing the GHG emissions per passenger. UMT/MuvMi Hero is also carrying out R&amp;D work to implement solar energy at the e-tuktuk charging stations (with patent pending).</p>		None required.

REF	ADB'S SAFEGUARD PRINCIPLES/REQUIREMENTS	REFERENCE	COMMENTARY/ FINDINGS	RISK RANKING	CORRECTIVE ACTION
8	<b>Health &amp; Safety</b>				
a	<p>Worker Health &amp; Safety</p> <p>Provide workers with safe and healthy working conditions and prevent accidents, injuries, and disease.</p> <p>Under the Social Protection Strategy it recommends the project proponent to provide safe and healthy working environment for its employees as well as its contractors/ subcontractors and comply with the national labour laws and take measures to comply with the core labour standards. The ADB SPS mandate that the identified Occupational health and safety issues must be identified, assessed, and addressed in an EIA for proposed projects.</p>	<p>Environmental Safeguard, Policy Principle 10</p> <p>Social Protection Strategy.</p>	<p>UMT/MuvMi Hero has established the following health and safety related policies:</p> <ul style="list-style-type: none"> <li>• Safety, Occupational Health and Working Environment Policy;</li> <li>• Transportation Safety Policy; and</li> <li>• Drug Free Policy.</li> </ul> <p>In terms of procedures, UMT/MuvMi Hero has developed manuals and standard operating procedures (SOPS) covering the use of an EV charger, charging the e-tuktuk, using a fire extinguisher, handling fires at the charger and vehicle. UMT/MuvMi has also developed a fire fighting and protection plan, and participates in the fire evacuation drills organised annually at all charging stations.</p> <p>Specific to e-tuktuk driver safety, MuvMi Hero has a comprehensive "fit-to-work" programme comprising of visual observations and safety briefs conducted every morning. Normal operating hours for the drivers are capped at 12 hours (i.e. 8-hour shift and 3 hours overtime), however, the actual driving times re reportedly less due to stand-by time during off-peak hours e.g. late morning, early afternoon. In addition, drivers cannot drive longer than 3 continuous hours as the e-tuktuk system will alert the driver to recharge the e-tuktuk at the closest available charging station.</p> <p>All new drivers are required to undergo a 5-day (about 30-hour) driving training course at the MuvMi training centre. Existing drivers may be required to undergo retraining they are reported (e.g. by customers) for unsafe driving. MuvMi Hero also organises safety awareness and sharing sessions every year.</p> <p>UMT/MuvMi Hero has implemented internal accident investigation and statistics since approximately 2021. Accidents are classified into two main categories including:</p> <ul style="list-style-type: none"> <li>• Accident impacting people that is further divided into three types including first aid case, outpatient and inpatient; and</li> </ul>		<p>Develop a risk register (i.e. a hazard identification and risk assessment procedure) for its operations covering key environmental, social, health and safety risks and impacts relevant to its operations.</p> <p>Develop a Personal Protective Equipment (PPE) program for the maintenance workshop.</p>

REF	ADB'S SAFEGUARD PRINCIPLES/REQUIREMENTS	REFERENCE	COMMENTARY/ FINDINGS	RISK RANKING	CORRECTIVE ACTION
			<ul style="list-style-type: none"> <li>Accident related to property damage.</li> </ul> <p>No accident investigation or tracking procedure/records were provided for review. It is noted that near-miss cases were not included in the current accident statistics (as drivers tend to be unwilling to self-report). However, drivers to report on unsafe road sections which are shared with other drivers for their awareness and accident prevention.</p> <p>For the maintenance workshop, PPE were observed to be available for maintenance staff (i.e. safety glasses, gloves, safety shoes, apron, etc.) The PPE were stored at the designated area and appear to be in a good condition. However, there was no formal PPE program or Hazard Identification and Risk Assessment programme demonstrated.</p>		
b	<p>Community Health &amp; Safety</p> <p>Establish preventive and emergency preparedness and response measures to avoid, and where avoidance is not possible, to minimize, adverse impacts and risks to the health and safety of local communities.</p>	Environmental Safeguard, Policy Principle 10	<p>Given the nature and location of UMT/MuvMi Hero's facilities and operations, adverse impacts to nearby community are considered limited. In order to minimise potential community impacts due to unsafe behaviour and road accidents, MuvMi Hero has established and implemented the following safe driving programs including:</p> <ul style="list-style-type: none"> <li>A speed limit of 45km/hour, exceeding which will trigger a warning sign on the driver's screen;</li> <li>A 5-day (about 30-hour) driving training for all drivers which includes defensive driving techniques;</li> <li>Daily vehicle inspection program where broken / malfunctioning key vehicle parts e.g. turn signals, lights, etc. will reportedly be fixed at the parking area before commencing the work shift. Vehicles with major safety lapses e.g. brake pad is too thin, leaked hydraulic system, etc. will be sent for major repair at the service station;</li> <li>Daily morning visual inspection of the driver to ensure fit-to-work conditions;</li> <li>Weekly alcohol testing of all drivers to align with the Transportation Safety Policy. Note that alcohol testing is random without fixed schedule and all drivers shall be tested weekly;</li> </ul>		Establish an emergency preparedness and response plan for the maintenance workshop and training centre.



REF	ADB'S SAFEGUARD PRINCIPLES/REQUIREMENTS	REFERENCE	COMMENTARY/ FINDINGS	RISK RANKING	CORRECTIVE ACTION
			<ul style="list-style-type: none"> <li>• Criminal screening of prospective driver wherein the driver shall not have committed any crimes (including any traffic accidents during the last 10 years); and</li> <li>• Client feedback on driver's behaviour, etc. to minimise potential community impacts due to unsafe behaviour and road accidents. Reportedly, all e-Tuktuk has a Type 2+ insurance coverage for potential road accidents, which cover public liability. Drivers who have been reported for unsafe driving will be required to undergo retraining at the MuvMi training centre.</li> </ul> <p>In addition, annual drug testing (for amphetamines) was reportedly performed as part of the annual staff medical screening program. It is noted that the drug testing is not random (unlike the alcohol testing).</p> <p>All e-tuktuks are equipped with a fire extinguisher. The passenger seats are also equipped with seat belts (which are otherwise not provided in a traditional tuktuk). The drivers also undergo first aid training and are able to provide simple first aid for passengers if needed (e.g. heat stress incidents).</p> <p>UMT/MuvMi has also developed a fire fighting and protection plan, and participates in the fire evacuation drills organised annually at all charging stations. For the other facilities (i.e. offices, training centre, maintenance workshop), UMT/MuvMi reportedly participates in the fire evacuation drills organised by the building management. During the site visit, it was noted that residential houses are located adjacent to both the training centre and maintenance workshop. A large number of e-tuktuks are parked in both the training centre and maintenance workshop, and faulty/spent batteries are stored at the training centre (waiting for collection by BNGL). Whilst fire extinguishers were provided at all the facilities, there was no clear sign indicating the location of the fire extinguishers, and no clear signages indicating the direction of evacuation or the emergency muster point.</p>		

REF	ADB'S SAFEGUARD PRINCIPLES/REQUIREMENTS	REFERENCE	COMMENTARY/ FINDINGS	RISK RANKING	CORRECTIVE ACTION
<b>9</b>	<b>Physical Cultural Resources</b>				
	Conserve physical cultural resources and avoid destroying or damaging them by using field-based surveys that employ qualified and experienced experts during environmental assessment. Provide for the use of "chance find" procedures that include a pre-approved management and conservation approach for materials that may be discovered during project implementation.	Environmental Safeguard, Policy Principle 11	Given the location of UMT/MuvMi Hero's facilities and operations, impacts to physical cultural resources are considered unlikely.		None required.

**Table 6-2 Compliance Review: Safeguard Requirements 2: Involuntary Resettlement**

REF	ADB'S SAFEGUARD PRINCIPLES/REQUIREMENTS	REFERENCE	COMMENTARY/ FINDINGS	RISK RANKING	CORRECTIVE ACTION
<b>1</b>	<b>Screening</b>				
	Screen the project early on to identify past, present, and future involuntary resettlement impacts and risks. Determine the scope of resettlement planning through a survey and/or census of displaced persons, including a gender analysis, specifically related to resettlement impacts and risks	Involuntary Resettlement, Policy Principle 1	<p>UMT/MuvMi Hero leases the land/premises of its facilities (i.e. offices, training and R&amp;D centre, maintenance workshop, "mega hub" charging stations) from the land/building owner. UMT/MuvMi Hero has not engaged in any land acquisition, and is not aware of any previous land acquisition or land disputes.</p> <p>There are no formal land acquisition and lease policy, procedures and tools to avoid involuntary resettlement impacts and impacts to vulnerable groups.</p>		UMT/MUVMI Hero to develop land acquisition and lease tool to avoid IR impacts and impacts to vulnerable groups.

**Table 6-3 Compliance Review: Safeguard Requirements 3: Indigenous Peoples**

REF	ADB'S SAFEGUARD PRINCIPLES/REQUIREMENTS	REFERENCE	COMMENTARY/ FINDINGS	RISK RANKING	CORRECTIVE ACTION
1	<b>Screening</b>				
	Screen early on to determine (i) whether Indigenous Peoples are present in, or have collective attachment to, the project area; and (ii) whether project impacts on Indigenous Peoples are likely.	Indigenous Peoples, Policy Principle 1	Given the location and nature of the operations being considered, impacts on indigenous peoples are not considered applicable and are therefore screened out.		None required.

**Table 6-4 Compliance Review: Labour and Working Conditions**

REF	ADB'S SAFEGUARD PRINCIPLES/REQUIREMENTS	REFERENCE	COMMENTARY/ FINDINGS	RISK RANKING	CORRECTIVE ACTION
1	<b>Child Labour</b>				
	Appropriate steps should be taken to ensure that procurement of goods and services, contractors, subcontractors, and consultants, comply with the country's labour legislation as well as with the Core Labour Standards. The Core Labour Standards consist of (a) freedom of association and the effective recognition of the right to collective bargaining, (b) the abolition of all forms of forced or compulsory labour, (c) effective abolition of child labour, and (d) elimination of discrimination in respect of employment and occupation.	ADB's Social Protection Strategy (2001)	<p>Thailand has ratified seven out of the ten fundamental ILO conventions, including the ILO conventions on Minimum Age Convention, 1973 (No. 138) and Worst Forms of Child Labour Convention, 1999 (No. 182).</p> <p>UMT/MuvMi Hero does not have a specific policy on Child Labour, but commits to comply with all laws and regulations and uphold human rights practices (through UMT's Business Ethics Policy and MuvMi Hero's People Policy). Identification documents would be reviewed as part of the employment process (including for outsourced labour, which are expected to be the responsibility of the labour outsourcing company). It is noted that in the context of e-tuktuk drivers, the minimum age for obtaining a three-wheeler driving license is 22 years old.</p> <p>Overall, given the nature of the operations onsite (i.e. driving of three-wheeler vehicles, office-based workers), the risk of the use of child labour is considered to be low. No child labour was observed during the site visit. It is recommended that</p>		Develop enhanced HR Policy explicitly complying with core labor standards and national labour laws.

REF	ADB'S SAFEGUARD PRINCIPLES/REQUIREMENTS	REFERENCE	COMMENTARY/ FINDINGS	RISK RANKING	CORRECTIVE ACTION
			UMT/MuvMi Hero develop an enhanced HR Policy explicitly complying with core labour standards and national labor laws.		
<b>2</b>	<b>Forced Labour</b>				
	Appropriate steps should be taken to ensure that procurement of goods and services, contractors, subcontractors, and consultants, comply with the country's labour legislation as well as with the Core Labour Standards. The Core Labour Standards consist of (a) freedom of association and the effective recognition of the right to collective bargaining, (b) the abolition of all forms of forced or compulsory labour, (c) effective abolition of child labour, and (d) elimination of discrimination in respect of employment and occupation.	Social Protection Strategy (2001)	<p>Thailand has ratified seven out of the ten fundamental ILO conventions, including the ILO conventions on Forced Labour, 1930 (No. 29) and Abolition of Forced Labour Convention, 1957 (No. 105).</p> <p>UMT/MuvMi Hero does not have a specific policy on Forced Labour, but commits to comply with all laws and regulations and uphold human rights practices (through UMT's Business Ethics Policy and MuvMi Hero's People Policy). As part of the employment process, employee's ID documents would be requested to verify their age but UMT/MuvMi Hero only retains a copy of the ID documents and does not withhold any employees' original ID documents. The same standard is expected of the labour outsourcing company.</p> <p>Overall, given the nature of the business the likelihood of forced labour is considered to be low. It is recommended that UMT/MuvMi Hero develop an enhanced HR Policy explicitly complying with core labor standards and national labour laws.</p>		Develop enhanced HR Policy explicitly complying with core labor standards and national labour laws.
<b>3</b>	<b>Payment of Wages</b>				
	Appropriate steps should be taken to ensure that procurement of goods and services, contractors, subcontractors, and consultants, comply with the country's labour legislation as well as with the Core Labour Standards. The Core Labour Standards consist of (a) freedom of association and the effective recognition of the right to collective bargaining, (b) the abolition of all forms of forced or compulsory labour, (c) effective abolition of child labour, and (d) elimination of	Social Protection Strategy (2001)	<p>Workers interviewed on-site during the site visit expressed they had a copy of their contract and understood the terms and conditions. Actual UMT employee agreements were not available for review but a template of the UMT employment agreement was provided for review which specifies the gross base salary of the employee as well as other provisions and benefits (e.g. performance-based bonus, social security contributions, group insurance, leave etc. Salaries will be credited directly to the employee's bank account on a monthly basis.</p> <p>For the e-tuktuk drivers, sample contracts were not available for review but it is understood that salary is paid twice a month (as a compromise to cash flow concerns raised by the drivers</p>		<p>Develop enhanced HR Policy explicitly complying with core labor standards and national labour laws.</p> <p>The internal complaint handling procedure should allow for anonymous grievances to be raised and addressed.</p>

REF	ADB'S SAFEGUARD PRINCIPLES/REQUIREMENTS	REFERENCE	COMMENTARY/ FINDINGS	RISK RANKING	CORRECTIVE ACTION
	discrimination in respect of employment and occupation.		<p>they would be used to daily earnings when previously working as traditional tuktuk drivers):</p> <ul style="list-style-type: none"> <li>• On the 15th of each month: 7,500 THB from the base salary is paid to the drivers; and</li> <li>• On the 25th of each month: the remainder of the base salary will be paid, along with any overtime salary or allowance.</li> </ul> <p>Based on the management interview and driver interviews, there have been no reports of late or due payment of salaries.</p> <p>Both the UMT and MuvMi Hero working regulations describe an employee grievance mechanism with general procedures for how to receive, investigate and resolve grievances. There have been no employee grievances reported to date for the office-based workers. For the drivers, MuvMi Hero implements a tracking system that has recorded 304 grievances to-date. These grievances related to driver feedback on the system, operations, the e-tuktuks, work instructions, supervisors, the HR team, co-workers and others. MuvMi Hero tracks the grievances to closure. A total of 205 grievances (or 67.4% of the total) have been solved, the remaining grievances are mainly about the systems and operations which would take a relatively longer time to resolve.</p> <p>It was noted during the site visit management interviews that the grievance mechanisms currently do not allow for anonymous grievances to be considered. Details of the complainant are required for accountability and verification for further investigation, whilst protecting the privacy of the complainant during the investigation process. The internal complaint handling procedure should allow for anonymous grievances to be raised and addressed. It is recommended that UMT/MuvMi Hero develop an enhanced HR Policy explicitly complying with core labor standards and national labour laws.</p>		

REF	ADB'S SAFEGUARD PRINCIPLES/REQUIREMENTS	REFERENCE	COMMENTARY/ FINDINGS	RISK RANKING	CORRECTIVE ACTION
<b>4</b>	<b>Working Hours and Overtime</b>				
	Appropriate steps should be taken to ensure that procurement of goods and services, contractors, subcontractors, and consultants, comply with the country's labour legislation as well as with the Core Labour Standards. The Core Labour Standards consist of (a) freedom of association and the effective recognition of the right to collective bargaining, (b) the abolition of all forms of forced or compulsory labour, (c) effective abolition of child labour, and (d) elimination of discrimination in respect of employment and occupation.	Social Protection Strategy (2001)	<p>Based on the template of the UMT employment agreement, the working hours for office employees are defined as not more than 48 hours per week, which is aligned with the Thailand labour law. Records for tracking working hours have not yet been provided for review.</p> <p>For the e-tuktuk drivers (employed under MuvMi Hero), working hours are typically an 8-hour work shift a day, with no more than three overtime hours a day. This is in compliance and lower than the Thailand labour requirements which caps the maximum overtime hours at 36 hours a week (or six hours a day). The drivers get one day off every week. It is recommended that UMT/MuvMi Hero develop an enhanced HR Policy explicitly complying with core labor standards and national labour laws.</p>		Develop enhanced HR Policy explicitly complying with core labour standards and national labour laws.
<b>5</b>	<b>Non-Discrimination and Equal Opportunity</b>				
	Appropriate steps should be taken to ensure that procurement of goods and services, contractors, subcontractors, and consultants, comply with the country's labour legislation as well as with the Core Labour Standards. The Core Labour Standards consist of (a) freedom of association and the effective recognition of the right to collective bargaining, (b) the abolition of all forms of forced or compulsory labour, (c) effective abolition of child labour, and (d) elimination of discrimination in respect of employment and occupation.	Social Protection Strategy (2001)	<p>Thailand has ratified seven out of the ten fundamental ILO conventions, including the ILO convention on Discrimination (Employment and Occupation) Convention (No. 111).</p> <p>UMT/MuvMi Hero does not have a specific policy on equal opportunity and non-discrimination, but commits to comply with all laws and regulations and uphold human rights practices (through UMT's Business Ethics Policy and MuvMi Hero's People Policy).</p> <p>MuvMi Hero has developed recruitment procedures (separate for drivers and office/general workers) to ensure standardisation of the recruitment process. It is noted that under the recruitment procedure for office/general workers, successful candidates will need to undergo pre-employment physical check up to ensure that the candidates do not have any of the following diseases:</p> <ul style="list-style-type: none"> <li>• Tuberculosis;</li> <li>• Leprosy;</li> <li>• Drug addict;</li> </ul>		<p>Enhance HR policies to explicitly comply with core labour standards.</p> <p>The internal complaint handling procedure should allow for anonymous grievances to be raised and addressed.</p>

REF	ADB'S SAFEGUARD PRINCIPLES/REQUIREMENTS	REFERENCE	COMMENTARY/ FINDINGS	RISK RANKING	CORRECTIVE ACTION
			<ul style="list-style-type: none"> <li>• Alcoholism;</li> <li>• Elephantiasis;</li> <li>• Infectious skin diseases; and</li> <li>• Colour blindness.</li> </ul> <p>There were no such pre-employment health checkup requirements included in the recruitment procedure for the drivers, although some requirements would be relevant for safety consideration in the context of driving (i.e. no history of drug abuse or alcohol abuse, no colour blindness). Further, based on the site visit interviews, it is understood that MuvMi Hero carries out criminal screening of prospective drivers wherein the driver shall not have committed any crimes (including any traffic accidents) during the last 10 years. This is currently not indicated in the recruitment procedure.</p>		
<b>6</b>	<b>Freedom of Association</b>				
	Appropriate steps should be taken to ensure that procurement of goods and services, contractors, subcontractors, and consultants, comply with the country's labour legislation as well as with the Core Labour Standards. The Core Labour Standards consist of (a) freedom of association and the effective recognition of the right to collective bargaining, (b) the abolition of all forms of forced or compulsory labour, (c) effective abolition of child labour, and (d) elimination of discrimination in respect of employment and occupation.	Social Protection Strategy (2001)	<p>UMT/MuvMi Hero does not have a specific policy on freedom of association, but commits to comply with all laws and regulations and uphold human rights practices (through UMT's Business Ethics Policy and MuvMi Hero's People Policy).</p> <p>There is currently no workers union in place (for either the office based employees or the e-tuktuk drivers). Based on the site visit interviews, there has reportedly been no request from the employees to establish a workers union as employees are free to raise any concerns that they have.</p> <p>As noted above, both the UMT and MuvMi Hero working regulations describe an employee grievance mechanism with general procedures for how to receive, investigate and resolve grievances.</p>		Develop enhanced HR Policy explicitly complying with core labour standards and national labor laws.
<b>7</b>	<b>Worker Accommodation</b>				
	Appropriate steps should be taken to ensure that procurement of goods and services, contractors, subcontractors, and consultants, comply with the country's labour legislation as well as with the Core	Social Protection Strategy (2001)	UMT/MuvMi Hero does not operate or provide any workers' accommodations for its employees.		None required.



REF	ADB'S SAFEGUARD PRINCIPLES/REQUIREMENTS	REFERENCE	COMMENTARY/ FINDINGS	RISK RANKING	CORRECTIVE ACTION
	Labour Standards. The Core Labour Standards consist of (a) freedom of association and the effective recognition of the right to collective bargaining, (b) the abolition of all forms of forced or compulsory labour, (c) effective abolition of child labour, and (d) elimination of discrimination in respect of employment and occupation.				
8	<b>Supply Chain Management</b>				
	Appropriate steps should be taken to ensure that procurement of goods and services, contractors, subcontractors, and consultants, comply with the country's labour legislation as well as with the Core Labour Standards. The Core Labour Standards consist of (a) freedom of association and the effective recognition of the right to collective bargaining, (b) the abolition of all forms of forced or compulsory labour, (c) effective abolition of child labour, and (d) elimination of discrimination in respect of employment and occupation.	Social Protection Strategy (2001)	<p>UMT/MuvMi Hero does not have a supplier management procedure or a supplier code of conduct (which would require all of their suppliers to comply with the policies and standards of UMT/MuvMi Hero).</p> <p>There are currently procurement procedures in place to ensure that suppliers' bids are being assessed and suppliers are engaged on a fair and transparent manner. It is understood that there are no E&amp;S considerations in the supplier screening requirements.</p> <p>Suppliers of UMT/MuvMi Hero include mainly office supplies and electrical components and spare parts. In terms of the e-tuktuks, UMT/MuvMi Hero currently engages Thai Rung Union Car Public Company Limited (Thai Rung) to assemble and supply the e-tuktuks. It is understood that there are no E&amp;S requirements in the supplier contract (which was not provided for review). Based on the Thai Rung company website, Thai Rung has an Environmental Policy and Safety Policy in place, and has also received ISO certification for environmental management system (ISO 14001).</p> <p>Regarding the planned of purchase of 1,500 electric e-tuktuks, it is understood that there is no exclusivity in place between UMT/MuvMi Hero and Thai Rung.</p>		Include E&S requirements in the supplier and contractor procurement and management procedure that takes into consideration E&S requirements.

REF	ADB'S SAFEGUARD PRINCIPLES/REQUIREMENTS	REFERENCE	COMMENTARY/ FINDINGS	RISK RANKING	CORRECTIVE ACTION
9	<b>Gender</b>				
	<p>The policy recognises the need to improve the status of women and to promote their potential role in development practices. The strategy of the policy is based on the consideration of social justice and gender equity that investment in women is vital to achieving economic efficiency and growth. The key elements of the policy relates to the following:</p> <p><i>Gender Sensitivity:</i> Focuses on how the operations of the project proponent will affect women and men, and to take into account women's needs and perspectives in planning its operations.</p> <p><i>Gender Analysis:</i> Focuses on the systematic assessment of the impact of a project on men and women, and on the economic and social relationship between them.</p> <p><i>Gender Planning:</i> Focuses on specific strategies that aim to bring about equal opportunities for men and women.</p> <p><i>Gender Mainstreaming:</i> Focuses on the consideration of gender issues in all aspects of the project proponent's operations, accompanied by efforts to encourage women's participation in the decision-making process in development activities.</p> <p><i>Agenda Setting:</i> Focuses on the formulation of strategies to reduce gender disparities and in developing plans and targets for women's and girls' education,</p>	<p>Gender and Development Policy (1998).</p>	<p>UMT/MuvMi commits to comply with all laws and regulations and uphold human rights practices (through UMT's Business Ethics Policy and MuvMi Hero's People Policy). These include labour conditions and benefits for female employees.</p> <p>Based on the site visit presentation, it is understood that currently more than half (51%) of UMT's 95 employees are female, with positions in various departments including accounting, business, corporate services, operations and product development. As for the drivers, 40 out of the 534 drivers are women.</p> <p>In terms of site facilities, it was noted during the site visit that the MuvMi office has a single toilet within its premises, but the wider main building premises has gender-segregated toilets. For the e-tuktuk charging stations (as well as the training centre and maintenance workshop), the availability of toilets would depend on the building/car park management.</p> <p>As noted above, both the UMT and MuvMi Hero working regulations describe an employee grievance mechanism with general procedures for how to receive, investigate and resolve grievances. There have been employee feedback regarding the general office facilities, which the UMT management have acknowledged and there are also plans to consolidate all the UMT offices (in view of the company's expansion in recent years)</p>		None required.

REF	ADB'S SAFEGUARD PRINCIPLES/REQUIREMENTS	REFERENCE	COMMENTARY/ FINDINGS	RISK RANKING	CORRECTIVE ACTION
	health, legal rights, employment, and income-earning opportunities.				

## 6.2 BNGL AND E-TUKTUK CHARGING STATIONS

### 6.2.1 Site Visit

A visit was undertaken to sample of e-tuktuk charging stations within Bangkok as part of the site visit to UMT/MuvMi Hero facilities on 14 July 2023 and was led by the same personnel detailed in *Section 6.1.1*.

The e-tuktuk charging stations viewed during the site visit were mainly established within the parking lots of buildings (three of such charging stations were visited, included one at the Banpu office building). There was also a “mega hub” charging station located in the MuvMi Hero training centre. Fire extinguishers are provided at each of the charging stations

### 6.2.2 Summary of Compliance to E&S Legislation

Due to the nature of operations of the e-tuktuk charging stations, E&S permits and licenses are generally limited (i.e. there have been no EIA requirements or waste discharge permitting requirements). BNGL typically leases the land/premises from the land/building owner to set up a charging station.

### 6.2.3 E&S Management Systems

Based on the management interview with BPN, BNGL is an entity that was originally set up to handle the leasing aspect of the energy service providing business (due to unique regulations concerning leasing businesses), but has evolved to cover a wider range of business activities. There are currently no employees engaged under BNGL. Employees involved in the construction and operation of the e-tuktuk charging stations are employees of BPN (who are also involved in the other business activities of BPN). There are reportedly plans to reconsolidate the E-mobility business of BPN under BNGL.

On this basis, BNGL fully adopts Banpu’s policies as well as BPN’s work procedures that are applicable to the construction and operation of the e-tuktuk charging stations.

### 6.2.4 Reputational Risk Review

A review of publicly available information associated with E&S risks for BNGL was conducted, and the findings are presented in *Annex B: Reputational Risk Review (RRR)*. Based on the RRR, no E&S issues or concerns associated with BNGL were identified from the internet search to the date when the review was undertaken.

### 6.2.5 Assessment of the Site’s E&S Implementation

The findings for the e-tuktuk charging stations are summarised in the following tables:

- Table 6-5 Compliance Review on ADB's Safeguard Requirement 1 – Environment;
- Table 6-6 Compliance Review on ADB's Safeguard Requirement 2 – Involuntary Resettlement;
- Table 6-7 Compliance Review: Safeguard Requirements 3 – Indigenous Peoples; and
- Table 6-8 Compliance Review: Labour and Working Conditions

Note that in the sections below regarding ADB's Safeguard Principles/Requirements are an abbreviated inclusion of the requirements in view of space constraints, as such the full documents should be referred to where further detail is required.

**Table 6-5 Compliance Review: ADB Safeguard Requirement 1 – Environment**

REF	ADB'S SAFEGUARD PRINCIPLES/REQUIREMENTS	REFERENCE	COMMENTARY/ FINDINGS	RISK RANKING	CORRECTIVE ACTION
<b>1</b>	<b>Environmental Assessment</b>				
	<p>Use a screening process for each proposed project, as early as possible, to determine the appropriate extent and type of environmental assessment so that appropriate studies are undertaken commensurate with the significance of potential impacts and risks.</p> <p>Conduct an environmental assessment for each proposed project to identify potential direct, indirect, cumulative, and induced impacts and risks to physical, biological, socioeconomic (including impacts on livelihood through environmental media, health and safety, vulnerable groups, and gender issues), and physical cultural resources in the context of the project's area of influence. Assess potential transboundary and global impacts, including climate change. Use strategic environmental assessment where appropriate.</p> <p>Examine alternatives to the project's location, design, technology, and components and their potential environmental and social impacts and document the rationale for selecting the particular alternative proposed. Also consider the no project alternative.</p>	Environmental Safeguard, Policy Principles 1, 2 and 3	<p>The construction and operation of the e-tuktuks charging stations reportedly do not require any EIA or any other environmental or health and safety related permit. For typical charging stations (i.e. located in the carpark of buildings with a few e-tuktuk parking lots provided at the charging station), BNGL leases the land/premises from the land/building owner so there has reportedly been no requirement to obtain any waste discharge permits.</p> <p>There are Hazard Identification and Risk Assessment procedures prepared by BPN, and completed Hazard Identification and Risk Assessment forms were provided for review covering the E-Mobility business (including e-tuktuks and EV charging stations in general) as well as operation and maintenance (O&amp;M) work in general. The risks focus on health and safety and cover mainly the electrical and fire hazard risks associated with the battery and battery charger, and general O&amp;M risks such as travelling to site, working at height, electrical works, working in confined spaces etc.</p> <p>It is noted that environmental risks (i.e. waste management, hazardous waste management) are currently not formally identified and mitigated, whilst recognising that the environmental risks are low given the nature and scale of the operations (i.e. construction and operation of the charging stations).</p> <p>Regarding the storage of electronic and hazardous materials and waste (i.e. mainly new and old/spoilt batteries) at the BNGL level, it is understood that BNGL currently rents a storage unit from a third party logistics centre operated by Bangpoo Intermodal Systems Co., Ltd. (BISCO) There are currently no environmental screening reviews and mitigation developed by BNGL for the storage of electronic and hazardous materials and waste.</p>		Develop a waste management plan (covering non-hazardous and hazardous waste) to include handling, labelling, storage, transport and disposal procedures applicable to BNGL's energy service provider scope (i.e. the construction and operation of the e-tuktuk charging stations, storage of new and old/spoilt batteries associated with the e-tuktuks).

REF	ADB'S SAFEGUARD PRINCIPLES/REQUIREMENTS	REFERENCE	COMMENTARY/ FINDINGS	RISK RANKING	CORRECTIVE ACTION
<b>2</b>	<b>Environmental Planning and Management</b>				
	Avoid, and where avoidance is not possible, minimize, mitigate, and/or offset adverse impacts and enhance positive impacts by means of environmental planning and management. Prepare an environmental management plan (EMP) that includes the proposed mitigation measures, environmental monitoring and reporting requirements, related institutional or organizational arrangements, capacity development and training measures, implementation schedule, cost estimates, and performance indicators. Key considerations for EMP preparation include mitigation of potential adverse impacts to the level of no significant harm to third parties, and the polluter pays principle.	Environmental Safeguard, Policy Principle 4	There is no formal environmental management plan developed by BNGL specific to the construction and operation of e-tuktuk charging stations, given limited E&S impacts associated. However, there is merit in establishing an environmental management plan commensurate to the risks of the business operations (or at least identifying the appropriate mitigation measures as part of a screening process).		Please refer to Ref #1.
<b>3</b>	<b>Consultation and Participation</b>				
	Carry out meaningful consultation with affected people and facilitate their informed participation. Ensure women's participation in consultation. Involve stakeholders, including affected people and concerned nongovernment organizations, early in the project preparation process and ensure that their views and concerns are made known to and understood by decision makers and taken into account. Continue consultations with stakeholders throughout project implementation as necessary to address issues related to environmental assessment. Establish a grievance redress mechanism to receive and facilitate	Environmental Safeguard, Policy Principle 5	<p>There is no formal stakeholder engagement plan or external grievance mechanism developed by BNGL for the e-tuktuk charging stations. Reportedly, a contact number of BPN is to be displayed at the charging stations for any public feedback, however this was not observed at the charging stations visited during the site visit. Rather, a QR code managed by MuvMi was displayed. The construction of an e-tuktuk charging station also takes a relatively short time (i.e. around one to two weeks) and therefore there is no formal external communication procedure in place (e.g. display of contact details at the construction site of the charging station).</p> <p>Given the location of the e-tuktuks charging stations (i.e. typically a relatively small footprint leased from an existing building such as the parking lot), impacts (e.g. noise, dust, waste) to external stakeholders may be limited and transient. Therefore, a formal stakeholder engagement plan may not be</p>		None required.



REF	ADB'S SAFEGUARD PRINCIPLES/REQUIREMENTS	REFERENCE	COMMENTARY/ FINDINGS	RISK RANKING	CORRECTIVE ACTION
	resolution of the affected people's concerns and grievances regarding the project's environmental performance.		warranted, although there should be a standardised external communication procedure in place that is applicable to all the e-tuktuk charging stations in case of any feedback/grievances.		
<b>4</b>	<b>Information Disclosure</b>				
	Disclose a draft environmental assessment (including the EMP) in a timely manner, before project appraisal, in an accessible place and in a form and language(s) understandable to affected people and other stakeholders. Disclose the final environmental assessment, and its updates if any, to affected people and other stakeholders.	Environmental Safeguard, Policy Principle 6	Given limited E&S impacts associated with the e-tuktuk charging stations (and no EIA or other environmental monitoring requirements), there are no environmental related disclosures carried out by BNGL specific to the construction and operation of the charging stations.		None required.
<b>5</b>	<b>Monitoring &amp; Reporting</b>				
	Implement the EMP and monitor its effectiveness. Document monitoring results, including the development and implementation of corrective actions, and disclose monitoring reports.	Environmental Safeguard, Policy Principle 7	<p>As noted earlier (see Ref #2), there is no formal environmental management plan developed by BNGL specific to the construction and operation of the e-tuktuk charging stations, given limited E&amp;S impacts.</p> <p>Since BNGL is a fully owned subsidiary under BPN and BPN a fully owned subsidiary under Banpu, there are monitoring and reporting requirements between BNGL and Banpu (through BPN). As noted under the corporate ESMS review, a sample of a monthly reporting from BPN to Banpu was provided for review. The reporting appears to follow a non-structured format and included a broad range of project updates such as site assessments being conducted for solar projects and charging station, finalisation of OHS and environmental compliance checklist and addition of OHS health check-up programmes for applicable (at-risk) employees.</p> <p>Information regarding monitoring and reporting of H&amp;S related incidents and accidents are discussed further below (see Ref #8).</p>		None required.

REF	ADB'S SAFEGUARD PRINCIPLES/REQUIREMENTS	REFERENCE	COMMENTARY/ FINDINGS	RISK RANKING	CORRECTIVE ACTION
<b>6</b>	<b>Biodiversity Conservation and Sustainable Natural Resources Management</b>				
	Do not implement project activities in areas of critical habitats, unless (i) there are no measurable adverse impacts on the critical habitat that could impair its ability to function, (ii) there is no reduction in the population of any recognized endangered or critically endangered species, and (iii) any lesser impacts are mitigated. If a project is located within a legally protected area, implement additional programs to promote and enhance the conservation aims of the protected area. In an area of natural habitats, there must be no significant conversion or degradation, unless (i) alternatives are not available, (ii) the overall benefits from the project substantially outweigh the environmental costs, and (iii) any conversion or degradation is appropriately mitigated. Use a precautionary approach to the use, development, and management of renewable natural resources.	Environmental Safeguard, Policy Principle 8	<p>The e-tuktuk charging stations are located within Bangkok city and tend to be within existing buildings. The operation of the e-tuktuk charging stations also has no significant demand on natural resources for its operations. With respect to future developments, the nature of the business is such that the locations are likely to be in urban environments with relatively small footprints. As a result, the likelihood of encountering biodiversity receptors is very low.</p> <p>Overall, the nature and location of the current operations of the e-tuktuk charging stations render this topic not applicable.</p>		None required.
<b>7</b>	<b>Pollution Prevention and Abatement</b>				
a	<p>Pollution Prevention, Resource Conservation</p> <p>Apply pollution prevention and control technologies and practices consistent with international good practices as reflected in internationally recognized standards such as the World Bank Group's Environmental, Health and Safety Guidelines. Adopt cleaner production processes and good energy efficiency practices. Avoid pollution, or, when avoidance is not possible, minimize or control the intensity</p>	Environmental Safeguard, Policy Principle 9	<p>Based on the site visit findings and management interviews, environmental impacts associated with the e-tuktuk charging stations and the current management procedures include the following:</p> <ul style="list-style-type: none"> <li>Hazardous materials and waste: There is no formal management plan for hazardous materials and waste (i.e. electrical components of the charging stations, new and old/spoilt batteries associated with the e-tuktuks) that provides a standardised, good practice approach to the proper handling, storage, transport and disposal of electronic and hazardous waste and materials. BPN has developed e-waste management</li> </ul>		Please refer to Ref #1.

REF	ADB'S SAFEGUARD PRINCIPLES/REQUIREMENTS	REFERENCE	COMMENTARY/ FINDINGS	RISK RANKING	CORRECTIVE ACTION
	or load of pollutant emissions and discharges, including direct and indirect greenhouse gases emissions, waste generation, and release of hazardous materials from their production, transportation, handling, and storage. Avoid the use of hazardous materials subject to international bans or phaseouts.		<p>guideline which provides simplified flow-charts on how to handle the e-waste generated from the e-mobility business of BPN but there are no specific procedures (e.g. site requirements, designated area, proper signage, proper ventilation, proper temperatures avoiding excessive heat, fire safety, leak containment) for storage and handling of the hazardous waste itself.</p> <p>It is understood that BNGL currently stores the e-tuktuk batteries at a third party logistics centre (operated by BISCO) and expects BISCO to be responsible for the management of the batteries. Regarding the disposal of hazardous waste, BPN has a service agreement in place with a licensed hazardous waste collector to collect and dispose of batteries, solar panels and electronic equipment. A sample hazardous waste manifest for the disposal of solar photovoltaic panels by BPN was provided for review.</p> <ul style="list-style-type: none"> <li>• Solid waste: Some general waste is expected from the construction and O&amp;M of the e-tuktuk charging stations, and it is not clear how these wastes are managed (except that this should be in compliance with local regulations).</li> <li>• Noise and dust: These are mainly associated with the construction activities for the charging stations, and are expected to be minimal and transient.</li> </ul>		
b	Wastes	Environmental Safeguard, Policy Principle 9	As noted above, there is no formal waste management plan (covering both non-hazardous and hazardous waste) with procedures on proper storage and disposal.		Please refer to Ref #1.
c	Hazardous Materials	Environmental Safeguard, Policy Principle 9	There is limited use of hazardous materials expected from the O&M activities of the e-tuktuk charging stations including paint chemicals, etc. As such there are no management procedures in place for the safe storage and use of hazardous materials.		Please refer to Ref #1.

REF	ADB'S SAFEGUARD PRINCIPLES/REQUIREMENTS	REFERENCE	COMMENTARY/ FINDINGS	RISK RANKING	CORRECTIVE ACTION
d	Pesticide Use and Management	Environmental Safeguard, Policy Principle 9	Based on the site visit findings, no pesticides were reportedly stored on-site and no pesticide required for the site operations and activities.		None required.
e	Greenhouse Gas Emissions	Environmental Safeguard, Policy Principle 9	GHG emissions and reporting by BNGL are covered under Banpu's reporting requirements (for subsidiaries in which Banpu has management control). The Sustainability Assurance team is responsible for ensuring that all of Banpu's subsidiaries adhere to Banpu's policies and procedures, through monthly updates as well as annual audits involving sample checks of compliance reports from the projects of each subsidiary.		None required.
<b>8</b>	<b>Health &amp; Safety</b>				
a	<p>Worker Health &amp; Safety</p> <p>Provide workers with safe and healthy working conditions and prevent accidents, injuries, and disease.</p> <p>Under the Social Protection Strategy it recommends the project proponent to provide safe and healthy working environment for its employees as well as its contractors/ subcontractors and comply with the national labour laws and take measures to comply with the core labour standards. The ADB SPS mandate that the identified Occupational health and safety issues must be identified, assessed, and addressed in an EIA for proposed projects.</p>	<p>Environmental Safeguard, Policy Principle 10</p> <p>Social Protection Strategy.</p>	<p>As noted under the corporate ESMS review, BPN's OHS work procedures are applicable to the e-tuktuk charging stations. Completed Hazard Identification and Risk Assessment forms were provided for review which identified the health and safety risks of the charging stations such as electrical and fire hazard risks associated with the battery and battery charger, and general O&amp;M risks such as travelling to site, working at height, electrical works, working in confines spaces etc.</p> <p>Based on the management interview with BPN, it is understood that construction of charging stations was typically carried out by a contractor, Evolt Technology Co., Ltd. (which BPN has 20% shareholding in). Examples of completed job safety analysis (JSA), energy isolation work permit and construction work permit were provided by BPN to illustrate the OHS procedures in place. Construction of the charging stations will be supervised by a BPN project manager (who is also trained and registered as a Safety Officer in Supervisory Level) whilst O&amp;M activities for the charging stations will be carried out BPN technicians.</p> <p>OHS incidents at the charging stations are also reported to BPN. Sample communication records (via email) of OHS incidents indicate that an incident is reported to the Banpu Next Customer Service, which is then forwarded to the E-Mobility</p>		None required.

REF	ADB'S SAFEGUARD PRINCIPLES/REQUIREMENTS	REFERENCE	COMMENTARY/ FINDINGS	RISK RANKING	CORRECTIVE ACTION
			<p>Operation Services Manager who will update in the OHS tracking spreadsheet and also update BPN HSE Manager. A sample of the OHS Incident and investigation form (for one unsafe act in June 2023) was also provided for review, which included photographs of the unsafe act (i.e. storage of materials behind the e-tuktuk near the charging point) as well as the corrective actions recommended (i.e. warning to the driver) and tracked to closure.</p> <p>Training programmes and procedures follow that of Banpu. Based on the management interview with BPN, training includes technical and health and safety courses relevant to the e-tuktuk O&amp;M activities carried out by the technicians.</p>		
b	Community Health & Safety  Establish preventive and emergency preparedness and response measures to avoid, and where avoidance is not possible, to minimize, adverse impacts and risks to the health and safety of local communities.	Environmental Safeguard, Policy Principle 10	For potential emergency during installation and inspection of the charging station, BPN was reportedly implemented a "buddy system" for field staff performing routine inspection of the charging station. An informal protocol to call the BPN head office or the respective line manager/supervisor for support during an emergency accident is in place. However, there was no formal emergency response plan developed including emergency contact number and communication protocol.		Develop a formal, simple emergency preparedness and response plan commensurate to the risks and operations of BNGL's energy service provider scope
9	<b>Physical Cultural Resources</b>				
	Conserve physical cultural resources and avoid destroying or damaging them by using field-based surveys that employ qualified and experienced experts during environmental assessment. Provide for the use of "chance find" procedures that include a pre-approved management and conservation approach for materials that may be discovered during project implementation.	Environmental Safeguard, Policy Principle 11	Given the location of the e-tuktuk charging stations (i.e. within existing buildings), impacts to physical cultural resources are considered unlikely.		None required.

**Table 6-6 Compliance Review: Safeguard Requirements 2: Involuntary Resettlement**

REF	ADB'S SAFEGUARD PRINCIPLES/REQUIREMENTS	REFERENCE	COMMENTARY/ FINDINGS	RISK RANKING	CORRECTIVE ACTION
1	<b>Screening</b>				
	Screen the project early on to identify past, present, and future involuntary resettlement impacts and risks. Determine the scope of resettlement planning through a survey and/or census of displaced persons, including a gender analysis, specifically related to resettlement impacts and risks	Involuntary Resettlement, Policy Principle 1	For typical charging stations (i.e. located in the carpark of buildings with a few e-tuktuk parking lots provided at the charging station), BNGL leases the land for the e-tuktuk charging stations from the land/building owner. BNGL has not engaged in any land acquisition for the purpose of the e-tuktuk charging stations, and is not aware of any previous land acquisition or land disputes.		None required.

**Table 6-7 Compliance Review: Safeguard Requirements 3: Indigenous Peoples**

REF	ADB'S SAFEGUARD PRINCIPLES/REQUIREMENTS	REFERENCE	COMMENTARY/ FINDINGS	RISK RANKING	CORRECTIVE ACTION
1	<b>Screening</b>				
	Screen early on to determine (i) whether Indigenous Peoples are present in, or have collective attachment to, the project area; and (ii) whether project impacts on Indigenous Peoples are likely.	Indigenous Peoples, Policy Principle 1	Given the location and nature of the operations being considered, impacts on indigenous peoples are not considered applicable and are therefore screened out.		None required.

**Table 6-8 Compliance Review: Labour and Working Conditions**

REF	ADB'S SAFEGUARD PRINCIPLES/REQUIREMENTS	REFERENCE	COMMENTARY/ FINDINGS	RISK RANKING	CORRECTIVE ACTION
<b>1</b>	<b>Child Labour</b>				
	Appropriate steps should be taken to ensure that procurement of goods and services, contractors, subcontractors, and consultants, comply with the country's labour legislation as well as with the Core Labour Standards. The Core Labour Standards consist of (a) freedom of association and the effective recognition of the right to collective bargaining, (b) the abolition of all forms of forced or compulsory labour, (c) effective abolition of child labour, and (d) elimination of discrimination in respect of employment and occupation.	ADB's Social Protection Strategy (2001)	<p>As noted under the corporate ESMS review, Banpu has developed a Human Rights Policy including commitments to the prevention of human trafficking, forced labour, and child labour. Identification documents would be reviewed as part of the employment process (which would include verification of an employee's age)</p> <p>Overall, given the nature of the operations (i.e. technical/specialised work), the risk of the use of child labour is considered to be low. No child labour was observed during the site visit.</p>		None required.
<b>2</b>	<b>Forced Labour</b>				
	Appropriate steps should be taken to ensure that procurement of goods and services, contractors, subcontractors, and consultants, comply with the country's labour legislation as well as with the Core Labour Standards. The Core Labour Standards consist of (a) freedom of association and the effective recognition of the right to collective bargaining, (b) the abolition of all forms of forced or compulsory labour, (c) effective abolition of child labour, and (d) elimination of discrimination in respect of employment and occupation.	Social Protection Strategy (2001)	<p>As noted under the corporate ESMS review, Banpu has developed a Human Rights Policy including commitments to the prevention of human trafficking, forced labour, and child labour. As part of the employment process, employee's ID documents would be requested to but BPN only retains a copy of the ID documents and does not withhold any employees' original ID documents.</p> <p>Overall, given the nature of the business the likelihood of forced labour is considered to be low.</p>		None required.



REF	ADB'S SAFEGUARD PRINCIPLES/REQUIREMENTS	REFERENCE	COMMENTARY/ FINDINGS	RISK RANKING	CORRECTIVE ACTION
<b>3</b>	<b>Payment of Wages</b>				
	Appropriate steps should be taken to ensure that procurement of goods and services, contractors, subcontractors, and consultants, comply with the country's labour legislation as well as with the Core Labour Standards. The Core Labour Standards consist of (a) freedom of association and the effective recognition of the right to collective bargaining, (b) the abolition of all forms of forced or compulsory labour, (c) effective abolition of child labour, and (d) elimination of discrimination in respect of employment and occupation.	Social Protection Strategy (2001)	<p>Banpu's workplace rules and regulations are applicable to BPN, and specify labour and working conditions including calculation of wages (for normal and overtime hours) and payment of wages.</p> <p>Provisions for payment of salary are broad (to cover the scope of Banpu). Payment of salary must be at least once a month and is typically once a month on the 25<sup>th</sup> of each month. Means of payment can be at the Banpu's offices, or directly deposited into an employee's designated bank account.</p> <p>No BPN employees (carrying out supervision or O&amp;M work for the e-tuktuk charging stations) were interviewed during the site visit. Based on the site visit interview with Banpu Human Resources department (which also covers BPN employees), there have been no employee grievance received to date.</p>		None required.
<b>4</b>	<b>Working Hours and Overtime</b>				
	Appropriate steps should be taken to ensure that procurement of goods and services, contractors, subcontractors, and consultants, comply with the country's labour legislation as well as with the Core Labour Standards. The Core Labour Standards consist of (a) freedom of association and the effective recognition of the right to collective bargaining, (b) the abolition of all forms of forced or compulsory labour, (c) effective abolition of child labour, and (d) elimination of discrimination in respect of employment and occupation.	Social Protection Strategy (2001)	<p>Banpu's workplace rules and regulations describes the working days, hours and break time for employees. Records for tracking working hours for BPN employees have not yet been provided for review.</p> <p>No BPN employees (carrying out supervision or O&amp;M work for the e-tuktuk charging stations) were interviewed during the site visit. Based on the site visit interview with Banpu Human Resources department (which also covers BPN employees), there have been no employee grievance received to date.</p>		None required.

REF	ADB'S SAFEGUARD PRINCIPLES/REQUIREMENTS	REFERENCE	COMMENTARY/ FINDINGS	RISK RANKING	CORRECTIVE ACTION
<b>5</b>	<b>Non-Discrimination and Equal Opportunity</b>				
	Appropriate steps should be taken to ensure that procurement of goods and services, contractors, subcontractors, and consultants, comply with the country's labour legislation as well as with the Core Labour Standards. The Core Labour Standards consist of (a) freedom of association and the effective recognition of the right to collective bargaining, (b) the abolition of all forms of forced or compulsory labour, (c) effective abolition of child labour, and (d) elimination of discrimination in respect of employment and occupation.	Social Protection Strategy (2001)	As noted under the corporate ESMS review, Banpu has developed a Human Rights Policy including commitments to non-discrimination, diversity, equity, and inclusion.		None required.
<b>6</b>	<b>Freedom of Association</b>				
	Appropriate steps should be taken to ensure that procurement of goods and services, contractors, subcontractors, and consultants, comply with the country's labour legislation as well as with the Core Labour Standards. The Core Labour Standards consist of (a) freedom of association and the effective recognition of the right to collective bargaining, (b) the abolition of all forms of forced or compulsory labour, (c) effective abolition of child labour, and (d) elimination of discrimination in respect of employment and occupation.	Social Protection Strategy (2001)	As noted under the corporate ESMS review, Banpu has developed a Human Rights Policy including commitments to the freedom of association and rights to collective bargaining.  Based on the site visit interview with Banpu Human Resources department (which also covers BPN employees), there have been no employee grievance received to date.		None required.
<b>7</b>	<b>Worker Accommodation</b>				
	Appropriate steps should be taken to ensure that procurement of goods and services, contractors, subcontractors, and	Social Protection Strategy (2001)	BNGL/BPN does not operate or provide any workers' accommodations for its employees in the context of the		None required.

REF	ADB'S SAFEGUARD PRINCIPLES/REQUIREMENTS	REFERENCE	COMMENTARY/ FINDINGS	RISK RANKING	CORRECTIVE ACTION
	consultants, comply with the country's labour legislation as well as with the Core Labour Standards. The Core Labour Standards consist of (a) freedom of association and the effective recognition of the right to collective bargaining, (b) the abolition of all forms of forced or compulsory labour, (c) effective abolition of child labour, and (d) elimination of discrimination in respect of employment and occupation.		planned use of proceeds (i.e. construction and operation of the e-tuktuk charging stations).		
<b>8</b>	<b>Supply Chain Management</b>				
	Appropriate steps should be taken to ensure that procurement of goods and services, contractors, subcontractors, and consultants, comply with the country's labour legislation as well as with the Core Labour Standards. The Core Labour Standards consist of (a) freedom of association and the effective recognition of the right to collective bargaining, (b) the abolition of all forms of forced or compulsory labour, (c) effective abolition of child labour, and (d) elimination of discrimination in respect of employment and occupation.	Social Protection Strategy (2001)	BNGL is expected to comply with Banpu's supplier management procedures including a Supplier Code of Conduct which requires suppliers to comply Banpu's requirements across the following aspects: Business Ethics, Labor and Human Rights, Occupational Health and Safety, Environment, Community and Society, Business Continuity, and Supply Chain Collaboration. The supplier questionnaire provided for review indicated that potential suppliers of Banpu will need to read and agree with the Supplier Code of Conduct before being considered for doing business with Banpu.		None required.
<b>9</b>	<b>Gender</b>				
	The policy recognises the need to improve the status of women and to promote their potential role in development practices. The strategy of the policy is based on the consideration of social justice and gender equity that investment in women is vital to achieving economic efficiency and growth.	Gender and Development Policy (1998).	As noted above, BNGL does not employ any workers (and is only an operating entity). Please refer to the corporate ESMS review for commentary on female workforce and policies relating to protection of human rights, non-discrimination and anti-harassment.		None required.

REF	ADB'S SAFEGUARD PRINCIPLES/REQUIREMENTS	REFERENCE	COMMENTARY/ FINDINGS	RISK RANKING	CORRECTIVE ACTION
	<p>The key elements of the policy relates to the following:</p> <p><i>Gender Sensitivity:</i> Focuses on how the operations of the project proponent will affect women and men, and to take into account women's needs and perspectives in planning its operations.</p> <p><i>Gender Analysis:</i> Focuses on the systematic assessment of the impact of a project on men and women, and on the economic and social relationship between them.</p> <p><i>Gender Planning:</i> Focuses on specific strategies that aim to bring about equal opportunities for men and women.</p> <p><i>Gender Mainstreaming:</i> Focuses on the consideration of gender issues in all aspects of the project proponent's operations, accompanied by efforts to encourage women's participation in the decision-making process in development activities.</p> <p><i>Agenda Setting:</i> Focuses on the formulation of strategies to reduce gender disparities and in developing plans and targets for women's and girls' education, health, legal rights, employment, and income-earning opportunities.</p>				

## 6.3 SUZHOU DURAPOWERS AND EXISTING BATTERY MANUFACTURING FACILITY

### 6.3.1 Site Visit

A site visit was undertaken to the existing Durapower manufacturing facility at No.12 Fuhua Rd., Changshu Economic Development Zone (CEDZ), China on 20 July 2023. The following key management personnel led the site visit and were also interviewed during and after the site walkover:

- Mr. Albert Chen, Vice President;
- Mr. Zhihong Zhou, Production Director;
- Ms. Judy Zhu, Human Resources Manager;
- Mr. Jianfeng Du, EHS Manager;
- Mr. Chengyan Zheng, Procurement Manager;
- Mr. Xiaobo Ge, Product Manager;
- Ms. Min Ji, Vice Finance Director; and
- Mr. Liang Xiao, Sales Manager.

Collectively, they are referred to as Site Representatives in this subsection.

The entire manufacturing facility was accessible during the site walkover. Most of the production process (i.e. mixing, coating, cutting, packing, drying, liquid injection and integration) are automated within enclosed environments due to strict dust control. About three to five workers are designated at each zone to supervise the operation of the machines from outside the enclosed areas through glass separators. These enclosed areas were observed through the glass separators during the site visit.

There are a total of 451 workers employed at the site, comprising 280 directly employed employees (under Suzhou Durapower) and 171 employees engaged through subcontracted labour companies. Production runs two 8-hours shift every day, but based on the volume of production orders, two 12-hours shift a day is also a common practice, but overtime work is subject to voluntary basis and overtime salary and allowance are provided for workers in accordance with local labour regulations.

About 30 Suzhou Durapower employees currently live in the dormitory provided by the Changshu Economic Development Zone (CEDZ) where the battery manufacturing facility is situated within. Reportedly, there are some employees of the subcontracted labour companies who also live in the CEDZ dormitory, but the exact number is not monitored by Suzhou Durapower. The CEDZ dormitory is operated independently by the CEDZ and any employees working within the CEDZ may apply to reside in the dormitory. Based on interviews with the Suzhou Durapower Human Resources Manager and a Suzhou Durapower worker who currently lives at the CEDZ dormitory, CEDZ has an Accommodation Policy with rules and regulations governing the safety, access, living conditions etc. of the dormitory.

Employees living in the CEDZ dormitory require an access pass to enter the premises. The CEDZ dormitory was not accessible during the site visit.

### 6.3.2 Summary of Compliance to E&S Legislation

The battery manufacturing facility has obtained the E&S permits and licenses required for operations (Table 6-9).

**Table 6-9 Key E&S Permits and Licenses for the Suzhou Durapower Manufacturing Facility**

KEY E&S PERMITS AND LICENSES	DATE
Environment Impact Assessment (EIA) approval (first version) <i>Note. This EIA report was for a different site; a revised EIA report was prepared for the current site and operations, as listed below.)</i>	21 June 2010
Land use certificate	12 December 2017 (valid until 3 March 2061; available for extension)
Fire Safety Inspection Acceptance for Hazardous Materials Storage Warehouse	2 April 2019
Fire Safety Inspection Acceptance for Workshop #1	3 June 2019
Environment Impact Assessment (EIA) approval (revised)	21 May 2020
ISO 14001:2015 Environmental Management System certification	28 October 2020 (Valid until 27 October 2023)
ISO 45001:2018 Occupational Health & Safety Management System certification	28 October 2020 (Valid until 27 October 2023)
Inspection and acceptance of EIA for Phase 1 (Annual output of 38 million Ah)	December 2020
Safety acceptance evaluation report	October 2021
Waste Discharge Permit <sup>2</sup> (covering air emissions and wastewater)	17 October 2022 (valid until 16 October 2027)
Environmental Emergency Preparedness and Response Plan (EEPRP)	February 2023
Inspection and acceptance of EIA for Phase 2	April 2023

<sup>2</sup> Disclosed online:  
<http://permit.mee.gov.cn/perxxgkinfo/xkgkAction!xkgk.action?xkgk=getxxgkContent&dataid=91c81031a3d14f3b9e04a2a70b91ad6a>

KEY E&S PERMITS AND LICENSES	DATE
(Annual output of 22 million Ah)	

The battery manufacturing facility continues to carry out monitoring in line with the requirements of the national and local regulations, namely the following:

- Environmental: Environmental monitoring is undertaken twice a year through third-party service providers to monitor environmental parameters including air emission quality, wastewater quality and workplace noise levels.
- OHS: The OHS assessment is carried out every three years, whilst employees undergo annual health screening. The last OHS assessment was carried out in January 2021 and the next round of OHS assessment is planned to be carried out in the latter half of 2023.
- Hazardous materials and waste: Before transporting to site, hazardous materials are required to be registered at both the local police bureau and transportation bureau of both the manufacturing facility and the location where the hazardous materials are procured from. Hazardous materials are stored in a dedicated storage warehouse on-site, and are documented in the Database of Usage for Hazardous Materials which is reported annually to the Safety Supervision Office of CEDZ. As for hazardous waste, these are required to be registered on an online Hazardous Waste Management System of the Changshu Ecological Environment Bureau. Licensed hazardous waste handlers are understood to have been engaged for the disposal of hazardous wastes from the site and manifests are recorded.

### 6.3.3 E&S Management Systems

Suzhou Durapower has an EHS Team, who reports to the Operations Lead. The EHS Team comprises of an EHS Lead and an EHS Manager (*Figure 6-4*).

The existing battery manufacturing facility in Suzhou has received International Organization for Standardization (ISO) certification for an environmental management system (in line with the requirements of GB/T 24001-2016/ISO 14001:2015), an OHS management system (in line with the requirements of GB/T 45001-2020/ISO 45001:2018) and a quality management system (in line with the requirements of ISO 9001:2015 and IATF 16949:2016) under the activity of "Design and Manufacture of Lithium Ion Battery and Lithium Ion Battery Systems".

Based on the information request, it is understood that the Group Operation Director in Durapower Holdings ("DPH") will develop E&S procedures for its operations which will be reviewed by the Group Operation Director in Durapower Holdings. The following E&S procedures have been developed for the facility in line with national and local regulations as well as mitigation measures defined in the approved EIA:

- Environmental and OHS Manual (and supporting procedures);
- Human Resources Handbook;

- Hazard Identification, Risk Classification and Management Procedure;
- Hazardous Waste Management Procedure and supporting documentation; and
- Emergency Preparedness and Response Plans (for incidents/accidents, production accidents, environmental emergencies);
- Production Accident Reporting, Investigation and Handling Procedure;
- Accident and incident log (template);
- Internal and External Communication Procedure; and
- Supplier Management Procedure.





# Suzhou Durapower Technology Co., Ltd.

## Organisational Chart

2023年7月14日更新

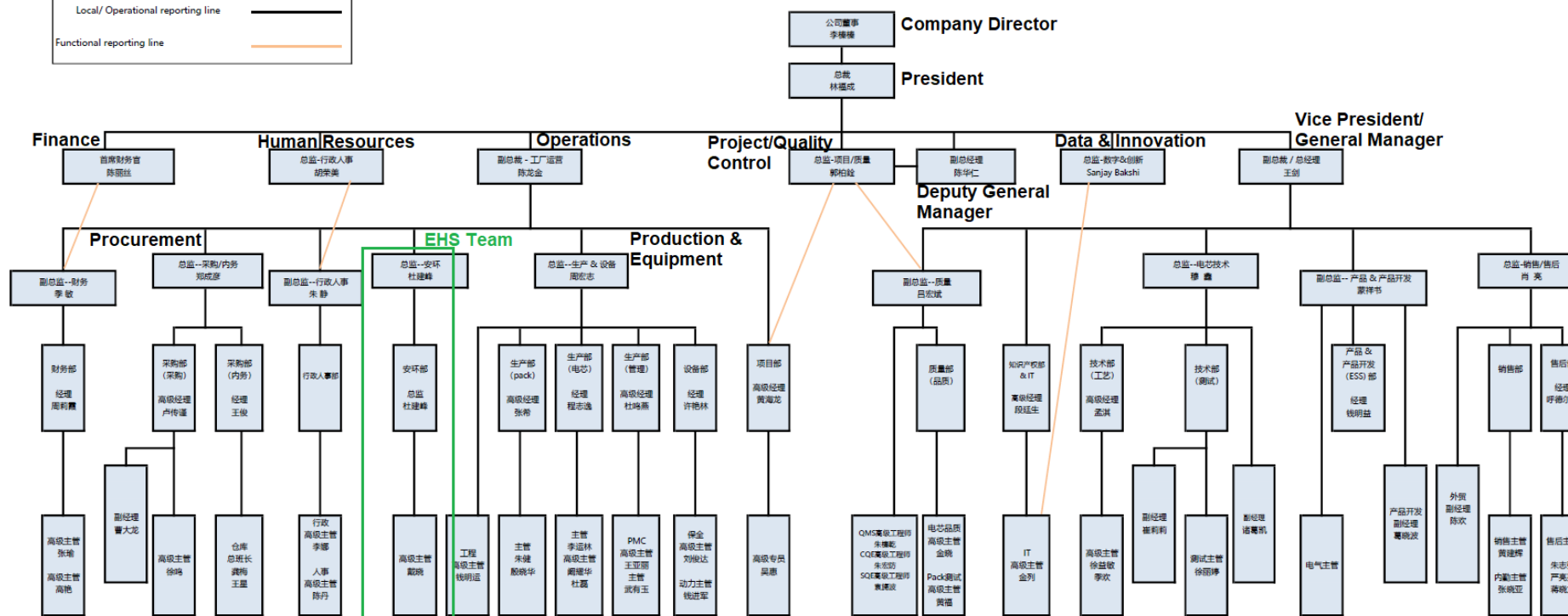
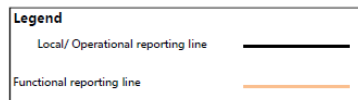


Figure 6-3 Suzhou Durapower Organisational Chart

### 6.3.4 Reputational Risk Review

A review of publicly available information associated with E&S risks for Suzhou Durapower was conducted, and the findings are presented in *Annex B: Reputational Risk Review*. Based on the RRR, no significant E&S issues or concerns associated with Suzhou Durapower were identified from the internet search.

### 6.3.5 Assessment of the Site's E&S Implementation

The findings for Suzhou Durapower manufacturing facility are summarised in the following tables:

- Table 6-10 Compliance Review on ADB's Safeguard Requirement 1 – Environment;
- Table 6-11 Compliance Review on ADB's Safeguard Requirement 2 – Involuntary Resettlement;
- Table 6-12 Compliance Review: Safeguard Requirements 3 – Indigenous Peoples; and
- Table 6-13 Compliance Review: Labour and Working Conditions

Note that in the sections below regarding ADB's Safeguard Principles/Requirements are an abbreviated inclusion of the requirements in view of space constraints, as such the full documents should be referred to where further detail is required.

**Table 6-10 Compliance Review: ADB Safeguard Requirement 1 – Environment**

REF	ADB'S SAFEGUARD PRINCIPLES/REQUIREMENTS	REFERENCE	COMMENTARY/ FINDINGS	RISK RANKING	CORRECTIVE ACTION
<b>1</b>	<b>Environmental Assessment</b>				
	<p>Use a screening process for each proposed project, as early as possible, to determine the appropriate extent and type of environmental assessment so that appropriate studies are undertaken commensurate with the significance of potential impacts and risks.</p> <p>Conduct an environmental assessment for each proposed project to identify potential direct, indirect, cumulative, and induced impacts and risks to physical, biological, socioeconomic (including impacts on livelihood through environmental media, health and safety, vulnerable groups, and gender issues), and physical cultural resources in the context of the project's area of influence. Assess potential transboundary and global impacts, including climate change. Use strategic environmental assessment where appropriate.</p> <p>Examine alternatives to the project's location, design, technology, and components and their potential environmental and social impacts and document the rationale for selecting the particular alternative proposed. Also consider the no project alternative.</p>	Environmental Safeguard, Policy Principles 1, 2 and 3	<p>An EIA was first prepared by Suzhou Durapower in 2010 in line with Chinese EIA Law, although for a different site and a revised EIA report was subsequently prepared in April 2020 when Suzhou Durapower moved its operations to the current site. The revised EIA report accounted for changes in the production process, equipment, layout, use of raw materials and pollution prevention mitigation measures, which was approved on 21 May 2020.</p> <p>Based on the EIA, the closest residential area is 1.3 km away from the site (which is located within the CEDZ), and the nearest water body is the Yangtze River at about 0.9km from the site. The EIA had identified key environmental risks (i.e. wastewater, air emissions, and waste including non-hazardous and hazardous waste) during project development (i.e. construction and operational phases) and proposed mitigation measures. The construction was carried out in two phases, phase 1 (annual output of 38 million Ah) and phase 2 (annual output of 22 million Ah), and the construction completion and EIA inspection reports were issued in December 2022 and April 2023 respectively.</p> <p>It is understood that the production process of the manufacturing facility includes a component with X-ray equipment (automatic assembly line) which was excluded from the EIA scope with a note that a dedicated radiation assessment should be carried out for X-ray equipment that generates electromagnetic radiation. Based on interviews during the site visit, the site is reportedly exempted from carrying out a radiation assessment due to limited levels of radiation from the equipment which is supported by an radiation safety permit from the device supplier as well as a waiver letter from the Guangdong Province Environmental Protection Bureau certifying that companies that use the equipment from device supplier need not prepare a dedicated radiation assessment. The site had</p>		<p>Suzhou Durapower to:</p> <ul style="list-style-type: none"> <li>• Provide details of the expansion plan for the existing facility in Suzhou;</li> <li>• Confirm the list of required environmental, health and safety related assessments for the proposed expansion; and</li> <li>• Provide a list of applicable permits and approval to be obtained prior to construction and operation</li> </ul> <p>With reference to the E&amp;S Screening, Categorisation and Risk Assessment procedures (see corporate level audit commentary for details):</p> <ul style="list-style-type: none"> <li>• Screening and categorisation will be carried out for</li> </ul>

REF	ADB'S SAFEGUARD PRINCIPLES/REQUIREMENTS	REFERENCE	COMMENTARY/ FINDINGS	RISK RANKING	CORRECTIVE ACTION
			<p>also commissioned OHS assessments including X-ray radiation dose rate in the work place and worker exposure to radiation, which were compliance with local Basic Standards for Protection Against Ionizing Radiation and Safety of Radiation Sources Regulations (GB 18871-2002) and National Health Protection Standards for X-ray Diffraction and Fluorescence Analysers (GBZ 115-2002).</p> <p>Suzhou Durapower is preparing to expand its production capacity, which includes expanding the existing operations of the current facility as well as the construction of a second production building on the existing land plot (adjacent to the current building). The associated assessments, including the EIA, are reportedly under preparation. However, details on how Suzhou Durapower intends to expand the capacity of the existing facility are not available at this stage and consequently, it cannot be confirmed if an updated EIA will be required for the existing facility. Typically, a change in the production process (e.g. more and new equipment, more raw materials etc.) would require a re-assessment of the environmental risks and whether existing mitigation measures remain adequate.</p> <p>It is also noted that the CEDZ has its own EIA report and approval, and developments within CEDZ (including the Suzhou Durapower manufacturing facility) will need to comply with the environmental requirements of CEDZ.</p>		<p>Durapower expansion prior to finalization of investment; and</p> <ul style="list-style-type: none"> <li>E&amp;S risk and impact assessment will be carried out for Durapower expansion prior to commencement of construction.</li> </ul>
<b>2</b>	<b>Environmental Planning and Management</b>				
	Avoid, and where avoidance is not possible, minimize, mitigate, and/or offset adverse impacts and enhance positive impacts by means of environmental planning and management. Prepare an environmental management plan (EMP) that includes the proposed mitigation measures, environmental monitoring and reporting requirements, related institutional or organizational arrangements, capacity development and training measures,	Environmental Safeguard, Policy Principle 4	<p>An environmental management plan was prepared as part of the EIA report, which included detailed environment mitigation measures, as well as monitoring and reporting requirements. Key environmental impacts, including air emission, wastewater, noise, solid waste (including waste hazardous), ecological environment, groundwater quality, soil quality) have been accounted for in the environmental management plan.</p> <p>Regarding the planned expansion in production capacity of the existing facility, there may be a need to revise the</p>		<p>Please see Ref #1.</p> <ul style="list-style-type: none"> <li>Provide draft updated/ supplementary EIA and EMP or any equivalent supplementary reports (if required); and</li> </ul>

REF	ADB'S SAFEGUARD PRINCIPLES/REQUIREMENTS	REFERENCE	COMMENTARY/ FINDINGS	RISK RANKING	CORRECTIVE ACTION
	implementation schedule, cost estimates, and performance indicators. Key considerations for EMP preparation include mitigation of potential adverse impacts to the level of no significant harm to third parties, and the polluter pays principle.		existing mitigation and monitoring requirements, which will need to be confirmed by Suzhou Durapower.		<ul style="list-style-type: none"> <li>Update environmental, occupational health and safety management system for plant operations prior to commencement of expansion operations.</li> </ul>
<b>3</b>	<b>Consultation and Participation</b>				
	Carry out meaningful consultation with affected people and facilitate their informed participation. Ensure women's participation in consultation. Involve stakeholders, including affected people and concerned nongovernment organizations, early in the project preparation process and ensure that their views and concerns are made known to and understood by decision makers and taken into account. Continue consultations with stakeholders throughout project implementation as necessary to address issues related to environmental assessment. Establish a grievance redress mechanism to receive and facilitate resolution of the affected people's concerns and grievances regarding the project's environmental performance.	Environmental Safeguard, Policy Principle 5	<p>Suzhou Durapower does not have a formal stakeholder engagement plan or formal external grievance mechanism (e.g. guided steps and timeline for each step, supported by templates for a grievance form to record each grievance and grievance log to track all grievances to closure), although procedures for external communication are in place. An internal and external communication procedure has been prepared which describes the process for receiving, categorising and addressing internal and external feedback or news, etc. Examples of external feedback include customer feedback, market trends, policies and regulations. Internal feedback includes feedback on the daily operations, work procedures, working conditions etc.</p> <p>Stakeholder engagement was reportedly carried out by the EIA consultancy during the EIA preparation, which included consultations with people working in the neighbouring companies within the CEDZ. There is no record of stakeholder engagement and consultation in the EIA report or documents available for review. Contact details of Suzhou Durapower are available online (e.g. the national pollution discharge database) and also registered with the local police department (where external parties can request for the contact details). Reportedly, no external grievances have been reported to date.</p>		Develop a stakeholder engagement plan and external grievance mechanism, noting overarching requirements for Banpu to cascade/integrate the company's ESMS/E&S policies and procedures with Durapower's ESMS/E&S policies and procedures.

REF	ADB'S SAFEGUARD PRINCIPLES/REQUIREMENTS	REFERENCE	COMMENTARY/ FINDINGS	RISK RANKING	CORRECTIVE ACTION
<b>4</b>	<b>Information Disclosure</b>				
	Disclose a draft environmental assessment (including the EMP) in a timely manner, before project appraisal, in an accessible place and in a form and language(s) understandable to affected people and other stakeholders. Disclose the final environmental assessment, and its updates if any, to affected people and other stakeholders.	Environmental Safeguard, Policy Principle 6	EIA disclosure requirements are guided by the local EIA regulations. The EIA and EIA inspection approvals for the Suzhou Durapower manufacturing facility were disclosed on the website of Suzhou Ecological and Environment Bureau on 24 December 2020 for phase 1 and 25 April 2023 for phase 2. Similar disclosure requirements are expected should the planned expansion production capacity require an update in the EIA.		Please see Ref #1.
<b>5</b>	<b>Monitoring &amp; Reporting</b>				
	Implement the EMP and monitor its effectiveness. Document monitoring results, including the development and implementation of corrective actions, and disclose monitoring reports.	Environmental Safeguard, Policy Principle 7	<p>Key environmental parameters (i.e. air emissions, wastewater and workplace noise levels) are monitored on a bi-annual basis through contracting qualified third-party service providers. Based on the recent monitoring reports 9dated 7 April 2023), no non-compliances with local environmental standards were reported.</p> <p>As noted above, there may be a need to revise the existing mitigation and monitoring requirements in relation to the planned expansion in production capacity, which will need to be confirmed by Suzhou Durapower.</p> <p>BPN had recently became a majority shareholder and is in the process of integrating management procedures between Durapower Holdings and BPN.</p> <p>Monitoring of subsidiary E&amp;S performances is limited to subsidiaries where BPN holds a greater than 50% of total shares and has management control. This would mean that UMT is excluded from the scope of the Banpu's monitoring and reporting, whilst Durapower Holdings should be included in future monitoring.</p> <p>These is currently no designated E&amp;S focal point defined (which would help support on monitoring and reporting requirements to ADB through Banpu, in relation to the planned use of proceeds from ADB's loan).</p>		<p>Please see corporate level audit on E&amp;S monitoring requirements Durapower Holdings (in relation to the planned uses of proceeds from ADB's loan).</p> <p>BPN and Durapower Holdings/Suzhou Durapower will need to prepare and implement a plan to align with Banpu's policies and procedures.</p>

REF	ADB'S SAFEGUARD PRINCIPLES/REQUIREMENTS	REFERENCE	COMMENTARY/ FINDINGS	RISK RANKING	CORRECTIVE ACTION
<b>6</b>	<b>Biodiversity Conservation and Sustainable Natural Resources Management</b>				
	Do not implement project activities in areas of critical habitats, unless (i) there are no measurable adverse impacts on the critical habitat that could impair its ability to function, (ii) there is no reduction in the population of any recognized endangered or critically endangered species, and (iii) any lesser impacts are mitigated. If a project is located within a legally protected area, implement additional programs to promote and enhance the conservation aims of the protected area. In an area of natural habitats, there must be no significant conversion or degradation, unless (i) alternatives are not available, (ii) the overall benefits from the project substantially outweigh the environmental costs, and (iii) any conversion or degradation is appropriately mitigated. Use a precautionary approach to the use, development, and management of renewable natural resources.	Environmental Safeguard, Policy Principle 8	<p>The Suzhou Durapower manufacturing facility is located within the CEDZ and does not overlap with any national protected areas or internationally recognises important biodiversity areas.</p> <p>Based on the EIA, there were four ecologically sensitive areas located around the site, including:</p> <ul style="list-style-type: none"> <li>• The Provincial Level of wetland of Yangtze River, located about 1.9km north of the site;</li> <li>• The Municipal Level of drinking water source protection zone, located about 2km north of the site;</li> <li>• The national level of drinking water source protection zone located 2.5km o northwest of the site; and</li> <li>• The Provincial Level of water source quality protection zone located 12.5km west of the site.</li> </ul> <p>Environmental mitigation and monitoring measures have been implemented by the site. The site is not expected to have any direct impact on the ecologically sensitive areas or on biodiversity and natural resources in general.</p>		None required.
<b>7</b>	<b>Pollution Prevention and Abatement</b>				
a	Pollution Prevention, Resource Conservation  Apply pollution prevention and control technologies and practices consistent with international good practices as reflected in internationally recognized standards such as the World Bank Group's Environmental, Health and Safety Guidelines. Adopt cleaner production processes and good energy efficiency practices. Avoid pollution, or, when avoidance is not possible, minimize or control the intensity or load of pollutant emissions and discharges, including direct and indirect greenhouse gases emissions, waste generation, and release of hazardous	Environmental Safeguard, Policy Principle 9	<p>As noted earlier, the site has an environmental management plan developed as part of its EIA process, but there may be a need to revise the existing mitigation and monitoring requirements in relation to the planned expansion in production capacity, which will need to be confirmed by Suzhou Durapower.</p> <p>In terms of wastewater discharge, the CEDZ has its own separate surface runoff collection system and wastewater collection and treatment system. Suzhou Durapower has a septic tank on-site and is required to ensure that wastewater discharged from its premises comply with local requirements. Reportedly, only domestic wastewater is produced daily and there is no production wastewater from</p>		Please see Ref #1 and 2.

REF	ADB'S SAFEGUARD PRINCIPLES/REQUIREMENTS	REFERENCE	COMMENTARY/ FINDINGS	RISK RANKING	CORRECTIVE ACTION
	materials from their production, transportation, handling, and storage. Avoid the use of hazardous materials subject to international bans or phaseouts.		<p>the facility. Wastewater is discharged directly to the municipal sewage pipeline.</p> <p>As for air emissions from its facility, Suzhou Durapower has in place mitigation measures including two sets of coated N-methyl-2-pyrrolidone (NMP) recovery system, one set of activated carbon system and one set of two-stage activated carbon system.</p> <p>The site's compliance with local environmental standards has been demonstrated through the recent environmental monitoring report provided for review.</p>		
b	Waste	Environmental Safeguard, Policy Principle 9	<p>As noted earlier, the site has an environmental management plan developed as part of its EIA process, but there may be a need to revise the existing mitigation and monitoring requirements in relation to the planned expansion in production capacity, which will need to be confirmed by Suzhou Durapower.</p> <p><u>Hazardous Waste</u></p> <p>Hazardous waste generated on-site include mainly N-methyl pyrrolidone slurry generated from production of anode, electrolyte generated from cleaning liquid injection equipment and cutting of cell packaging film, absolute alcohol from polishing and product cleaning processes, and waste activated carbon from the air outlet of hazardous waste warehouse and production components (coating and liquid injection). Hazardous wastes are registered in an online Hazardous Waste and Materials Management System managed by the Changshu Ecological Environment Bureau along with information on the type of waste, volume, labelling, emergency response measures and storage details. The site has prepared a hazardous waste management plan which details the type and amount of hazardous waste generated by the production process and at which stage of the process. This plan is valid between 1 January 2023 to 31 December 2023 and will need to be updated periodically to ensure the</p>		<p>Please see Ref #1 and 2.</p> <p>The storage of recyclable waste on-site can be improved to prevent surface runoff and contamination of waste machinery oil or corrosion.</p>



REF	ADB'S SAFEGUARD PRINCIPLES/REQUIREMENTS	REFERENCE	COMMENTARY/ FINDINGS	RISK RANKING	CORRECTIVE ACTION
			<p>accuracy of the information relating to hazardous management on-site.</p> <p>A licensed waste handler (Suzhou Suez Environmental Protection Company) has been engaged for the disposal of hazardous wastes (both chemical and solid wastes). Sample hazardous waste manifests were provided for review which indicated the type and quantity of hazardous waste collected and sign off by both the facility and the waste handler. Based on the hazardous waste manifest provided for June 2023, the following hazardous materials were generated by the site:</p> <ul style="list-style-type: none"> <li>• Cleaning waste solution (containing N-methyl pyrrolidone): 1.882 tons;</li> <li>• Waste packaging (containing electrolytes): 1.276 tons;</li> <li>• Waste slurry (containing (N-methyl pyrrolidone, nickel cobalt lithium manganate, lithium iron phosphate etc.): 0.173 tons; and</li> <li>• Waste rags (containing organic matter): 1.71 tons.</li> </ul> <p>Based on observations during the site visit, the hazardous waste were generally stored in an orderly and appropriate manner in the on-site hazardous material and waste storage room. Secondary containment was observed for liquid hazardous waste containers which had appropriate hazardous waste labels. Firefighting provisions (i.e. sand, fire extinguisher and sprinkler system) were observed in the storage room.</p> <p><u>General Waste</u></p> <p>General solid waste is generated from the office area and the production lines.</p> <p>For general (non-hazardous) solid waste generated from the office area, the waste is collected at a designated bin on-site, and garbage collection trucks assigned by the CEDZ collect the waste from the site every morning and transport the waste to a centralised general waste</p>		

REF	ADB'S SAFEGUARD PRINCIPLES/REQUIREMENTS	REFERENCE	COMMENTARY/ FINDINGS	RISK RANKING	CORRECTIVE ACTION
			<p>collection site in the CEDZ. The volume of general solid waste generated from the site daily is estimated at 0.5 tons.</p> <p>For general solid waste generated from the production lines, includes used packaging, scrap metal, scrap plastic, waste wood, etc. and are recyclable waste. Suzhou Durapower sells these wastes to external recycling waste collection every two to five days according to the production volume. The amount of recyclable waste generated every month is estimated at four to 10 tons.</p> <p>Based on observations during the site visit, the recyclable waste is sorted and stored at a centralised waste collection area on-site. The rain cover for old or waste machines dismantled from the production line was not properly covered, leaving some of the machinery exposed to rain.</p>		
c	Hazardous Materials	Environmental Safeguard, Policy Principle 9	<p>Hazardous materials are stored in a dedicated storage warehouse on-site, and are documented in the Database of Usage for Hazardous Materials which is reported annually to the Safety Supervision Office of CEDZ. There is a Hazardous Materials Safety Management Procedure in place for the facility which was developed following national mandatory management regulations (i.e. the Regulations on the Management of Hazardous Chemicals, Transportation Code of Hazardous Materials, Rules for the Vehicle Transportation for Hazardous Materials, Packaging Labels for Hazardous Materials, etc.). Storage and Personal Protection Equipment (PPE) policy for hazardous materials are established, and the transportation and emergency response measures are also in place.</p> <p>Based on the site visit management interviews, after the hazardous materials have been procured and before they are transported to site, the materials will need to be registered at both the local police bureau and transportation bureau of the Suzhou Durapower manufacturing facility as well as the location where the materials are being procured from, and monitored throughout the transportation process.</p>		Please see Ref #1 and 2.

REF	ADB'S SAFEGUARD PRINCIPLES/REQUIREMENTS	REFERENCE	COMMENTARY/ FINDINGS	RISK RANKING	CORRECTIVE ACTION
			As noted earlier, there may be a need to revise the existing mitigation and monitoring requirements (including the Hazardous Materials Safety Management Procedure) in relation to the planned expansion in production capacity, which will need to be confirmed by Suzhou Durapower.		
d	Pesticide Use and Management	Environmental Safeguard, Policy Principle 9	According to the Site Representatives, Suzhou Durapower does not store or use any pesticides on-site due to limited landscaping on-site.		None required.
e	Greenhouse Gas Emissions	Environmental Safeguard, Policy Principle 9	<p>Based on the site visit management interviews, the facility has established an initial strategy for energy saving and reduction of greenhouse gas (GHG) emission, which includes the establishment and usage of solar energy, recycling of old lithium battery, and procurement of energy efficient devices (motion sensors for lights) and production machineries.</p> <p>There is no formal GHG emission management plan or monitoring of GHG emissions from the facility (which is not mandated for the facility with reference to both local regulations and international standards given the nature of its operations), although there may be GHG monitoring requirements in line with Banpu's reporting requirements.</p>		None required.
<b>8</b>	<b>Health &amp; Safety</b>				
a	<p>Worker Health &amp; Safety</p> <p>Provide workers with safe and healthy working conditions and prevent accidents, injuries, and disease.</p> <p>Under the Social Protection Strategy it recommends the project proponent to provide safe and healthy working environment for its employees as well as its contractors/ subcontractors and comply with the national labour laws and take measures to comply with the core labour standards. The ADB SPS mandate that the identified Occupational</p>	<p>Environmental Safeguard, Policy Principle 10</p> <p>Social Protection Strategy.</p>	Suzhou Durapower has a consolidated Environmental and OHS Manual that was designed to comply with ISO 14001 and ISO 45001 certification for environmental management system and OHS management system. The manual describes roles and responsibilities for implementing the environmental and OHS management systems, risk identification and management procedures, risk mitigation procedures, resourcing, communication and information disclosure procedures, third-party (contractor, subcontractor, supplier) management procedures, internal audit procedures and corrective action procedures etc.		.Please see Ref #1, 2 and 5.

REF	ADB'S SAFEGUARD PRINCIPLES/REQUIREMENTS	REFERENCE	COMMENTARY/ FINDINGS	RISK RANKING	CORRECTIVE ACTION
	health and safety issues must be identified, assessed, and addressed in an EIA for proposed projects.		<p>The manual is also supported by other work procedures including a Hazard Identification, Risk Classification and Management Procedure, Hazardous Waste Management Procedure, Production Accident Reporting, Investigation and Handling Procedure and accident and incident log (template).</p> <p>An OHS safety acceptance assessment is required to be carried out every three years. The last OHS report was prepared in January 2021 and the assessor determined that the facility was compliant with local OHS regulatory requirements. The report also noted that the OHS team is experienced and capable of managing OHS effectively (which was supported by a review of the OHS and specialised training and certifications of the workforce).</p> <p>Various other OHS related assessments have been conducted by qualified third-parties including for occupational diseases (dated 21 November 2022), worker radiation exposure (dated 6 March 2023) and workplace radiation dose rate (dated 6 January 2023). No non-compliances were reported in the screening reports reviewed.</p> <p>The facility also carried out weekly OHS spot checks including before and after national holidays. The OHS checklists for 5 June 2023, 21 June 2023 and 26 June 2023 were provided for review. These identified some non-compliances (e.g. obstruction of a passageway, equipment overdue for periodic maintenance). An OHS tracker was also provided which consolidated the findings from the OHS checklists and included photographs showing the non-compliances before and after the corrective actions were implemented. Based on clarification with site personnel, it is understood that the OHS tracker currently does not record any near-miss incidents.</p> <p>In terms of emergency response, the facility has developed emergency preparedness and response plans for incidents/accidents, production accidents and environmental emergencies. The facility also carries out</p>		

REF	ADB'S SAFEGUARD PRINCIPLES/REQUIREMENTS	REFERENCE	COMMENTARY/ FINDINGS	RISK RANKING	CORRECTIVE ACTION
			<p>annual emergency drills. Records of the most recent evacuation drill that was conducted on 1 June 2023 were provide for review, which included the different emergency procedures practiced and along with photographs.</p> <p>During the site visit, some positive observations were observed, including proper use of PPE by workers. First aid boxes and firefighting provisions were observed in each production workshop. Some areas for improvement were identified, including the following:</p> <ul style="list-style-type: none"> <li>• Housekeeping in the standby diesel generator room could be improved as there was disorderly stacking of materials, which may impede access to the standby diesel generator (which is used to provide emergency power for emergency equipment such as emergency lights and fire-fighting devices).; and</li> <li>• The fire-fighting access lane in front of the production building was occupied by some cars although should be unobstructed at all times.</li> </ul> <p>A consolidated employee training plan for 2022 was provided for review, which included training topics proposed by all departments (i.e. sales, finance, procurement, EHS, etc.). EHS training carried out in 2022 included hazardous materials handling (for all relevant employees) and OHS awareness training (for new employees and those involved in OHS monitoring).</p>		
b	<p>Community Health &amp; Safety</p> <p>Establish preventive and emergency preparedness and response measures to avoid, and where avoidance is not possible, to minimize, adverse impacts and risks to the health and safety of local communities.</p>	Environmental Safeguard, Policy Principle 10	<p>The Suzhou Durapower manufacturing facility has prepared an Environment Emergency Preparedness and Response Procedure (dated March 2023) which noted all sensitive receptors within 5km of the site, including the nearest community located at 1.7km from the site (note that the EIA indicated that the nearest community is located 1.3km from the site).</p> <p>The Environment Emergency Preparedness and Response Procedure covers environmental emergencies related to atmosphere, water, soil and groundwater, natural disasters and manual demolition, hazardous waste,</p>		None required.

REF	ADB'S SAFEGUARD PRINCIPLES/REQUIREMENTS	REFERENCE	COMMENTARY/ FINDINGS	RISK RANKING	CORRECTIVE ACTION
			<p>fire and explosion and leakage. Emergency preparedness and response provisions and equipment are in place at the facility. A communication mechanism has been established between Suzhou Durapower and local government departments, i.e. the ecological and environment bureau, the transportation bureau, the fire-fighting station, etc. Emergency drills are carried out at least once a year and require the participation of all site employees.</p> <p>The Environment Emergency Preparedness and Response Procedure will need to be updated every three years (i.e. the next update is due in 2026).</p>		
<b>9</b>	<b>Physical Cultural Resources</b>				
	Conserve physical cultural resources and avoid destroying or damaging them by using field-based surveys that employ qualified and experienced experts during environmental assessment. Provide for the use of "chance find" procedures that include a pre-approved management and conservation approach for materials that may be discovered during project implementation.	Environmental Safeguard, Policy Principle 11	Given the location of the Suzhou Durapower manufacturing facility (i.e. within the CEDZ which was designated for industrial development in 1993), impacts to physical cultural resources are considered unlikely.		None required.

**Table 6-11 Compliance Review: Safeguard Requirements 2: Involuntary Resettlement**

REF	ADB'S SAFEGUARD PRINCIPLES/REQUIREMENTS	REFERENCE	COMMENTARY/ FINDINGS	RISK RANKING	CORRECTIVE ACTION
<b>1</b>	<b>Screening</b>				
	Screen the project early on to identify past, present, and future involuntary resettlement impacts and risks. Determine the scope of resettlement planning through a survey and/or census of displaced persons, including a gender	Involuntary Resettlement, Policy Principle 1	The Suzhou Durapower manufacturing facility is located within the CEDZ which was first designated for industrial development in 1993 by the Jiangsu Provincial Government as part of the 2000-2010 master plan. An EIA		None required, although as noted above, there is a need to align Suzhou Durapower policies

REF	ADB'S SAFEGUARD PRINCIPLES/REQUIREMENTS	REFERENCE	COMMENTARY/ FINDINGS	RISK RANKING	CORRECTIVE ACTION
	analysis, specifically related to resettlement impacts and risks		<p>was reportedly prepared for the CEDZ and approved by the Jiangsu Province Environmental Protection Bureau.</p> <p>Suzhou Durapower obtained a land use certificate for the 33,185m<sup>2</sup> plot of land in 2017 to develop the battery manufacturing facility. Suzhou Durapower has not engaged in any land acquisition, and is not aware of any previous land acquisition or land disputes.</p> <p>The land use certificate was provided to Suzhou Durapower on 12 December 2017 and is valid until 3 March 2061, and is also typically available for extension thereafter.</p>		and procedures on E&S to Banpu corporate policies.

**Table 6-12 Compliance Review: Safeguard Requirements 3: Indigenous Peoples**

REF	ADB'S SAFEGUARD PRINCIPLES/REQUIREMENTS	REFERENCE	COMMENTARY/ FINDINGS	RISK RANKING	CORRECTIVE ACTION
<b>1</b>	<b>Screening</b>				
	Screen early on to determine (i) whether Indigenous Peoples are present in, or have collective attachment to, the project area; and (ii) whether project impacts on Indigenous Peoples are likely.	Indigenous Peoples, Policy Principle 1	Given the location and nature of the operations being considered, impacts on indigenous peoples are not considered applicable and are therefore screened out.		None required.

**Table 6-13 Compliance Review: Labour and Working Conditions**

REF	ADB'S SAFEGUARD PRINCIPLES/REQUIREMENTS	REFERENCE	COMMENTARY/ FINDINGS			RISK RANKING	CORRECTIVE ACTION
1	Child Labour						
	Appropriate steps should be taken to ensure that procurement of goods and services, contractors, subcontractors, and consultants, comply with the country's labour legislation as well as with the Core Labour Standards. The Core Labour Standards consist of (a) freedom of association and the effective recognition of the right to collective bargaining, (b) the abolition of all forms of forced or compulsory labour, (c) effective abolition of child labour, and (d) elimination of discrimination in respect of employment and occupation.	ADB's Social Protection Strategy (2001)	As some overarching context, China has ratified seven out of the ten fundamental ILO conventions (as shown below):				Enhance HR Policy to include explicit statements on core labor standards and respective national labor laws, covering all types of employees.
			CONVENTION	DATE	STATUS		
			C029 - Forced Labour Convention, 1930 (No. 29)	12 August 2022	Not In Force (It will enter into force on 12 August 2023)		
			C087 - Freedom of Association and Protection of the Right to Organise Convention, 1948 (No. 87)	-	Not ratified		
			C098 - Right to Organise and Collective Bargaining Convention, 1949 (No. 98)	-	Not ratified		
			C100 - Equal Remuneration Convention, 1951 (No. 100)	2 November 1990	In Force		
			C105 - Abolition of Forced Labour Convention, 1957 (No. 105)	12 August 2022	Not In Force (It will enter into force on 12 August 2023)		
			C111 - Discrimination (Employment and Occupation) Convention, 1958 (No. 111)	12 January 2006	In Force		
			C138 - Minimum Age	28 April	In Force		



REF	ADB'S SAFEGUARD PRINCIPLES/REQUIREMENTS	REFERENCE	COMMENTARY/ FINDINGS	RISK RANKING	CORRECTIVE ACTION												
			<table><tr><td>Convention, 1973 (No. 138) Minimum age specified: 14 years</td><td>1999</td><td></td></tr><tr><td>C155 - Occupational Safety and Health Convention, 1981 (No. 155)</td><td>25 January 2007</td><td>In Force</td></tr><tr><td>C182 – Worst Forms of Child Labour Convention, 1999 (No. 182)</td><td>8 August 2002</td><td>In Force</td></tr><tr><td>C187 – Promotional Framework for Occupational Safety and Health Convention, 2006 (No. 187)</td><td>-</td><td>Not ratified</td></tr></table> <p>Suzhou Durapower adheres to the Chinese Labour Law which states that employees should be no less than 16 years old. The Human Resources handbook states that Suzhou Durapower has a minimum age requirement of 18 years old and the youngest employee at the facility is reportedly 19 years old. The age of employees are verified by checking the personal identification (ID) cards of candidates.</p> <p>For employees engaged through a third-party labour company (i.e. Changshu Riverside Human Resources Service Co. Ltd.), the labour company is also required to adhere to Chinese Labour Law and Suzhou Durapower's policies. There are no reports of child labour for the labour company (under which a reported 162 employees are engaged for the manufacturing facility).</p> <p>Overall, given the nature of the operations on-site (i.e. use of construction machinery and vehicles), the risk of the use of child labour is considered to be low. It is recommended that Durapower develop an enhanced HR Policy to include explicit statements on core labor standards and respective national labor laws, covering all types of employees, noting as well as the requirement to align with Banpu's policies and procedures.</p>	Convention, 1973 (No. 138) Minimum age specified: 14 years	1999		C155 - Occupational Safety and Health Convention, 1981 (No. 155)	25 January 2007	In Force	C182 – Worst Forms of Child Labour Convention, 1999 (No. 182)	8 August 2002	In Force	C187 – Promotional Framework for Occupational Safety and Health Convention, 2006 (No. 187)	-	Not ratified		
Convention, 1973 (No. 138) Minimum age specified: 14 years	1999																
C155 - Occupational Safety and Health Convention, 1981 (No. 155)	25 January 2007	In Force															
C182 – Worst Forms of Child Labour Convention, 1999 (No. 182)	8 August 2002	In Force															
C187 – Promotional Framework for Occupational Safety and Health Convention, 2006 (No. 187)	-	Not ratified															

REF	ADB'S SAFEGUARD PRINCIPLES/REQUIREMENTS	REFERENCE	COMMENTARY/ FINDINGS	RISK RANKING	CORRECTIVE ACTION
<b>2</b>	<b>Forced Labour</b>				
	Appropriate steps should be taken to ensure that procurement of goods and services, contractors, subcontractors, and consultants, comply with the country's labour legislation as well as with the Core Labour Standards. The Core Labour Standards consist of (a) freedom of association and the effective recognition of the right to collective bargaining, (b) the abolition of all forms of forced or compulsory labour, (c) effective abolition of child labour, and (d) elimination of discrimination in respect of employment and occupation.	Social Protection Strategy (2001)	<p>Suzhou Durapower adheres to the Chinese Labour Law which prohibits forced labour. Suzhou Durapower requests for employee's ID cards to verify their age but only retains a copy of the ID card and does not withhold any employees' original ID card. The same standard is expected of the third-party labour company.</p> <p>The Human Resources handbook includes an employee's grievance mechanism where employees may raise any grievances with their direct line manager or to the Human Resources Manager or General Manager directly. Interviews with a sample of employees during the site visit indicated that there have been no employee grievances reported to date, although there is an ongoing legal proceeding related to a worker dispute regarding compensation from their resignation from the company (further details below under Ref #3).</p> <p>The grievance mechanism is not clear on whether anonymous grievances would be considered. The internal grievance redress mechanism should allow for submission of anonymous grievances. It is also recommended that Durapower develop an enhanced HR Policy to include explicit statements on core labor standards and respective national labor laws, covering all types of employees, noting as well as the requirement to align with Banpu's policies and procedures.</p>		<p>Enhance current internal grievance mechanism to include means to send anonymous grievance.</p> <p>Enhance HR Policy to include explicit statements on core labor standards and respective national labor laws, covering all types of employees.</p>
<b>3</b>	<b>Payment of Wages</b>				
	Appropriate steps should be taken to ensure that procurement of goods and services, contractors, subcontractors, and consultants, comply with the country's labour legislation as well as with the Core Labour Standards. The Core Labour Standards consist of (a) freedom of association and the effective recognition of the right to collective bargaining, (b) the abolition of all forms of forced or compulsory labour, (c) effective	Social Protection Strategy (2001)	<p>Prior to contract signing, a draft labour contract is provided to the candidates for review. Two copies of the contract are signed with one copy provided to the employee and one copy retained by the Company. Any adjustment to job scope or contract details will require a new contract to be prepared. Interviews with a sample of employees during the site visit confirmed this practice.</p> <p>Payment of wages is reportedly on the 15<sup>th</sup> of every month. If the 15<sup>th</sup> falls on a weekend or a holiday, the wages would be</p>		Enhance HR Policy to include explicit statements on core labor standards and respective national labor laws, covering all types of employees.

REF	ADB'S SAFEGUARD PRINCIPLES/REQUIREMENTS	REFERENCE	COMMENTARY/ FINDINGS	RISK RANKING	CORRECTIVE ACTION
	abolition of child labour, and (d) elimination of discrimination in respect of employment and occupation.		<p>paid in advance. This wage payment practice was confirmed by employees during the site visit interviews. No cases of late payment or overdue payment of wages were reported.</p> <p>For outsourced employees engaged through a third-party labour company, the labour company will tabulate the working hours if its employees, submit to Suzhou Durapower for payment and then make the payment to the respective employee.</p> <p>It is noted that the Changshu Human Resources and Social Safeguard Bureau will carry out two random labour inspections every year covering the compliance of labour contract signing, wage payment, provision or purchase of social insurance for workers etc. Based on management interviews during the site visit, no non-compliances have been raised by the bureau.</p> <p>As noted above, there is an ongoing legal proceeding related to a worker dispute regarding compensation from their resignation from the company. The first trial was completed on 14 September 2022, and the second trial is currently ongoing. Suzhou Durapower confirmed that it would follow the court processing result of the second trial. It is recommended that Durapower develop an enhanced HR Policy to include explicit statements on core labor standards and respective national labor laws, covering all types of employees, noting as well as the requirement to align with Banpu's policies and procedures.</p>		
<b>4</b>	<b>Working Hours and Overtime</b>				
	Appropriate steps should be taken to ensure that procurement of goods and services, contractors, subcontractors, and consultants, comply with the country's labour legislation as well as with the Core Labour Standards. The Core Labour Standards consist of (a) freedom of association and the effective recognition of the right to collective bargaining, (b) the abolition of all forms of forced or compulsory labour, (c) effective	Social Protection Strategy (2001)	<p>Production of the manufacturing facility operates on a two 8-hour shift daily, but depending on the production volume, this may be increase to two 12-hour shift a day. All overtime work is subject to voluntary basis and Suzhou Durapower will provide overtime wages in accordance of local regulations.</p> <p>Based on the Human Resources handbook, employees need to apply for overtime work through an online system (Dingding Application). Overtime work can only be</p>		Enhance HR Policy to include explicit statements on core labor standards and respective national labor laws, covering all types of employees.

REF	ADB'S SAFEGUARD PRINCIPLES/REQUIREMENTS	REFERENCE	COMMENTARY/ FINDINGS	RISK RANKING	CORRECTIVE ACTION
	abolition of child labour, and (d) elimination of discrimination in respect of employment and occupation.		<p>undertaken when approved by the managers of the related departments. The Human Resources Handbook also indicated that the total overtime work for office workers shall be no more than 32 hours/month, which is under the maximum permissible amount in the Labour Law (i.e. 36 hours a month). However, the Human Resources Handbook does not specify the overtime work for production line workers.</p> <p>According to a record of overtime work for Suzhou Durapower employees in June 2023, the total overtime work is more than 36 hours for several employees, which is in violation of the Labour Law. These employees are understood to be production line workers (and not office workers). For subcontracted workers, Suzhou Durapower has a separate tracker for total working hours for the purpose of calculating the total salary. The tracker for June 2023 was provided for review and does not clearly indicate overtime hours (i.e. overtime by subcontractors is not tracked by Suzhou Durapower), however, it is clear that there has been an exceedance in the total permissible overtime hours per month.</p> <p>Overtime pay is calculated in line with the requirements of the Labour Law. Payment for overtime is on a monthly basis, along with the payment of the monthly salary. Interviews with the employee representatives confirmed the overtime work and payment practice. They also indicated that they were able to get sufficient rest when not working.</p> <p>It is recommended that Durapower develop an enhanced HR Policy to include explicit statements on core labor standards and respective national labor laws, covering all types of employees, noting as well as the requirement to align with Banpu's policies and procedures.</p>		
<b>5</b>	<b>Non-Discrimination and Equal Opportunity</b>				
	Appropriate steps should be taken to ensure that procurement of goods and services, contractors, subcontractors, and consultants, comply with the country's labour legislation as well as with the	Social Protection Strategy (2001)	Section 9 of the Human Resources Handbook indicates a code of conduct which includes the principles of Equal Opportunity and Non-Discrimination. Section 9.2 of the Human Resources Handbook clearly elaborated that the		Enhance HR Policy to include explicit statements on core labor standards and

REF	ADB'S SAFEGUARD PRINCIPLES/REQUIREMENTS	REFERENCE	COMMENTARY/ FINDINGS	RISK RANKING	CORRECTIVE ACTION
	Core Labour Standards. The Core Labour Standards consist of (a) freedom of association and the effective recognition of the right to collective bargaining, (b) the abolition of all forms of forced or compulsory labour, (c) effective abolition of child labour, and (d) elimination of discrimination in respect of employment and occupation.		company commits to ensure fairness and justice to all employees. Interviews with the employee representatives did not flag any discrimination issues faced at work.  It is recommended that Durapower develop an enhanced HR Policy to include explicit statements on core labor standards and respective national labor laws, covering all types of employees, noting as well as the requirement to align with Banpu's policies and procedures.		respective national labor laws, covering all types of employees.
<b>6</b>	<b>Freedom of Association</b>				
	Appropriate steps should be taken to ensure that procurement of goods and services, contractors, subcontractors, and consultants, comply with the country's labour legislation as well as with the Core Labour Standards. The Core Labour Standards consist of (a) freedom of association and the effective recognition of the right to collective bargaining, (b) the abolition of all forms of forced or compulsory labour, (c) effective abolition of child labour, and (d) elimination of discrimination in respect of employment and occupation.	Social Protection Strategy (2001)	Currently there is no workers' union at Suzhou Durapower, although the Human Resources Manager indicated that the company is currently assisting with the establishment of a Workers' Union for the company and is expected to be formalised in 2024.  It is recommended that Durapower develop an enhanced HR Policy to include explicit statements on core labor standards and respective national labor laws, covering all types of employees, noting as well as the requirement to align with Banpu's policies and procedures.		Enhance HR Policy to include explicit statements on core labor standards and respective national labor laws, covering all types of employees.
<b>7</b>	<b>Worker Accommodation</b>				
	Appropriate steps should be taken to ensure that procurement of goods and services, contractors, subcontractors, and consultants, comply with the country's labour legislation as well as with the Core Labour Standards. The Core Labour Standards consist of (a) freedom of association and the effective recognition of the right to collective bargaining, (b) the abolition of all forms of forced or compulsory labour, (c) effective abolition of child labour, and (d) elimination of discrimination in respect of employment and occupation.	Social Protection Strategy (2001)	About 30 Suzhou Durapower employees currently live in the dormitory provided by CEDZ. Reportedly, there are some employees of the subcontracted labour companies who also live in the CEDZ dormitory, but the exact number is not monitored by Suzhou Durapower. The CEDZ dormitory is operated independently by the CEDZ and any employees working within the CEDZ may apply to reside in the dormitory. Based on interviews with the Suzhou Durapower Human Resources Manager and a Suzhou Durapower workers who currently lives at the CEDZ dormitory, CEDZ has an Accommodation Policy with rules and regulations governing the safety, access, living conditions etc. of the dormitory.		None required.

REF	ADB'S SAFEGUARD PRINCIPLES/REQUIREMENTS	REFERENCE	COMMENTARY/ FINDINGS	RISK RANKING	CORRECTIVE ACTION
			Employees living in the CEDZ dormitory require an access pass to enter the premises.		
8	<b>Supply Chain Management</b>				
	Appropriate steps should be taken to ensure that procurement of goods and services, contractors, subcontractors, and consultants, comply with the country's labour legislation as well as with the Core Labour Standards. The Core Labour Standards consist of (a) freedom of association and the effective recognition of the right to collective bargaining, (b) the abolition of all forms of forced or compulsory labour, (c) effective abolition of child labour, and (d) elimination of discrimination in respect of employment and occupation.	Social Protection Strategy (2001)	<p>Suzhou Durapower has a Supplier Management Procedure which implements a three-phase approach to supplier management:</p> <ul style="list-style-type: none"> <li>Phase I Selection of Supplier: Potential suppliers are screened using a Quality System Audit Check Sheet which includes questions on whether the supplier has an environment management system or OHS management system in place with certifications for such management systems; whether the required environment permits are in place; whether regular environment monitoring is implemented; whether any child labours or forced labours issue involved, etc.</li> <li>Phase II Additional Audit: After screening, further audit (sometimes involving a physical site visit to the supplier site) will be carried out by the Supplier Quality Evaluation (SQE) department, which includes collection and verification of E&amp;S and OHS performance, e.g. collection of ISO certificates for environmental management system and OHS management system, environmental monitoring reports, employee contracts etc. A sample of SQE evaluation reports was reviewed during the site visit and no significant issues were identified.</li> <li>Phase III Periodic Review: After a supplier is selected, a Supplier Monitoring System will be implemented to monitor the overall performance of the supplier, including tracking the reputation and any grievances related to the supplier.</li> </ul>		None required.
9	<b>Gender</b>				
	The policy recognises the need to improve the status of women and to promote their potential role in development practices. The strategy of the policy is based on the consideration of social justice and gender equity that investment in	Gender and Development Policy (1998).	<p>There are a total of 451 employees at Suzhou Durapower, including 134 females (30%). Out of the 56 management roles in the company, 17 are female (30%).</p> <p>The Human Resources Handbook specifies labour conditions and benefits for female employees, including maternity leave,</p>		None required.

REF	ADB'S SAFEGUARD PRINCIPLES/REQUIREMENTS	REFERENCE	COMMENTARY/ FINDINGS	RISK RANKING	CORRECTIVE ACTION
	<p>women is vital to achieving economic efficiency and growth. The key elements of the policy relates to the following:</p> <p><i>Gender Sensitivity:</i> Focuses on how the operations of the project proponent will affect women and men, and to take into account women's needs and perspectives in planning its operations.</p> <p><i>Gender Analysis:</i> Focuses on the systematic assessment of the impact of a project on men and women, and on the economic and social relationship between them.</p> <p><i>Gender Planning:</i> Focuses on specific strategies that aim to bring about equal opportunities for men and women.</p> <p><i>Gender Mainstreaming:</i> Focuses on the consideration of gender issues in all aspects of the project proponent's operations, accompanied by efforts to encourage women's participation in the decision-making process in development activities.</p> <p><i>Agenda Setting:</i> Focuses on the formulation of strategies to reduce gender disparities and in developing plans and targets for women's and girls' education, health, legal rights, employment, and income-earning opportunities.</p>		<p>leave for pre-natal checkup, breastfeeding leave, abortion leave and parental leave. Section 9.2 of the HR Handbook also sets out an anti-sexual harassment policy.</p> <p>Durapower has a PPE policy particular for the production lien workers. Various sizes of PPEs are available to suit different size of needs.</p> <p>Gender segregated toilets and changing rooms are provided at the manufacturing facility.</p> <p>Based on interviews with employee representatives, the CEDZ accommodation reportedly has gender-segregated areas/rooms for men and women employees.</p>		

## 7 CORRECTIVE ACTION PLAN

In summary, no significant non-compliances were noted, however, non-compliances have been identified at the corporate level and the site level which the Corrective Action Plan (CAP) in *Table 7-1* below provides recommendations to address. Indicative resources/budgets have been provided based on available information and are provided to give an indication. The tasks may be able to be completed in more economic ways or conversely require addition support and time, depending on a number of factors.



**Table 7-1 Corrective Action Plan**

NO.	ASPECT	COMMENTARY	CORRECTIVE ACTION	DELIVERABLES	RESPONSIBILITY	TIMELINE	INDICATIVE BUDGET/ RESOURCES
<b>1</b>	<b>Corporate ESMS – BANPU/BPN</b>						
1a	E&S Screening, Categorization and Risk Assessment	<p>Banpu has a Work Procedure for the Investment Committee (IC) – Investment Decision Process (No: TH-SBD-SPA-WP-03 Rev: 04) to establish a standard work process for investment decisions made by the IC. The content of the investment approval report is focused on the financial analysis, although there are guidelines requiring a description of any environmental concerns, an E&amp;S impact analysis and a mitigation plan for the key E&amp;S risks identified.</p> <p>During the site visit interviews with Banpu, it was discussed that generally for greenfield projects, the investment approval report would include a screening of E&amp;S impacts such as whether there would be any land acquisition and involuntary resettlement. For projects deemed to be “environmentally friendly” or “green” (i.e. renewable energy development, replacement of fossil fuels, noting that there is no formal definition), however, it was noted that E&amp;S impacts and mitigation were generally not assessed at the investment decision stage. Specifically, for Banpu’s investment into both Durapower Holdings and UMT, E&amp;S aspects were not considered during the investment screening process.</p>	<p>Develop and implement procedures for E&amp;S Screening, Categorisation and Risk Assessment including:</p> <ul style="list-style-type: none"> <li>(i) An E&amp;S screening procedure against ADB’s Prohibited Investment Activities List (PIAL) applicable to activities that will utilize ADB loan proceeds.</li> <li>(ii) An E&amp;S categorisation procedure compliant with ADB Safeguard Policy Statement (2009) applicable to activities that will utilize ADB loan proceeds.</li> <li>(iii) An E&amp;S risk and impact assessment procedure to identify environmental, health, safety, labour and community risks and impacts from projects and investments that will utilize ADB loan proceeds.</li> </ul> <p>The E&amp;S screening, categorisation and risk assessment procedures will form part of BANPU and BPN’s ESMS.</p>	Screening, categorisation and risk assessment procedures compliant with ADB SPS (2009).	BANPU	Prior to disbursement.	Management time.
				Screening and categorisation will be carried out for Durapower expansion prior to finalization of investment.	BPN/ Durapower	Finalisation of Durapower investment decision.	Management time.
				E&S risk and impact assessment will be carried out for Durapower expansion prior to commencement of construction.	BPN/ Durapower	Prior to commencement of Durapower factory expansion construction.	Depending on the requirements of the item 2a, the risk and impact assessment may be carried out as part of the EIA or as standalone process.
1b	E&S Monitoring and Reporting	<p>ADB will require, as per requirements of the SPS (2009) for BANPU to report on its E&amp;S management and performance, in particular where ADB loan will be utilized.</p> <p>Monitoring of subsidiary E&amp;S performances is limited to subsidiaries where BANPU holds a greater than 50% of total shares and has management control. This would mean that UMT is excluded from the scope of the Banpu’s monitoring and reporting, whilst Durapower Holdings should be included in future monitoring and reporting. At the time of the ESDD, neither Durapower nor UMT have been included in BANPU’s E&amp;S monitoring.</p>	<p>Establish routine and non-routine reporting requirements to ADB (including any ADB specific metrics) by BANPU.</p> <p>Include E&amp;S monitoring requirements specific for Durapower and UMT (to be discussed with Durapower and UMT) in relation to the planned uses of proceeds from ADB’s loan.</p>	Agreed E&S monitoring scope and template with ADB, and with Durapower and UMT (Agreed template to be appended to the finance document).	Banpu / BPN / Durapower / UMT	Prior to disbursement	Management time.
1c	E&S Policies and Procedures Adoption by Subsidiaries	<p>BANPU and BPN implement environmental, health, safety and social management policies and procedures, including environment, occupational health and safety (OHS), climate change, sustainability, human rights and community related policies, and specific operational management procedures. Subsidiaries including Durapower and UMT also implement their own environmental and social policies and procedures.</p> <p>As BANPU holds &gt;50% stakes of Durapower, BANPU plans to cascade/integrate their E&amp;S policies and procedures with</p>	<p>Banpu to cascade/integrate the company’s ESMS/E&amp;S policies and procedures with Durapower’s ESMS/E&amp;S policies and procedures. Specifically as identified during the ESDD, Durapower shall:</p> <ul style="list-style-type: none"> <li>• Enhance its HR Policy to include explicit statements on core labor standards and respective national labor laws, covering all</li> </ul>	Plan on how BPN and Durapower Holdings/Suzhou Durapower will work to align with Banpu’s policies and procedures.	Banpu/ BPN / Durapower	Prior to disbursement.	Management time.
				HR Policy with explicit statements on core labor standards and respective	Banpu/ BPN / Durapower	Within six months after signing.	Management time.

NO.	ASPECT	COMMENTARY	CORRECTIVE ACTION	DELIVERABLES	RESPONSIBILITY	TIMELINE	INDICATIVE BUDGET/ RESOURCES
		<p>Durapower's management of their activities. At the time of the ESDD, the integration has not been formally planned or commenced.</p> <p>As BANPU is a minority shareholder of UMT, BANPU does not have a policy to cascade, integrate or monitor UMT's E&amp;S management or performance.</p>	<p>types of employees.</p> <ul style="list-style-type: none"> <li>Enhance its internal and external grievance redress mechanisms allowing submission of anonymous grievance.</li> <li>Develop and implement stakeholder engagement plan.</li> </ul> <p>Recommendation for ESMS at UMT has been provided separately for UMT to independently implement in 3a.</p>	<p>national labor laws.</p> <p>Internal and external grievance redress mechanisms allowing submission of anonymous grievances</p> <p>Stakeholder identification and engagement plan.</p>			
1d	E&S organisational structure	E&S reporting lines between BPN and investee companies (in the context of the planned used of proceeds) are unclear.	Agree upon E&S contact points and reporting organisation structure between BANPU/BPN with Durapower and UMT/MuvMi Hero.	List of E&S focal persons and E&S roles and responsibilities, organisation charts where possible.	Banpu / BPN / Durapower	Prior to disbursement.	Management time.
1e	Hazardous Materials and Waste Management - Banpu Next Green Leasing	<p>There is no formal management plan for hazardous materials and waste (i.e. electrical components of the charging stations, new and old/spoilt batteries associated with the e-tuktuks) that provides a standardised, good practice approach to the proper handling, storage, transport and disposal of electronic and hazardous waste and materials. Note that BPN has developed an e-waste management guideline which provides simplified flow-charts on how to handle the e-waste generated from the E-mobility business of BPN but there are no specific procedures (e.g. site requirements, designated area, proper signage, proper ventilation, proper temperatures avoiding excessive heat, fire safety, leak containment) for storage and handling of the hazardous waste itself.</p> <p>BPNGL currently stores the e-tuktuk batteries at a third party logistics centre (operated by BISCO) and relies on BISCO to manage the onsite storage of the batteries. Regarding the disposal of hazardous waste, BPN has a service agreement in place with a license hazardous waste collector to collect and dispose of batteries, solar panels and electronic equipment. A sample hazardous waste manifest for the disposal of solar photovoltaic panels by BPN was provided for review.</p>	Develop a waste management plan (covering non-hazardous and hazardous waste) to include handling, labelling, storage, transport and disposal procedures applicable to BPNGL's energy service provider scope (i.e. the construction and operation of the e-tuktuk charging stations, storage of new and old/spoilt batteries associated with the e-tuktuks).	Waste management plan for non-hazardous and hazardous waste.	BPNGL	Within three months after signing.	Management time.
1f	Health and Safety	For potential emergency during installation and inspection of the charging station, BPNGL reportedly implements a "buddy system" for field staff performing routine inspection of the charging station. An informal protocol to call the BPN head office or the respective line manager/supervisor for support during an emergency accident is in place. However, there was no formal emergency response plan developed including emergency contact number and communication protocol.	Develop a formal, simple emergency preparedness and response plan commensurate to the risks and operations of BPNGL's energy service provider scope.	Emergency preparedness and response plan	BPNGL	Within three months after signing.	Management time.

NO.	ASPECT	COMMENTARY	CORRECTIVE ACTION	DELIVERABLES	RESPONSIBILITY	TIMELINE	INDICATIVE BUDGET/ RESOURCES
<b>2</b>	<b>Battery Manufacturing Facility – Suzhou Durapower</b>						
2a	Environmental, Health and Safety and Social Assessment and Management	<p>An EIA was first prepared by Suzhou Durapower in 2010 in line with Chinese EIA Law, although for a different site and a revised EIA report was subsequently prepared in April 2020 when Suzhou Durapower moved its operations to the current site. The revised EIA report, which was approved on 21 May 2020, accounted for changes in the production process, equipment, layout, use of raw materials and pollution prevention mitigation measures that were applicable to the current factory set up and operations.</p> <p>Suzhou Durapower plans to expand its production capacity, which includes expanding the existing operations of the current facility as well as the construction of a second production building on the existing land plot (adjacent to the current building). The associated assessments, including the EIA, are reportedly under preparation. However, details on how Suzhou Durapower intends to expand the capacity of the existing facility are not available at this stage and consequently, it cannot be confirmed if an updated EIA will be required for the existing facility. Typically, a change in the production process (e.g. more and new equipment, more raw materials etc.) would require a re-assessment of the environmental risks and whether existing mitigation measures remain adequate.</p> <p>The facility implements an integrated environmental, occupational health and safety management system (certified to the requirements of GB/T 24001-2016/ISO 14001:2015 / GB/T 45001-2020/ISO 45001:2018). The system scope, EHS risk and impact registers, management, monitoring and reporting procedures, organization capacity and training will need to be reviewed and updated to include the expanded operations.</p>	<p>Provide details of the expansion plan of the factory in Suzhou.</p> <p>Confirm the regulatory requirements for environmental, occupational health and safety assessments that will be required for the Reassessment of the environmental risks and existing mitigation measures related to the planned expansion</p>	Facility expansion plan and details.	Suzhou Durapower	Prior to commencement of expansion construction.	Management time.
				Confirmation of the list of required environmental, health, safety related assessments, for the proposed expansion.			
				List of applicable permits and approval that need to be obtained prior to construction and operations. If possible, include status of application and provide a copy.	Suzhou Durapower	Permits and approvals obtained as per required timelines.	Management time.
				Draft updated / supplementary EIA and EMP or any equivalent supplementary reports (if required)	Suzhou Durapower	Prior to commencement of expansion operations.	Management time.
				Updated environmental, occupational health and safety management system for plant operations prior to commencement of expansion operations.			
2b	Waste Management	Based on observations during the site visit, the recyclable waste is sorted and stored at a centralised waste collection area on-site. The rain cover for old or waste machines dismantled from the production line was not properly covered, leaving some of the machinery exposed to rain.	The storage of recyclable waste on-site can be improved to prevent surface runoff and contamination of waste machinery oil or corrosion.	Improved waste management storage on-site	Suzhou Durapower	Within six months after signing.	Minor cost.
<b>3</b>	<b>E-tuktuk Operations – UMT/MuvMi Hero</b>						
3a	E&S Policies and Procedures	UMT has an environmental policy with the aim to enhance resource efficiency and minimise environmental impacts associated with the operations.	<p>Develop and implement environmental and social policies and procedures covering the following:</p> <ul style="list-style-type: none"> <li>E&amp;S Risk Assessment Tool and Risk Register</li> <li>Land acquisition and lease tool to avoid IR</li> </ul>	Plan on how UMT will prepare and update policies and procedures.	BPN/UMT	Prior to disbursement.	Management time.
				E&S risk assessment tool	BPN/UMT	Within three months after signing.	Management time.
				Land acquisition and lease tool			

NO.	ASPECT	COMMENTARY	CORRECTIVE ACTION	DELIVERABLES	RESPONSIBILITY	TIMELINE	INDICATIVE BUDGET/ RESOURCES
			<p>impacts and impacts to vulnerable groups.</p> <ul style="list-style-type: none"> <li>• <b>Enhanced HR Policy</b> explicitly complying with core labor standards and national labor laws</li> <li>• <b>E&amp;S organisation</b> to manage E&amp;S procedures implementation, E&amp;S monitoring and reporting.</li> <li>• <b>E&amp;S Monitoring and Reporting Procedure</b></li> </ul>	<p>Enhanced HR Policy</p> <p>Organisational structure identifying E&amp;S focal persons</p> <p>Risk Register</p> <p>E&amp;S Training plan</p> <p>E&amp;S monitoring and reporting procedure</p>			
3b	Management Plans (MuvMi Hero)	It was identified during the ESDD that UMT/MuvMi Hero do not have formal processes to manage specific environmental, health, safety, labor and community aspects of their activities as indicated in the recommendations.	<p>Develop and implement environmental and social plans and procedures to manage specific EHS and Social issues, including covering the following:</p> <ul style="list-style-type: none"> <li>• <b>Waste Management Plan</b> to include both non-hazardous and hazardous waste generated from the e-tuktuk operation, maintenance and end of life disposal.</li> <li>• <b>Emergency Preparedness and Response Plan</b> for the maintenance workshop and training centre.</li> <li>• <b>Personal Protective Equipment Program</b> for the maintenance workshop.</li> <li>• <b>Stakeholder Engagement Process</b></li> <li>• <b>External and Internal Grievance Redress Procedures</b></li> <li>• <b>Supplier and Contractor Procurement and Management Procedure</b> that takes into consideration E&amp;S requirements.</li> </ul>	<p>Waste management plan</p> <p>Emergency Preparedness and Response Plan for the maintenance workshop and training centre.</p> <p>PPE Program for the maintenance workshop.</p> <p>Stakeholder engagement process</p> <p>Internal GRM</p> <p>External GRM</p> <p>Supplier and contractor procurement and management process</p>	BPN/UMT	Within six months after signing.	Management time.

## 8 CONCLUSION

### 8.1 CORPORATE ESMS OVERVIEW

There are comprehensive E&S policies at the Banpu corporate level that cover a broad range of topics (i.e. Environmental, Human Rights, Occupational Health and Safety, Community Engagement, Waste Management, Resettlement Management, Biodiversity, Indigenous Peoples etc.). Further, BPN has developed more detailed work procedures for additional guidance on E&S management that are specific to the business activities of BPN (covering renewable energy development as well as E-mobility business). There is a defined global corporate sustainability organisational structure at the Banpu corporate level that supports in ensuring that all of Banpu's subsidiaries (where Banpu has management control) adhere to Banpu's policies and procedures.

It should be noted that Banpu's policies generally apply to Banpu and its subsidiaries where Banpu has management control (i.e. more than 50% shareholding). In the context of the planned use of proceeds:

- Banpu currently does not require UMT to adhere to Banpu's policies since Banpu has less than 50% shareholding in UMT.
- Banpu has just recently become a majority shareholder in Durapower Holdings so an integration process is still to come to ensure that Durapower Holdings (and the manufacturing facility owned by Suzhou Durapower) aligns with Banpu's policies.
- There are no currently structured reporting requirements on E&S performance between UMT/Suzhou Durapower and Banpu.

Currently during the investment screening process, E&S risks are not assessed for projects that are deemed to be "green" (i.e. related to renewable energy, replacement of fossil fuels, whilst noting there is no formal definition for "green" projects). For Banpu's investment into both Durapower and MuvMi, E&S aspects were not considered during the investment screening process.

A CAP has been prepared to assist in addressing the key gaps identified and moving towards alignment with the E&S Safeguards.

### 8.2 COMPLIANCE AUDIT FINDINGS

From the compliance audit work undertaken, the findings related to ADB's Safeguard Requirements are summarised below.

### 8.2.1 Safeguard Requirements 1 – Environment

In relation to the three site compliance audits, IBIS identified E&S compliance risks (against the respective host-country requirements and also the wider set of E&S Safeguards). Measures to address these gaps have been provided in the CAP. Main E&S risks for each are provided below:

- E&S screening procedures/risk register;
- Hazardous materials and waste management;
- Stakeholder engagement and external communication procedures;
- Occupational and community health and safety;
- Labour and working conditions including working hours and overtime.

In general, there needs to be monitoring and reporting procedures between the corporate and site level relevant to the planned use of proceeds, and more activity-specific work procedures at the subsidiary level.

### 8.2.2 Safeguard Requirements 2 – Involuntary Resettlement

In the context of the nature, scale and location of operations of the sites visited, this Safeguard is generally not considered to be relevant. The operations of the e-tuktuks and battery manufacturing facility related to the use of proceeds are mainly established in industrial zones and commercial areas. Land expropriation and involuntary resettlement are indicated not to have been issues to-date in the operations or anticipated not to be an issue relating to the use of proceeds.

### 8.2.3 Safeguard Requirements 3 – Indigenous Peoples

In the context of the nature, scale and location of operations of the sites visited, this Safeguard is not considered to be relevant.

## Annex A: Key Documents Reviewed

**Table A-8-1 List of key documents reviewed**

NO.	DOCUMENT TITLE	DOCUMENT LANGUAGE	DATE PROVIDED	DATE OF DOCUMENT
1	BANPU_One-Report-2022_EN_11-Apr-23	English	(Downloaded from Banpu website)	2022
2	BANPU_Financial-Report-2022_EN_10-Mar-23	English	(Downloaded from Banpu website)	2022
3	Banpu-SD-Report-2022-EN-1	English	(Downloaded from Banpu website)	31 May 2023
4	Supplier-Code-of-Conduct-EN	English	(Downloaded from Banpu website)	(not dated)
5	Banpu-Human-Resources-Management-Policy-English	English	(Downloaded from Banpu website)	1 July 2022
6	Human-Rights-Due-Diligence-Manual	English	(Downloaded from Banpu website)	14 January 2022
7	Human-Rights-Policy	English	(Downloaded from Banpu website)	31 March 2023
8	Occupational-Health-and-Safety-Policy	English	(Downloaded from Banpu website)	15 March 2017
9	Climate-Change-Policy	English	(Downloaded from Banpu website)	27 April 2018
10	Waste-Management-Policy	English	(Downloaded from Banpu website)	9 September 2020
11	Water-Management-Policy	English	(Downloaded from Banpu website)	12 March 2021
12	Community-Development-Policy	English	(Downloaded from Banpu website)	30 April 2019
13	Community-Engagement-Policy	English	(Downloaded from Banpu website)	30 April 2019
14	Biodiversity-Policy	English	(Downloaded from Banpu website)	22 April 2022
15	Sustainable-Supply-Chain-Policy	English	(Downloaded from Banpu website)	5 December 2018
16	Corporate-Governance-Policy-and-Code-of-Conduct	English	(Downloaded from Banpu website)	Not dated (2018)
17	Business-Continuity-Policy	English	(Downloaded from Banpu website)	4 August 2017
18	Biodiversity Policy.pdf	English	2 July 2023	22 April 2022
19	Climate Change.pdf	English	2 July 2023	27 April 2018



## ANNEX A: KEY DOCUMENTS REVIEWED

NO.	DOCUMENT TITLE	DOCUMENT LANGUAGE	DATE PROVIDED	DATE OF DOCUMENT
20	Environmental Policy.pdf	English	2 July 2023	14 March 2023
21	Occupational_Health_and_Safety_Policy.pdf	English	2 July 2023	23 March 2023
22	Sustainable-Development-Policy (1).pdf	English	3 July 2023	01 April 2016
23	TH-HSEC-CD-PO-01 Community Development Policy.pdf	English	2 July 2023	30 April 2019
24	Water Management Policy.pdf	English	2 July 2023	12 March 2021
25	BP-HSEC-SP-003 Community Consultative Committee Guideline.pdf	English	3 July 2023	May 2020
26	BP-HSEC-SPM-002 Resettlement Management.pdf	English	3 July 2023	19 October 2018
27	BP-HSEC-SPM-005 Community Engagement Work.pdf	English	3 July 2023	16 July 2019
28	BP-HSEC-SPM-006 Stakeholder Engagement.pdf	English	3 July 2023	16 July 2019
29	Waste Management - General Waste.pdf	English	3 July 2023	01 January 2023
30	Waste Management - Mineral Waste.pdf	English	3 July 2023	15 January 2023
31	Water Management.pdf	English	3 July 2023	28 November 2022
32	About Safety Risk Assessment.pdf	English	2 July 2023	01 December 2012
33	Example of Hazard Identification and Risk Assessment (Warehouse).pdf	Thai	2 July 2023	May 2023
34	BANPU_Climate-Change-Report-2022.pdf	English	2 July 2023	2022
35	BANPU_Climate-Change-Report-2022.pdf	English	2 July 2023	2022
36	BP-HSEC-SPM-008 Monitoring, Evaluation and Reporting of Community Engagement Work.pdf	English	3 July 2023	16 July 2019
37	BP-HSEC-WP-002 Community Engagement Management Review at Country's Community Function.pdf	English	3 July 2023	16 July 2019
38	BP-HSEC-WP-003 Joint Management Review at Operational Sites with Country's Community Function.pdf	English	3 July 2023	16 July 2019
39	[ITM] 2022 Community Engagement & Development Report.pdf	English	3 July 2023	2022
40	Banpu-SD-Report-2022-EN.pdf	English	3 July 2023	31 May 2023
41	Banpu-SD-Report-2022-EN.pdf	English	3 July 2023	31 May 2023
42	Announcement 9-2023 Global Corporate Sustainability Organizational Structure.pdf	English	2 July 2023	29 June 2023
43	GCS's Communication&Engagement 23Jun.pptx	English	3 July 2023	Not dated
44	Compliance Management System.pdf	English	3 July 2023	Not dated
45	Environment Manager_Revis Oct 27, 2015.docx	English	3 July 2023	Not dated
46	Manager-Community Development.docx	English	3 July 2023	Not dated
47	Occupational Health and Safety Manager_Revis Oct 28 rev2.docx	English	3 July 2023	28 October 2015
48	[ITM] CD CAPABILITY DEVELOPMENT.pdf	English	3 July 2023	May 2023
49	PPC System.pptx	English	2 July 2023	09 May 2023
50	Accident Investigation.pdf	English	2 July 2023	01 September 2010



## ANNEX A: KEY DOCUMENTS REVIEWED

NO.	DOCUMENT TITLE	DOCUMENT LANGUAGE	DATE PROVIDED	DATE OF DOCUMENT
51	Example_Incident Reporting and Investigation_Lost Time Case.pdf	English	2 July 2023	09 June 2021
52	BP-HSEC-SPM-006 Stakeholder Engagement.pdf	English	3 July 2023	16 July 2019
53	BP-HSEC-SPM-001 Community Complaint Management.pdf	English	2 July 2023	20 July 2021
54	Bharinto Ekatama_OHS 621681_Copy of 45001.pdf	English	2 July 2023	06 June 2021
55	BPNE_copy of 14001.pdf	English	2 July 2023	08 June 2022
56	BPNE_copy of Certificate ISO 45001.pdf	English	2 July 2023	14 June 2022
57	LN Power Plant_Copy of 14001 and 45001.pdf	English	2 July 2023	18 September 2021
58	200527 Investment Committee - Investment Decision Process.pdf	English	3 July 2023	08 May 2020
59	PPC-BPP.pptx	English	3 July 2023	Not dated
60	Banpu-SD-Report-2022-EN.pdf	English	3 July 2023	31 May 2023
61	[CEY] Western Region - Aboriginal Cultural Heritage Management Plan.pdf	English	2 July 2023	July 2016
62	BP-HSEC-SP-004 Indigenous Peoples Engagement Guideline.pdf	English	2 July 2023	June 2020
63	Banpu-Human-Resources-Management-Policy-English.pdf	English	3 July 2023	01 July 2022
64	Banpu Work Rules and Regulations 2562 English (PDF).pdf	English	13 July 2023	01 July 2020
65	จดหมายเชิญพบพนักงานตรวจแรงงาน 13032020.pdf	Thai	13 July 2023	17 February 2020
66	บันทึกคำให้การต่อพนักงานตรวจแรงงาน 13032020.pdf	Thai	13 July 2023	12 March 2020
67	3.1.8_Whistleblower-Policy.pdf	English	3 July 2023	19 November 2015
68	Supplier-Code-of-Conduct-EN.pdf	English	3 July 2023	Not dated
69	Sustainable-Supply-Chain-Policy.pdf	English	3 July 2023	05 December 2018
70	Corporate Procurement Policy 2019.pdf	English	3 July 2023	01 July 2019
71	Corporate Procurement Policy 2019.pdf	English	3 July 2023	01 July 2019
72	[CEY] Mandalong Stakeholder Engagement Strategy.pdf	English	3 July 2023	April 2018
73	BP-HSEC-SP-003 Community Consultative Committee Guideline.pdf	English	3 July 2023	May 2020
74	BP-HSEC-SPM-005 Community Engagement Work.pdf	English	3 July 2023	16 July 2019
75	BP-HSEC-SPM-006 Stakeholder Engagement.pdf	English	3 July 2023	16 July 2019
76	BPN-SHE-WP-002_Personal Protective Equipment (PPE).pdf	Thai (English translated copy available)	7 July 2023	18 July 2022
77	BPN-SHE-WP-003_Machine Safety.pdf	Thai (English translated copy available)	7 July 2023	18 July 2022
78	Occupational Health and Safety Manual_Banpu NEXT_Rev.01.pdf	Thai (English translated copy available)	7 July 2023	Not dated
79	3 (ENMO) BPN-SHE-FM-001 Hazard Identification and Risk Assessment Form (1).xlsx	Thai (English translations available)	7 July 2023	8 July 2022

## ANNEX A: KEY DOCUMENTS REVIEWED

NO.	DOCUMENT TITLE	DOCUMENT LANGUAGE	DATE PROVIDED	DATE OF DOCUMENT
80	4 (ENMO) BPN-SHE-FM-002 Objective Target and Action Plan (1).xlsx	Thai (English translations available)	7 July 2023	8 July 2022
81	E-Mobility_ Hazard Identification and Risk Assessment Form _21Jul2022.xlsx	Thai (English translations available)	7 July 2023	Multiple dates (14 to 19 July 2023)
82	E-Mobility_002-003_Objective Target and Action Plan.xlsx	Thai (English translations available)	7 July 2023	20 July 2022
83	Factsheet_โครงการพลังงานแสงอาทิตย์เพื่อการเรียนรู้ "Light & Learn".docx	English	7 July 2023	Not dated
84	BPN-SHE-WP-010_Legal and Other Requirement.pdf	Thai (English translated copy available)	7 July 2023	20 July 2022
85	4.3.3.1 EM192010033-苏州新中能源科技有限公司-英文证书 ISO 14001.pdf	English	7 July 2023	28 October 2020
86	4.3.3.2 HS192010024-苏州新中能源科技有限公司-英文证书 (1) ISO 45001.pdf	English	7 July 2023	28 October 2020
87	4.3.3.3 ISO 9001 certification.pdf	English	7 July 2023	13 February 2023
88	5.6.15.1 STAFF HANDBOOK revised 2 Jan 21.pdf	English	7 July 2023	2 January 2021
89	BPN-SHE-SP-015_Occupational Health and Safety Regulation.docx	Thai (English translated copy available)	7 July 2023	Not dated
90	BPN-SHE-SP-017_Vender Evaluation for Health and Safety Assessment .xlsx	Thai (English translations available)	7 July 2023	Not dated
91	BPN-SHE-WP-004_Contractor Management.pdf	Thai (English translated copy available)	7 July 2023	19 July 2022
92	4.3.3.1 EM192010033-苏州新中能源科技有限公司-英文证书 ISO 14001.pdf	English	13 July 2023	28 October 2020
93	4.3.3.2 HS192010024-苏州新中能源科技有限公司-英文证书 (1) ISO 45001.pdf	English	13 July 2023	28 October 2020
94	4.3.3.3 ISO 9001 certification.pdf	English	13 July 2023	13 February 2023
95	4.3.3.4 IATF 16949 certification.pdf	English	13 July 2023	13 February 2023
96	Durapower Org Chart.png	English	13 July 2023	Not dated
97	1. 二期总平面图.pdf	Mandarin	18 July 2023	Not dated
98	2. 体系证书 14001 EMS Certification.pdf	Mandarin	18 July 2023	3 December 2021
99	2. 环境职业健康安全手册 A1_EMS.pdf	Mandarin	18 July 2023	1 November 2020
100	3. 体系证书 45001 OHS Certification.pdf	Mandarin	18 July 2023	3 December 2021
101	4. Battery Assembly Struecture v3.pdf	English and Mandarin	18 July 2023	Not dated
102	4. Cell Mfg Process v4.pdf	English and Mandarin	18 July 2023	Not dated

## ANNEX A: KEY DOCUMENTS REVIEWED

NO.	DOCUMENT TITLE	DOCUMENT LANGUAGE	DATE PROVIDED	DATE OF DOCUMENT
103	4. HV Box Assembly Structure v3.pdf	English and Mandarin	18 July 2023	Not dated
104	4. Module Assembly Structure v3.pdf	English and Mandarin	18 July 2023	Not dated
105	4. PACK flowchart v3.pdf	English and Mandarin	18 July 2023	Not dated
106	E-Mobility_ Hazard Identification and Risk Assessment Form_21Jul2022.xlsx	Thai (English translations available)	28 July 2023	Multiple dates (in July 2023)
107	E-Mobility_002-003_Objective Target and Action Plan.xlsx	Thai (English translations available)	28 July 2023	Multiple dates (in July 2023)
108	OM_BPN-SHE-FM-001 Hazard Identification and Risk Assessment Form.xlsx	Thai (English translations available)	28 July 2023	Multiple dates (in July 2023)
109	3 BPN-SHE-FM-001 Hazard Identification and Risk Assessment Form_PMO_Signed offv2.xlsx	Thai (English translations available)	28 July 2023	Multiple dates (in July 2023)
110	3 BPN-SHE-FM-001 Hazard Identification and Risk Assessment Form - Sales Team (rev.01).xlsx	Thai (English translations available)	28 July 2023	Multiple dates (in July 2023)
111	HSE_BPN-SHE-FM-001 Hazard Identification and Risk Assessment Form_Rev.00_sign.xlsx	Thai (English translations available)	28 July 2023	Multiple dates (in July 2023)
112	manifest_PV Module_2023.04.10.pdf	Thai (and some English)	28 July 2023	10 April 2023
113	กอล&PO.pdf	Thai	28 July 2023	10 April 2023
114	รายงานแจ้งกำจัดของเสียบ้านปู เน็กซ์ แก๊ส 10.4.66.pdf	Thai	28 July 2023	17 April 2023
115	BISCO ที่อยู่คลัง สาขา 2.docx	Thai	28 July 2023	Not dated
116	durapower battery.jpg	Thai	28 July 2023	Not dated
117	BJP_Work Permit.jpg	Thai	28 July 2023	5 June 2023
118	Work at height permit at CNI Chachoengsao_MA 2023.06.19.pdf	Thai	28 July 2023	19 June 2023
119	4.3.3.1 EM192010033-苏州新中能源科技有限公司-英文证书 ISO 14001.pdf	English	13 July 2023	28 October 2020
120	4.3.3.2 HS192010024-苏州新中能源科技有限公司-英文证书 (1) ISO 45001.pdf	English	13 July 2023	28 October 2020
121	4.3.3.3 ISO 9001 certification.pdf	English	13 July 2023	13 February 2023
122	4.3.3.4 IATF 16949 certification.pdf	English	13 July 2023	13 February 2023
123	Durapower Management Team.png	English	13 July 2023	Not dated
124	Durapower Org Chart.png	English and Mandarin	13 July 2023	Not dated
125	Energy Isolation Work Permit.pdf	Thai (English translated copy available)	13 July 2023	15 November 2022
126	Hazardous Waste Disposal Flow for E-Mobility.pdf	Thai (English translated copy available)	13 July 2023	2 August 2022
127	OHS Risk Assessment_E-volte.pdf	Thai	13 July 2023	1 November 2022

## ANNEX A: KEY DOCUMENTS REVIEWED

NO.	DOCUMENT TITLE	DOCUMENT LANGUAGE	DATE PROVIDED	DATE OF DOCUMENT
128	TH_Questionnaires_admin.xlsx	English and Thai	13 July 2023	Not dated
129	3a HSEC Orientation pack, Banpu Orientation Application Version_Jul2023.pdf	English	21 July 2023	Not dated
130	4 Training recommendation from audit findings.jpg	English	21 July 2023	Not dated
131	5 BP-HSEC-SP-004 Indigenous Peoples Engagement Guideline.pdf	English	21 July 2023	June 2020
132	6 Montly report from subsidiary.jpg	English	21 July 2023	Not dated
133	Banpu & Banpu NEXT -Information Requests & Clarifications_response 1.docx	English	21 July 2023	21 July 2023
134	1. EM_OHS PRS Template(BP-HSEC-SH-FM-002)_2023 (1).xlsx	English	25 July 2023	2023 (to date)
135	Announcement 13-2022 Banpu NEXT Organizational Structure.pdf	English	25 July 2023	16 December 2022
136	Email Communication - Incident & Accident Reports.docx	Thai	25 July 2023	Multiple dates
137	OHS-ICD-EM-004-2023.pdf	English	25 July 2023	9 June 2023
138	HR-PC-1-04_นโยบายสิ่งแวดล้อม.pdf	Thai	22 July 2023	28 February 2019
139	HR-PC-19-02_จรรยาบรรณทางธุรกิจ.pdf	Thai	22 July 2023	27 August 2019
140	นโยบายเรื่องมาตรฐานระบบการจัดการ.pdf	Thai	22 July 2023	27 August 2019
141	220114_ข้อบังคับเกี่ยวกับการทำงาน_Hero.pdf	Thai	22 July 2023	1 February 2022
142	220209_People Policy.pdf	Thai	22 July 2023	9 February 2022
143	220525_HEROHR Privacy Policy.pdf	Thai	22 July 2023	25 May 2022
144	220525_HEROPPL_Consent.pdf	Thai	22 July 2023	Not dated
145	220525_HERORECRUITMENT Privacy Policy.pdf	Thai	22 July 2023	Not dated
146	210124_MuvMiHero_Safety Policy.pdf	Thai	22 July 2023	6 February 2022
147	210203_MuvMiHero_Transportation Policy.pdf	Thai	22 July 2023	9 February 2022
148	210615_MuvMiyHero_Drug free Policy.pdf	Thai	22 July 2023	23 June 2022
149	MM-RP-03-23 Procedure_Recruitment_Driver and Helper.pdf	English	22 July 2023	1 March 2023
150	MM-RP-03-23 Procedure_Recruitment_Office.pdf	English	22 July 2023	
151	Procedure_Salary Increment_Driver.pdf	English	22 July 2023	1 January 2022
152	Procedure_Salary Increment_Office.pdf	English	22 July 2023	1 January 2022
153	Template Employment Agreement.pdf	English	22 July 2023	Not dated
154	ข้อบังคับเกี่ยวกับการทำงาน_V1.0_20191001.pdf	Thai	22 July 2023	1 October 2019
155	230714_ADB_Environmental_Social [Final]_vSent.pdf	English	22 July 2023	14 July 2023
156	1、滨江劳务合同（2023.1.1-2023.12.31）.pdf	Mandarin	21 July 2023	Not dated
157	六月综合 端午节前 夏季 检查表.pdf	Mandarin	21 July 2023	5 June 2023; 21 June 2023; 26 June 2023

## ANNEX A: KEY DOCUMENTS REVIEWED

NO.	DOCUMENT TITLE	DOCUMENT LANGUAGE	DATE PROVIDED	DATE OF DOCUMENT
158	六月综合检查.pdf	Mandarin	21 July 2023	5 June 2023
159	危险化学品使用基本情况登记表.docx	Mandarin	21 July 2023	Not dated
160	安全生产责任制度.pdf	Mandarin	21 July 2023	1 February 2021
161	端午节前 夏季检查.pdf	Mandarin	21 July 2023	21 June 2023
162	苏州新中能源科技有限公司新建车用锂电池系统项目安全验收评价报告.pdf	Mandarin	21 July 2023	October 2021
163	隐患排查与治理管理制度.pdf	Mandarin	21 July 2023	1 June 2020
164	1#车间消防验收合格意见书.pdf	Mandarin	21 July 2023	3 June 2019
165	危化品仓库消防验收合格意见书.pdf	Mandarin	21 July 2023	2 April 2019
166	应急逃生疏散及消防演练记录 2023.06.01.pdf	Mandarin	21 July 2023	1 June 2023
167	年度环境监测报告 2022.11.pdf	Mandarin	21 July 2023	17 November 2022
168	环境应急预案 2023.pdf	Mandarin	21 July 2023	February 2023
169	环境应急预案备案表 2023.pdf	Mandarin	21 July 2023	11 May 2023
170	第一阶段竣工环保验收报告表.pdf	Mandarin	21 July 2023	December 2020
171	第二阶段竣工环保验收报告表.pdf	Mandarin	21 July 2023	April 2023
172	车用锂电池系统项目环境影响报告表 202004.pdf	Mandarin	21 July 2023	April 2020
173	验收检测报告 2023.03.pdf	Mandarin	21 July 2023	7 April 2023
174	486b7ac6403a371d0bf428997714526.jpg	Mandarin	21 July 2023	Not dated
175	5c449ee55914e9bd46b6e9f8840627f.jpg	Mandarin	21 July 2023	Not dated
176	ed3e1f49fe3677826f23c3c78dc7048.jpg	Mandarin	21 July 2023	Not dated
177	种类.jpg	Mandarin	21 July 2023	Not dated
178	转移联单-废封装膜、废浆料、废抹布、清洗废液.pdf	Mandarin	21 July 2023	16 June 2023
179	转移联单-废电解液.pdf	Mandarin	21 July 2023	25 June 2023
180	2022.11.21-2023.11.20 职业卫生检测报告.pdf	Mandarin	21 July 2023	21 November 2022
181	2022.11.21-2023.11.20 职业卫生评价报告.pdf	Mandarin	21 July 2023	21 November 2022
182	2022 职业场所射线检测报告.pdf	Mandarin	21 July 2023	6 January 2023
183	体检报告.pdf	Mandarin	21 July 2023	Multiple dates
184	放 (个) 检字 2023 第 02647 号 苏州新中能源科技有限公司.pdf	Mandarin	21 July 2023	6 March 2023
185	职业卫生控评报告 (备案稿) .pdf	Mandarin	21 July 2023	January 2021
186	QW-EHS-043 危险源辨识与风险分级管控管理制度.docx	Mandarin	25 July 2023	1 June 2020
187	QW-EHS-044 事故应急救援制度.docx	Mandarin	25 July 2023	1 June 2020

## ANNEX A: KEY DOCUMENTS REVIEWED

NO.	DOCUMENT TITLE	DOCUMENT LANGUAGE	DATE PROVIDED	DATE OF DOCUMENT
188	QW-EHS-045 生产安全事故事件报告和调查处理制度.docx	Mandarin	25 July 2023	1 June 2020
189	QW-EHS-045-002 事故事件统计分析台账.docx	Mandarin	25 July 2023	Not dated
190	QW-EHS-063 危险废物管理责任制度.docx	Mandarin	25 July 2023	1 June 2020
191	Waiver for Radiation Management (page1).jpg	Mandarin	25 July 2023	3 June 2018
192	Waiver for Radiation Management (page2).jpg	Mandarin	25 July 2023	3 June 2018
193	危险废物管理计划.pdf	Mandarin	25 July 2023	4 May 2023
194	新中能源应急救援预案 2023 年修订版.doc	Mandarin	25 July 2023	16 May 2023
195	车用锂电池系统项目环境影响报告表 2010.pdf	Mandarin	25 July 2023	12 June 2010
196	辐射安全许可证.jpg	Mandarin	25 July 2023	15 September 2017

## Annex B: Reputational Risk Review

The objective of a Reputational Risk Review (RRR) is to assess a company's E&S Reputational Issues using free public sources of information (internet) in a methodological way. The methodology includes:

- Google search using key words (such as “company name” + “safety”, “company name + pollution”, etc. – only the first 10 sites are reviewed using 5 to 10 combination of keywords);
- Where applicable, the screening of a set of strategic web sites (such as Land Matrix, Environmental Justice Atlas, Global Forest Watch, WWF, Greenpeace & Human Rights Watch, and Save the children) would be conducted as well.

The RRR can extend to a particular sector and geography that are relevant for the target company. It can also extend to other specific matters that are relevant for the assessment (Corruption Perception Index, Human Development Index, etc.).

The table below presents the EPR results for the following entities:

- Banpu Public Company Limited (PCL);
- Banpu NEXT and Banpu Next Green Leasing;
- UMT and MuvMi Hero;
- Suzhou Durapower Technology;

Based on the EFR, significant E&S issues or concerns associated with coal mining operations under Banpu were identified from the internet search, however this is not directly related to the planned use of proceeds. No E&S issues or concerns were identified for the other three entities (directly involved in the planned use of proceeds).

**Table B-8-2 RRR of Banpu Public Company Limited**

WEB SITES	CONSULTED (Y/N)	FINDINGS
<b>Result of Google search using the below key words (first 10 results):</b>  Company X + Country X + conflict Company X + Country X + human rights Company X + Country X + protest Company X + Country X + land grabs Company X + Country X + pollution Company X + Country X + accident Company X + Country X + corruption	Y	There was 1 hit with the keyword “conflict”. On September 21, 2012, Reuters published an article on the fall of Thai Banpu shares after the Thai Civil Court ordered Banpu PCL and its subsidiary to pay \$1 billion in damages to its former partners, Nganthavee group, in the Hongsa power project in Laos. The Nganthavee group alleged Banpu misled them by entering into a joint agreement to secure information on its coal mine contract and feasibility study for the

WEB SITES	CONSULTED (Y/N)	FINDINGS
<p>Company X + Country X + labour where</p> <p>Company X = Banpu Public Company Limited (PCL);</p> <p>Country X = Thailand.</p>		<p>Hongsa project. The group further alleged that Banpu misinformed the Laos government causing the group to lose its mining contract, to which they sought damages.</p> <p>Banpu appealed the ruling which was successfully overturned. (Sources: <a href="https://www.reuters.com/article/us-thailand-banpu-shares-idINBRE88K08L20120921">https://www.reuters.com/article/us-thailand-banpu-shares-idINBRE88K08L20120921</a>, UPDATE 2-Thai appeal court overturns \$1 billion ruling against Banpu   Reuters)</p> <p>There was 1 hit with the keywords “pollution” and “accident”. In March 2016, GreenPeace published their investigative report of PT Mandiri Indomincoon, the largest subsidiary company of Banpu in Indonesia. The report revealed the harmful effects of coal mining operations on the land and local communities of East Kalimantan and South Kalimantan. Impacts cited on the local hydrology include land dredging interrupting natural ground water flow, and Banpu’s proposal to divert the natural course of the river—with cascading impacts on water resources for local agriculture, fishing, and daily uses. (Source: <a href="a73c27d7-a73c27d7-the-dirty-work-of-banpu.pdf">a73c27d7-a73c27d7-the-dirty-work-of-banpu.pdf</a> (greenpeace.org))</p> <p>Follow up research led to a Mongabay article revealing the same coal company was fined 2 billion rupiah for illegal waste dumping in Borneo. The verdict was ruled on December 4, 2017, by the Tenggarong District Court in East Kalimantan. Company representatives respect the court’s verdict and note they have only been found guilty of illegal dumping, not polluting the waterway. (Source: <a href="https://news.mongabay.com/2018/04/coal-">https://news.mongabay.com/2018/04/coal-</a></p>



WEB SITES	CONSULTED (Y/N)	FINDINGS
		<a href="#"><u>company-fined-2-billion-rupiah-for-illegal-waste-dumping-in-borneo/</u></a>
<b>Screening of large organisation web sites:</b>		
<b>Environment Justice Atlas:</b> The environmental justice atlas documents and catalogues social conflict around environmental issues. It allows to assess potential conflict with communities surrounding the project <a href="https://ejatlas.org"><u>https://ejatlas.org</u></a>	Y	No significant environmental issues or concerns in relation to Banpu PCL were identified.
<b>Land Matrix:</b> The Land Matrix is a global and independent land monitoring initiative that promotes transparency and accountability in decisions over land and investment. <a href="http://www.landmatrix.org/"><u>http://www.landmatrix.org/</u></a>	Y	Banpu has a 40% stake in the Honga project, a coal and mining project in the Xayaboury Province, Laos. The coal-fired power plant is the first in Laos and the lignite is one of the largest in Southeast Asia.  The community reaction to the project was reportedly mixed, with worries of low compensation and their future livelihoods. In May 2013, it was reported authorities northern Laos has barred NGOs from meeting with the villagers being relocated. 2304 households were displaced because of the project. (Source: <a href="https://landmatrix.org/deal/6602/"><u>https://landmatrix.org/deal/6602/</u></a> )
<b>GreenPeace</b> is an independent campaigning organisation, which uses non-violent, creative confrontation to expose global environmental problems, and to force the solutions which are essential to a green and peaceful future. <a href="http://www.greenpeace.org"><u>www.greenpeace.org</u></a>	Y	Refer to above on the GreenPeace report on Banpu's operations in Indonesia (Source: <a href="https://www.greenpeace.org/indonesia/publicasi/1239/desa-terkepung-tambang-batu-bara-kisah-investasi-banpu/"><u>https://www.greenpeace.org/indonesia/publicasi/1239/desa-terkepung-tambang-batu-bara-kisah-investasi-banpu/</u></a> ).
<b>Human Rights Watch</b> is a human rights non-governmental organization headquartered in the USA. <a href="http://www.hrw.org"><u>www.hrw.org</u></a>	Y	No significant human rights issues or concerns in relation to Banpu PCL were identified.
<b>Global Forest Watch</b> is an online platform that provides data and tools for monitoring through access to near real-time information about where	Y	No entries related to Banpu PCL were identified.

WEB SITES	CONSULTED (Y/N)	FINDINGS
and how forests are changing around the world. <a href="https://www.globalforestwatch.org/">https://www.globalforestwatch.org/</a>		
<b>World Wildlife Fund</b> works to help local communities conserve the natural resources they depend upon; transform markets and policies toward sustainability; and protect and restore species and their habitats. <a href="https://www.worldwildlife.org/">https://www.worldwildlife.org/</a>	Y	No entries related to Banpu PCL were identified.
<b>Save the Children's</b> programs address children's unique needs, giving them a healthy start in life, the opportunity to learn and protection from harm. <a href="https://www.savethechildren.org/">https://www.savethechildren.org/</a>	Y	No entries related to Banpu PCL were identified.
<b>Centre for Research on Multinationals (SOMO)</b> is a critical, independent not-for-profit knowledge centre on multinationals. <a href="http://www.somo.nl">www.somo.nl</a>	Y	No entries related to Banpu PCL were identified.
<b>Business &amp; Human Rights Resource Centre:</b> The Resource Centre is an independent non-profit organization. It tracks the human rights policy and performance of over 7500 companies in over 180 countries, making information publicly available. <a href="https://www.business-humanrights.org/en/find-companies?letter=o">https://www.business-humanrights.org/en/find-companies?letter=o</a>	Y	On February 25, 2022, the Responsible Mining Foundation released a report revealing majority of mines are not demonstrating commitment to resolve environmental and community concerns. Among 49 companies, Banpu was placed 25 <sup>th</sup> with an average mine site score of 6%. (Source: <a href="https://www.business-humanrights.org/en/latest-news/global-report-reveals-majority-of-mines-cannot-demonstrate-commitment-to-resolving-environmental-and-community-concerns/">https://www.business-humanrights.org/en/latest-news/global-report-reveals-majority-of-mines-cannot-demonstrate-commitment-to-resolving-environmental-and-community-concerns/</a> )
<b>Wikileaks</b> is an international non-profit organisation that publishes secret information, news leaks, and classified media provided by anonymous sources. <a href="http://www.wikileaks.org">www.wikileaks.org</a>	Y	No significant E&S issues and concerns related to Banpu PCL were identified.

Table B8-3 RRR of Banpu NEXT and Banpu Next Green Leasing

WEB SITES	CONSULTED (Y/N)	FINDINGS
<b>Result of Google search using the below key words (first 10 results):</b>  Company X + Country X + conflict Company X + Country X + human rights Company X + Country X + protest Company X + Country X + land grabs Company X + Country X + pollution Company X + Country X + accident Company X + Country X + corruption Company X + Country X + labour where Company X = Banpu NEXT or Banpu Next Green Leasing; Country X = Thailand.	Y	No significant E&S issues or concerns were identified from the internet search using these key words for Banpu NEXT or Banpu Next Green Leasing.
<b>Screening of large organisation web sites:</b>		
<b>Environment Justice Atlas:</b> The environmental justice atlas documents and catalogues social conflict around environmental issues. It allows to assess potential conflict with communities surrounding the project <a href="https://ejatlas.org">https://ejatlas.org</a>	Y	No significant environmental issues or concerns in relation to Banpu NEXT or Banpu Next Green Leasing were identified.
<b>Land Matrix:</b> The Land Matrix is a global and independent land monitoring initiative that promotes transparency and accountability in decisions over land and investment. <a href="http://www.landmatrix.org/">http://www.landmatrix.org/</a>	Y	No land use rights acquisition issues or concerns in relation to Banpu NEXT or Banpu Next Green Leasing were identified.
<b>GreenPeace</b> is an independent campaigning organisation, which uses non-violent, creative confrontation to expose global environmental problems, and to force the solutions which are essential to a green and peaceful future. <a href="http://www.greenpeace.org">www.greenpeace.org</a>	Y	No significant E&S issues or concerns in relation to Banpu NEXT or Banpu Next Green Leasing were identified.
<b>Human Rights Watch</b> is a human rights non-governmental organization headquartered in the USA. <a href="http://www.hrw.org">www.hrw.org</a>	Y	No significant human rights issues or concerns in relation to Banpu NEXT or Banpu Next Green Leasing were identified.

WEB SITES	CONSULTED (Y/N)	FINDINGS
<b>Global Forest Watch</b> is an online platform that provides data and tools for monitoring through access to near real-time information about where and how forests are changing around the world. <a href="https://www.globalforestwatch.org/">https://www.globalforestwatch.org/</a>	Y	No entries related to Banpu NEXT or Banpu Next Green Leasing were identified.
<b>World Wildlife Fund</b> works to help local communities conserve the natural resources they depend upon; transform markets and policies toward sustainability; and protect and restore species and their habitats. <a href="https://www.worldwildlife.org/">https://www.worldwildlife.org/</a>	Y	No entries related to Banpu NEXT or Banpu Next Green Leasing were identified.
<b>Save the Children's</b> programs address children's unique needs, giving them a healthy start in life, the opportunity to learn and protection from harm. <a href="https://www.savethechildren.org/">https://www.savethechildren.org/</a>	Y	No entries related to Banpu NEXT or Banpu Next Green Leasing were identified.
<b>Centre for Research on Multinationals (SOMO)</b> is a critical, independent not-for-profit knowledge centre on multinationals. <a href="http://www.somo.nl">www.somo.nl</a>	Y	No entries related to Banpu NEXT or Banpu Next Green Leasing were identified.
<b>Business &amp; Human Rights Resource Centre:</b> The Resource Centre is an independent non-profit organization. It tracks the human rights policy and performance of over 7500 companies in over 180 countries, making information publicly available. <a href="https://www.business-humanrights.org/en/find-companies?letter=o">https://www.business-humanrights.org/en/find-companies?letter=o</a>	Y	No entries related to Banpu NEXT or Banpu Next Green Leasing were identified.
<b>Wikileaks</b> is an international non-profit organisation that publishes secret information, news leaks, and classified media provided by anonymous sources. <a href="http://www.wikileaks.org">www.wikileaks.org</a>	Y	No significant E&S issues and concerns related to Banpu NEXT or Banpu Next Green Leasing were identified.

Table B8-4 RRR of UMT and MuvMi Hero

WEB SITES	CONSULTED (Y/N)	FINDINGS
<p><b>Result of Google search using the below key words (first 10 results):</b></p> <p>Company X + Country X + conflict  Company X + Country X + human rights  Company X + Country X + protest  Company X + Country X + land grabs  Company X + Country X + pollution  Company X + Country X + accident  Company X + Country X + corruption  Company X + Country X + labour  where  Company X = UMT or MuvMi Hero;  Country X = Thailand.</p>	Y	No significant E&S issues or concerns were identified from the internet search using these key words for UMT or MuvMi Hero.
<b>Screening of large organisation web sites:</b>		
<p><b>Environment Justice Atlas:</b> The environmental justice atlas documents and catalogues social conflict around environmental issues. It allows to assess potential conflict with communities surrounding the project <a href="https://ejatlas.org">https://ejatlas.org</a></p>	Y	No significant environmental issues or concerns in relation to UMT or MuvMi Hero were identified.
<p><b>Land Matrix:</b> The Land Matrix is a global and independent land monitoring initiative that promotes transparency and accountability in decisions over land and investment. <a href="http://www.landmatrix.org/">http://www.landmatrix.org/</a></p>	Y	No land use rights acquisition issues or concerns in relation to UMT or MuvMi Hero were identified.
<p><b>GreenPeace</b> is an independent campaigning organisation, which uses non-violent, creative confrontation to expose global environmental problems, and to force the solutions which are essential to a green and peaceful future. <a href="http://www.greenpeace.org">www.greenpeace.org</a></p>	Y	No significant E&S issues or concerns in relation to UMT or MuvMi Hero were identified.
<p><b>Human Rights Watch</b> is a human rights non-governmental organization headquartered in the USA. <a href="http://www.hrw.org">www.hrw.org</a></p>	Y	No significant human rights issues or concerns in relation to UMT or MuvMi Hero were identified.
<p><b>Global Forest Watch</b> is an online platform that provides data and tools for monitoring through</p>	Y	No entries related to UMT or MuvMi Hero were identified.

WEB SITES	CONSULTED (Y/N)	FINDINGS
access to near real-time information about where and how forests are changing around the world. <a href="https://www.globalforestwatch.org/">https://www.globalforestwatch.org/</a>		
<b>World Wildlife Fund</b> works to help local communities conserve the natural resources they depend upon; transform markets and policies toward sustainability; and protect and restore species and their habitats. <a href="https://www.worldwildlife.org/">https://www.worldwildlife.org/</a>	Y	No entries related to UMT or MuvMi Hero were identified.
<b>Save the Children's</b> programs address children's unique needs, giving them a healthy start in life, the opportunity to learn and protection from harm. <a href="https://www.savethechildren.org/">https://www.savethechildren.org/</a>	Y	No entries related to UMT or MuvMi Hero were identified.
<b>Centre for Research on Multinationals (SOMO)</b> is a critical, independent not-for-profit knowledge centre on multinationals. <a href="http://www.somo.nl">www.somo.nl</a>	Y	No entries related to UMT or MuvMi Hero were identified.
<b>Business &amp; Human Rights Resource Centre:</b> The Resource Centre is an independent non-profit organization. It tracks the human rights policy and performance of over 7500 companies in over 180 countries, making information publicly available. <a href="https://www.business-humanrights.org/en/find-companies?letter=o">https://www.business-humanrights.org/en/find-companies?letter=o</a>	Y	No entries related to UMT or MuvMi Hero were identified.
<b>Wikileaks</b> is an international non-profit organisation that publishes secret information, news leaks, and classified media provided by anonymous sources. <a href="http://www.wikileaks.org">www.wikileaks.org</a>	Y	No significant E&S issues and concerns related to UMT or MuvMi Hero were identified.

Table B8-5 RRR of Suzhou Durapower Technology

WEB SITES	CONSULTED (Y/N)	FINDINGS
<p><b>Result of Google and Baidu (百度) search using the below key words (first 10 results):</b></p> <p>Company X + Country X + conflict (冲突)</p> <p>Company X + Country X + human rights (人权)</p> <p>Company X + Country X + protest (抗议)</p> <p>Company X + Country X + land grabs (土地掠夺)</p> <p>Company X + Country X + pollution (污染)</p> <p>Company X + Country X + accident (意外)</p> <p>Company X + Country X + corruption (贪污)</p> <p>Company X + Country X + labour (劳动力)</p> <p>where</p> <p>Company X = Suzhou Durapower Technology (苏州新中能源科技有限公司);</p> <p>Country X = China (中国).</p>	Y	No significant E&S issues or concerns were identified from the internet search using these key words for Suzhou Durapower Technology.
<b>Screening of large organisation web sites:</b>		
<p><b>Environment Justice Atlas:</b> The environmental justice atlas documents and catalogues social conflict around environmental issues. It allows to assess potential conflict with communities surrounding the project <a href="https://ejatlas.org">https://ejatlas.org</a></p>	Y	No significant environmental issues or concerns in relation to Suzhou Durapower Technology were identified.
<p><b>Land Matrix:</b> The Land Matrix is a global and independent land monitoring initiative that promotes transparency and accountability in decisions over land and investment. <a href="http://www.landmatrix.org/">http://www.landmatrix.org/</a></p>	Y	No land use rights acquisition issues or concerns in relation to Suzhou Durapower Technology were identified.
<p><b>GreenPeace</b> is an independent campaigning organisation, which uses non-violent, creative confrontation to expose global environmental problems, and to force the solutions which are essential to a green and peaceful future. <a href="http://www.greenpeace.org">www.greenpeace.org</a></p>	Y	No significant E&S issues or concerns in relation to Suzhou Durapower Technology were identified.

WEB SITES	CONSULTED (Y/N)	FINDINGS
<b>Human Rights Watch</b> is a human rights non-governmental organization headquartered in the USA. <a href="http://www.hrw.org">www.hrw.org</a>	Y	No significant human rights issues or concerns in relation to Suzhou Durapower Technology were identified.
<b>Global Forest Watch</b> is an online platform that provides data and tools for monitoring through access to near real-time information about where and how forests are changing around the world. <a href="https://www.globalforestwatch.org/">https://www.globalforestwatch.org/</a>	Y	No entries related to Suzhou Durapower Technology were identified.
<b>World Wildlife Fund</b> works to help local communities conserve the natural resources they depend upon; transform markets and policies toward sustainability; and protect and restore species and their habitats. <a href="https://www.worldwildlife.org/">https://www.worldwildlife.org/</a>	Y	No entries related to Suzhou Durapower Technology were identified.
<b>Save the Children's</b> programs address children's unique needs, giving them a healthy start in life, the opportunity to learn and protection from harm. <a href="https://www.savethechildren.org/">https://www.savethechildren.org/</a>	Y	No entries related to Suzhou Durapower Technology were identified.
<b>Centre for Research on Multinationals (SOMO)</b> is a critical, independent not-for-profit knowledge centre on multinationals. <a href="http://www.somo.nl">www.somo.nl</a>	Y	No entries related to Suzhou Durapower Technology were identified.
<b>Business &amp; Human Rights Resource Centre:</b> The Resource Centre is an independent non-profit organization. It tracks the human rights policy and performance of over 7500 companies in over 180 countries, making information publicly available. <a href="https://www.business-humanrights.org/en/find-companies?letter=o">https://www.business-humanrights.org/en/find-companies?letter=o</a>	Y	No entries related to Suzhou Durapower Technology were identified.
<b>Wikileaks</b> is an international non-profit organisation that publishes secret information, news leaks, and classified media provided by anonymous sources. <a href="http://www.wikileaks.org">www.wikileaks.org</a>	Y	No significant E&S issues and concerns related to Suzhou Durapower Technology were identified.



## Annex C: List of Key Interviewees

**Table C-8-6 List of interviewees**

NAME	COMPANY	POSITION	INTERVIEW DATE
Mr. Chatpol Uttamanond	Banpu	Senior Vice President - Global Corporate Sustainability	13 July 2023
Ms. Punyawee Preearittipan	Banpu	Manager - Health, Safety, Environment and Community Engagement	13 July 2023
Ms. Suthatcha Chayapan	Banpu	Manager - Occupational Health and Safety	13 July 2023
Ms. Chayada Kanabkaew	Banpu	Manager - Community Engagement	13 July 2023
Mrs. Kamonporn Chantornvong	Banpu	Manager - Sustainability Assurance	13 July 2023
Ms. Anna Kiewchaum	Banpu	Manager - Decarbonization	13 July 2023
Ms. Pornjit Sirinopwongsagon	Banpu	Manager - Human Resources	13 July 2023
Mr. Sarankorn Savayo	Banpu	Procurement	13 July 2023
Mr. Taggapojn Wannasiri	BPN	Manager - Corporate Services	13 July 2023; 27 July 2023
Mr. Banchob Kitchpanich	BPN	Chief Financial Officer	27 July 2023
Dr. Krisada (Mick) Kritayakirana	UMT	Co-founder and CEO	14 July 2023
Mr. Supapong (Ty) Kitiwattanasak	UMT	Co-founder	14 July 2023
Mr. Pipat Tangsiripaisan	UMT	Co-founder	14 July 2023
Mr. Nithi (Bank) Rattanachinda	UMT	Corporate Assistant	14 July 2023
Ms. Kaewta Sricha	UMT	Head of People Team	14 July 2023
Ms. Pattaranit (Pang) Chaiwattanasak	UMT	Accounting Manager	14 July 2023
Ms. Pimchaya (Kwan) Sasipapan	MuvMi Hero	Managing Director	14 July 2023
Mr. Phuri (Tod) Patraphuriskul	MuvMi Hero	Asset Assistant Manager (Service Station)	14 July 2023

## ANNEX C: LIST OF KEY INTERVIEWEES

NAME	COMPANY	POSITION	INTERVIEW DATE
Ms. Natchaya (Prae) Chotipattarajinda	MuvMi Hero	Health and Safety Officer	14 July 2023
Multiple employees	UMT/MuvMi Hero	Sample of e-tuktuk drivers as well as employees stationed at the R&D centre and maintenance workshop	14 July 2023
Mr. Albert Chen	Suzhou Durapower	Vice President	20 July 2023
Mr. Zhihong Zhou	Suzhou Durapower	Production Director	20 July 2023
Ms. Judy Zhu	Suzhou Durapower	Human Resources Manager	20 July 2023
Mr. Jianfeng Du	Suzhou Durapower	EHS Manager	20 July 2023
Mr. Chengyan Zheng	Suzhou Durapower	Procurement Manager	20 July 2023
Mr. Xiaobo Ge	Suzhou Durapower	Product Manager	20 July 2023
Ms. Min Ji	Suzhou Durapower	Vice Finance Director	20 July 2023
Mr. Liang Xiao	Suzhou Durapower	Sales Manager	20 July 2023
Random sample of 10 employees	Suzhou Durapower	Employees (comprising five female and five male employees, from the production, warehouse, maintenance and quality control departments as well as a subcontracted worker for cleaning work)	20 July 2023

## Annex D: Site Visit Photolog

Table D-8-7 Site Visit Photographs of UMT/MuvMi Hero Facilities in Thailand



Photo 1: MuvMi Hero/UMT office



Photo 2: Presentation of E&S management by UMT



Photo 3: E-tuktuks parked at the UMT/MuvMi Hero training centre (cum R&D centre)



Photo 4: E-tuktuk driving training course



Photo 5: Electrical testing works carried out at the UMT/MuvMi Hero training centre (cum R&D centre)



Photo 6: Waste/spent batteries (from the e-tuktuks) stored at the open-air shelving; fire extinguisher provided on the shelving rack





Photo 7: Charging of e-tuktuk at the “mega hub” charging station in the UMT/MuvMi Hero training centre



Photo 8: Residential houses located adjacent to the UMT/MuvMi Hero training centre



Photo 9: E-tuktuks parked at the UMT/MuvMi Hero maintenance workshop



Photo 10: Storage of used brake fluid from the vehicles at the UMT/MuvMi Hero maintenance workshop



Photo 11: E-tuktuk repair works carried out at the UMT/MuvMi Hero maintenance workshop



Photo 12: Storage of PPE and fire extinguisher at the UMT/MuvMi Hero maintenance workshop



Photo 13: Residential houses across a small road adjacent to the driveway entrance of the UMT/MuvMi Hero maintenance workshop



Photo 14: Residential houses across a small road adjacent to the driveway entrance of the UMT/MuvMi Hero maintenance workshop



Table D-8-8 Site Visit Photographs of E-tuktuk Charging Stations in Thailand



Photo 15: E-tuktuk charging station at the carpark of the Banpu office building



Photo 16: E-tuktuk charging station at the carpark of the Banpu office building (Fire extinguisher is provided next to the charging station)



Photo 17: E-tuktuk charging station near the UMT/MuvMi Hero office



Photo 18: Workers interview carried out at one of the e-tuktuk charging stations



Photo 19: E-tuktuk charging station situated at the basement of an office building



Photo 20: Fire extinguisher provided at the charging station



Photo 21: Workers interview carried out at one of the e-tuktuk charging stations

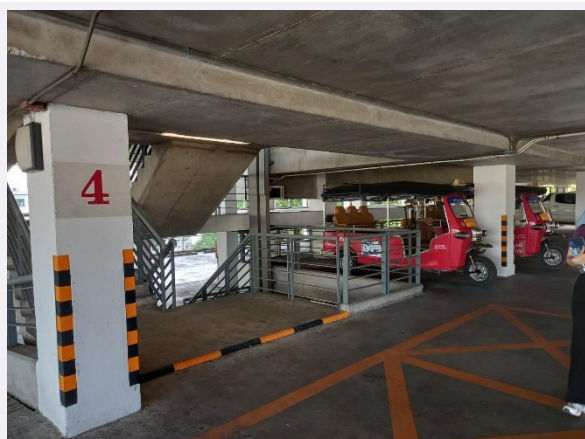


Photo 22: Additional e-tuktuk parking lots in the same office building where the charging stations located at the basement; toilets are accessible from this level.



**Table D-8-9 Site Visit Photographs of Durapower Battery Manufacturing Facility in China**



Photo 23: Entrance of Suzhou Durapower battery manufacturing facility



Photo 24: Car park within Suzhou Durapower site



Photo 25: Firefighting equipment near the entrance



Photo 26: PPE wearing instructions near the entrance

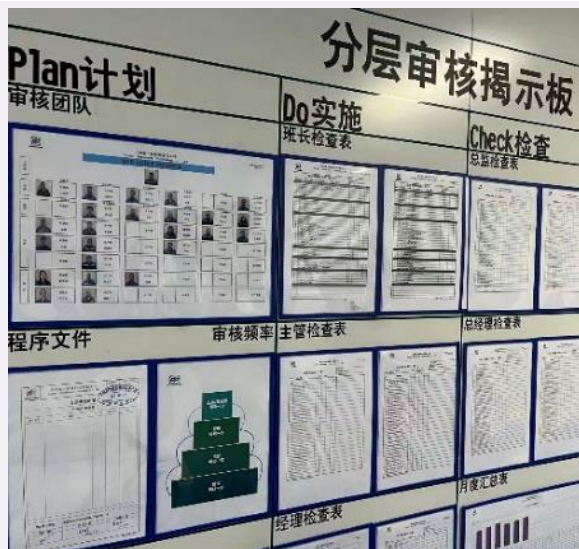


Photo 27: Notice board for organisational chart and production monitoring procedures



Photo 28: Display of OHS monitoring reports



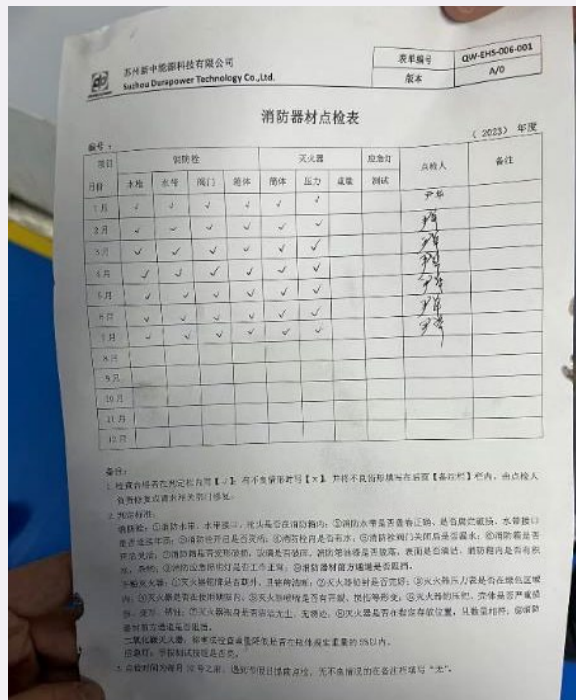


Photo 29: Fire-fighting equipment inspection checklist



Photo 30: OHS checklist for the packing process



Photo 31: Coating workshop



Photo 32: Liquid injection production zone



Photo 33: Integration of Battery Cell



Photo 34: Integration of Battery Cell



Photo 35: Chemical hazardous materials storage within the production workshop



Photo 36: Alcohol for polishing and product cleaning



Photo 37: Hazardous waste storage room

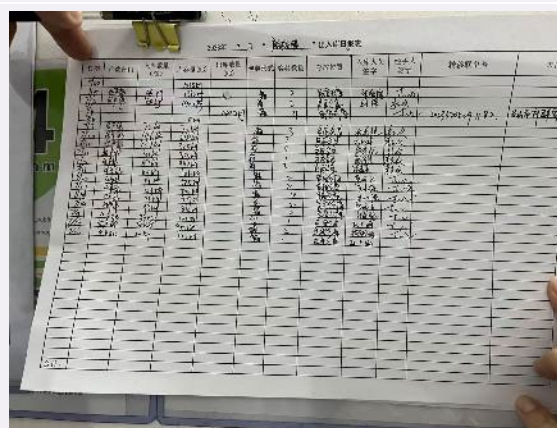


Photo 38: Hazardous waste log



Photo 39: Firefighting provisions at the hazardous waste storage room



Photo 40: Anti-seepage measures of the hazardous waste storage room





Photo 41: Storage of hazardous waste in the hazardous waste storage room



Photo 42: Storage of hazardous waste (waste N-Methyl Pyrrolidone) in the hazardous waste storage room



Photo 43: Materials warehouse



Photo 44: Use of forklift to load production materials into the warehouse



Photo 45: Recyclable waste storage area



Photo 46: Storage of recyclable waste on-site



Photo 47: Storage of electronic waste (old machinery to be recycled) on-site



Photo 48: Storage of electronic waste (old machinery to be recycled) on-site



Photo 49: Management interview on-site (during the site visit)



Photo 50: One of the employee's room in the workers' dormitory within CEDZ