

# **Non-Technical Summary (NTS) of the Environmental Impact Assessment (EIA) Report- Project Trinity**

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## Change Log

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10 October 2023	To address comments made by LESA	FASMF	ALXBA
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## Abbreviations

APAC	Asia Pacific
BAP	Biodiversity Action Plan
BMP	Best Management Practice
CCRA	Climate Change Risk Assessment
CESMP	Construction Environmental and Social Management Plan
CFA	Changhua Fishermen's Association
CHA	Critical Habitat Assessment
CHW	Greater Changhua Windfarm
CIA	Cumulative Impact Assessment
CoC	Code of Conduct
CPT	Cone Penetration Test
CSR	Corporate Social Responsibility
CZMA	Coastal Zone Management Act
FPIC	Free, Prior, and Informed Consent
E&S	Environmental and Social
EAAA	Ecological Appropriate Area of Analysis
EBRD	European Bank for Reconstruction and Development
EHS	Environmental, Health and Safety
EIA	Environmental Impact Assessment
EMF	Electromagnetic Field
EP	Equator Principles
EPA	Environmental Protection Administration
ESAP	Environmental and Social Action Plan
ESMS	Environmental and Social Management System
EY	Executive Yuan
FCA	Fishermen Compensation Agreement
FSIA	Focused Social Impact Assessment
GBVH	Gender-based Violence and Harassment
GHG	Greenhouse Gas
GIS	Gas Insulated Switchgear
GM	Grievance Mechanism
GN	Guidance Note
H&S	Health and Safety
HRIA	Human Rights Impact Assessment
HSE	Health, Safety and Environment
HVAC	High Voltage Alternative Current
IBAT	Integrated Biodiversity Assessment Tool
IFC	International Finance Corporation
IRPA	International Radiation Protection Association
IUCN	International Union for Conservation of Nature
LMP	Labour Management Plan
LRP	Livelihood Restoration Plan
MMO	Marine Mammals Observer
MOU	Memorandum of Understanding

NAAQS	National Ambient Air Quality Standards
NTS	Non-Technical Summary
NW	Northwest
O&M	Operations and Maintenance
OECD	Organisation for Economic Co-operation and Development
OnSS	Onshore Substation
OSHA	Occupational Safety and Health Administration
PAP	Project Affected Person
PS	Performance Standards
QHSE	Quality, Health, Safety, Environment
RPP	Responsible Business Partners Programme,
ROV	Remotely Operated Vehicle
SCPT	Static Cone Penetration Test
SEC	Star Energy Corporation
SEP	Stakeholder Engagement Plan
TPC	Taiwan Power Company
TW	Taiwan
WTG	Wind Turbine Generator
WBG	World Bank Group

## 1 Introduction

### 1.1 Overview

This Non-Technical Summary (NTS) of the Environmental Impact Assessment (EIA)<sup>1</sup> (the Report) presents the summarised main findings and conclusions of the environmental and social (E&S) studies that have been undertaken for the proposed 598MW Greater Changhua Northwest (NW) offshore wind farm located in Taiwan (or the CHW04), off the coast of Changhua County (the Project). This NTS briefly describes the Project, presents main findings from the local environmental impact assessment and surveys undertaken to assess the potential impacts and outlines mitigation measures including additional Environmental and Social (E&S) assessment per lenders' E&S standards and requirements.

### 1.2 Taiwanese Legislative Framework

A part of the Project's development and permitting requirements, the preparation and submission of an EIA was undertaken. The Project has successfully obtained regulatory approval from the Taiwan Environmental Protection Administration (EPA) for its EIA report on 10 August 2018. Subsequently, the Project applied to amend the environmental monitoring plans which was approved by the EPA on 29 March 2019, and EIA deviation report approved by the EPA on 19 April 2022.

The local EIA adheres to the local Taiwanese regulatory requirements, standards, permits, and national/regional plans, such as:

- EPA of the Executive Yuan
- Air Pollution Control Act
- Standard values specified in the Tokyo Public Hazard and Vibration Control Standards of Japan
- Regulations on Groundwater Conservation
- Marine Environment Classification and Marine Environmental Quality Standards
- Marine sediment standards of National Ocean and Atmosphere Administration (NOAA)
- Wildlife Conservation Act
- Mining Law
- Fisheries Act
- International Radiation Protection Association (IRPA) and National Radiological Protection Board (NRPB)
- Project Permits and Consenting from various authorities e.g., Environmental Protection Administration, Bureau of Energy, Industrial Development Bureau, Ministry of Interior, Ministry of Economic Affairs, Fisheries Department, Bureau of Cultural Heritage, Civil Aviation Authority, Maritime & Port Bureau, Changhua County etc.

In addition, Project also adheres to the applicable local regulatory requirements and standards on the topics of socioeconomics, livelihood compensation, and labour rights. These includes:

- Fishermen Association Act 2016: Aspects of this Act pertinent to the development and operation of the Project in relations to the fishing resources impacts which include Article 1 on the livelihoods of fishermen

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<sup>1</sup> The final full Project EIA report was submitted to the Taiwan Environmental Protection Administration (EPA) on 23 March 2018, with the approved EIA report formally acknowledged/archived in July 2018. The NTS summarises the findings of the 2018 EIA including the outcomes of the 2022 EIA Amendment Reports.

should be protected and improved; and Article 4 on the duties of the fishermen associations, which include to safeguard fishermen's rights and interests, to disseminate fisheries laws and regulations, and to mediate fisheries related disputes; to conduct fisheries improvement and promotion; and to conduct business on culture, medical treatment and sanitation, welfare, relief, and social service for fisheries villages.

- Fisheries Act 2018: The legal basis for fishery management to conserve and rationally utilise the aquatic resources, to promote sound fisheries development, and to improve the livelihood of fishermen, which includes Article 5 on any person who intends to operate fishery in the public waters or non-public waters adjacent thereto shall obtain approval given and fishing license issued by the competent authority prior to the operation; and Article 9 on exploiting or conserving aquatic resources, or for the need of public interests, the competent authority may impose restrictions or conditions when giving approval to any fishery operation.
- Compensation Guidelines 2003: The Memorandum of Understanding (MOU) between Ørsted and the CFA was developed in accordance with the Fisheries Right Compensation Benchmarks (2003) of the Fishery Agency of Republic of China (Taiwan). The "Fisheries Right Compensation Benchmark for Offshore Windfarm" has been recently promulgated in 2016 and provides similar compensation benchmarks to the 2003 approach. In general, Council of Agriculture, Executive Yuan developed a calculation formula to calculate the loss of fishery results from offshore wind power plant project.
- Electricity Act 2019: To comply with the Act (Article 65) and the associated Assistance Fund (Article 6), after the commercial operation of this Project, for every kWh of power generation, NT\$ 0.018 shall be charged as the Assistance Fund or Community Benefit Fund (CBF), which will be allocated in each ratio to the different local stakeholders to promote development of electricity and harmony with communities. From the Fund, the subsidy-type accounts for 70%, and the project-type accounts for 30%. Among the subsidy-type, Changhua County Government accounts for 15%, Changhua District Fisheries Association accounts for 55%, and the Lukang town (where this onshore substation is located) accounts for 30%. The project-type can be determined by each wind farm project. The Greater Changhua project will work with stakeholders to offer 50% of the project-type to support the development of the fishing community and offer 10% of the project-type to support local NGOs on the environment and society sustainability.
- Renewable Energy Development Act 2023: For purposes of encouraging renewable energy use, promoting energy diversification, improving energy structure, reducing emission of greenhouse gases, improving environmental quality, assisting relevant industries, and enhancing sustainable development of Taiwan.
- The Labour Standards Act: The Labour Standards Act (enacted 1984) Chapter IX requires employers hiring more than 30 workers to set Work Rules, which shall be publicly displayed after submission to the competent authorities for approval and record. The Labour Standards Act Chapter V covers Child Workers and Female Workers. Article 5 of the Act also stipulates that no employer shall, by force, coercion, detention, or other illegal means, compel a worker to perform work. Additionally, boarding and lodging arrangement and living allowances are stipulated for Apprentices, also covered in the Labour Standards Act Chapter VIII.
- The Employment Service Act: The Employment Service Act Chapter V Employment and Administration of Foreign Workers provides restrictions on the types of work that Foreign Workers can legally be engaged in,

which include specialised or technical work, and workers designated by the Central Competent Authority in response to national major construction projects or economic/social development needs. To protect the nationals' right to work, no employment of foreign worker may jeopardise nationals' opportunity in employment, their employment terms, economic development, or social stability. The Act also indicates that for employment of foreign workers employers shall not engage in employing a foreign worker without permit or after the expiration of permit therefore, or a foreign worker that has been permitted to be employed at the same time by a third party.

- The Collective Agreement Act: The Act is enacted to regulate the bargaining procedures and effect of collective agreement, stabilise labour relations, promote labour-management harmony, and protect rights and interests for the labour and the management.
- The Gender Equality in the Employment Act: The Act provides clauses for Prohibition of Gender Discrimination or Sexual Orientation regarding recruitment and termination, and for providing training, welfare measures, and wages. Employers shall prevent and correct sexual harassment from occurrence, measures for preventing, correcting sexual harassment, related complaint procedures and disciplinary measures shall be established. Maternity and paternity benefits are stated. Article 32 states that employers may establish grievance procedures to conciliate and handle the complaint files by employees. The Act also provides clauses for Prohibition of Gender Discrimination or Sexual Orientation regarding recruitment and termination and Act for Worker Protection of Mass Redundancy.
- The Occupational Safety and Health Act: The Act states that work assigned to labourers by the employers shall be within a reasonable and feasible scope, with necessary preventative equipment or measures taken to prevent labourers from being involved in occupational accidents. The Act also stipulates that Employers shall not employ persons under the age of 18 to perform potential dangerous or harmful work listed in Article 29. Additionally, the Act stipulates that Employers shall not employ pregnant females to perform potential dangerous or harmful work listed in Article 30. Employers shall also formulate a safety and health management plan based on the scale and characteristics of their business entities and shall also establish safety and health organisations and personnel to implement safety and health management and self-inspections. Where the scale of business entities in the preceding paragraph reaches or exceeds a certain level, the business entities shall establish an occupational safety and health management system. Employers shall provide labourers with all necessary safety and health education and training to perform duties and prevent accidents. The Labour Inspection Act is also enacted to implement labour inspection, enforce labour Acts and regulations, protect the rights and interests for labour and management, maintain social stability and to develop economy.
- Cultural Heritage Preservation Act 2016: Classifies tangible and intangible cultural heritages which are of cultural value from the point of view of history, art or science covering monuments, historic buildings, commemorative buildings, groups of buildings, archaeological sites, historic sites, cultural landscapes, antiquities, natural landscapes and natural monuments, traditional performing arts, traditional craftsmanship, folklore, and traditional knowledge and practices.

The 2019 EIA Amendment Report was to provide an updated indicative date for implementing the pre-construction monitoring plan. Both the EIA report and EIA amendment report are available online on the EPA website.

### 1.3 Project E&S Compliance Requirements

In addition to complying with the applicable environmental requirements and regulations of Taiwan, the Project was also required to comply with the E&S international standards and guidelines as required by the Project's Lenders, including following:

- The Equator Principles (EP) 4 (July 2020).
- The International Finance Corporation (IFC) Performance Standards (PS) (2012).
- The IFC World Bank Group (WBG) Environmental Health and Safety (EHS) General Guidelines (2007) and sector specific EHS guidelines, which include:
  - The EHS Wind Energy Guidelines (2015).
  - The EHS Guidelines for Electric Power Transmission and Distribution Guidelines (2007).

Ørsted has developed various policies which form the foundation for a common approach to various E&S issues across its business. The objectives, goals and commitments in the policies are in line with the IFC PS and are applicable to the Project and its operations. Key company-related E&S related policies and guidelines are:

- Ørsted Good Business Conduct Policy (2019).
- Ørsted Quality, Health, Safety and Environment Policy (2022).
- Ørsted Sustainability Commitment<sup>1</sup> (2016).
- Ørsted Human Rights Policy (2021).
- Ørsted Modern Slavery Act Statement (2021).
- Ørsted Stakeholder Engagement (2022).
- Ørsted Guidebook on Local Community Engagement (2014).
- Ørsted Global Diversity and Inclusion (2018).
- Ørsted Whistleblower Hotline (2018).
- Ørsted Code of Conduct for Business Partners (2022).

Project to also align with the local and international good international industry practices, and to communicate Project's expectations with respect to the E&S commitments i.e., based on the recommended monitoring and mitigation measures set out in the approved local EIA and additional technical environmental and social assessments and documents per lenders recommendations, where relevant. It will also be communicated to Project personnel as part of site induction processes to ensure all personnel are aware of their individual E&S obligations.

In addition, the adherence to Ørsted's policies also requires Project to implement international standards in relation to environmental and social management plans.

For instance, Ørsted Human Rights Policy describes the way in which Ørsted respects human rights as described in the applicable and relevant legislation as well as international standards and conventions. It is also covering the principles for the governance and implementation of the policy and links to other Ørsted policies covering human rights related topics. The commitment covers Ørsted employees, contractors, suppliers, and other business partners globally, as well as communities and societies affected by the business activities. This policy considers the United Nations Guiding Principles on Business and Human Rights as well as the Organisation for Economic Co-operation and Development (OECD) Guidelines for Multinational Enterprises as authoritative global frameworks that Ørsted wants to comply with. Ørsted is also committed to meeting key

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<sup>1</sup> Sustainability Commitment includes environmental commitments in three (3) prioritized area i.e., climate change, biodiversity, and resource management.

international human rights standards such as the International Bill of Human Rights and the fundamental rights set out in the International Labour Organisation's Declaration on Fundamental Principles and Rights at Work.

Under this policy, Ørsted also commits to providing or helping to provide appropriate remediation to workers in situations where Ørsted has identified that caused or contributed to a negative impact. The grievance mechanism and remediation approach include to:

- Remedy any adverse human rights on workers that Ørsted has cause or contributed to.
- Remedy adverse impacts which are directly linked to the Project operations, products or services through the business partners own mechanism or through collaboration on the development of third party non-judicial remedies.
- Not obstruct access to other remedies and commits to collaborate in initiatives that process access to remedy.

Additionally, for example, Ørsted's Code of Conduct for Business Partners also defines the requirements and aspirations Ørsted sets for Project's business partners in the following:

- Human Rights and Labour Rights i.e., working hours; child labour, and young workers; worker freedom; hiring practice; freedom of association and collective bargaining; wages & benefits; discrimination & harassment; and Health & Safety including workers accommodation in accordance with the IFC and European Bank for Reconstruction and Development (EBRD) Guidance Note on Worker's Accommodation, and transportation.
- Stakeholder Interaction – local community, property rights, rights defenders in exercising legal right to freedom of speech; Free, Prior, and Informed Consent (FPIC); and grievance mechanism.
- Environment – permits and license to operate; hazardous materials and emissions management; biodiversity protection; emergency response; and minerals, metals, and dual use.
- Business Ethics – bribery & corruption; conflict of interest; books and records on transactions; and fair competition.

This Code of Conduct adheres to several international standards such as the United Nations Guiding Principles on Business and Human Rights, the International Bill of Human Rights, the International Labour Organisation Conventions, the OECD Due Diligence Guidance, the Ten Principles of the UN Global Compact, the Maritime Labour Convention, the US Foreign Corrupt Practices Act, the UK Bribery Act, the IFC Performance Standards, and the Equator Principles IV. If a conflict occurs between any applicable law, regulation, standard or the Code of Conduct, Ørsted expects suppliers and business partners to apply the highest standard.

## 2 Project Description

### 2.1 Overview

The Project is in Taiwan, off the coast of Xianxi Township, Changhua County. The offshore wind farm area selected was zone #12 of the list of proposed offshore wind farm sites in Taiwan demarcated by the Bureau of Energy (BOE). An overview of the Project is presented in **Table 2.1**.

**Table 2.1 Summary of Project Information**

Item	Description
<b>Project Development</b>	
<b>Project Developer</b>	Greater Changhua Northwest (NW) Offshore Wind Power Co. Ltd
<b>Project Sponsor</b>	Ørsted Wind Power A/S
<b>Windfarm Capacity</b>	582.9 MW
<b>Location</b>	
<b>Windfarm Location</b>	Off the coast of Xianxi Township, Changhua County, Taiwan
<b>Windfarm Area (est.)</b>	117.4 km <sup>2</sup>
<b>Distance to Shore (est.)</b>	48.5 km
<b>Water Depth</b>	31.7 – 44.1 m
<b>Project Component</b>	
<b>Number of Wind Turbine Generator (WTG) and Capacity</b>	42 (14 MW)
<b>Substation</b>	<ul style="list-style-type: none"> <li>▪ One (1) offshore High Voltage Alternative Current (HVAC) substation</li> <li>▪ An onshore substation including a substation building, control room, Gas Insulated Switchgear (GIS) and supporting facilities on a total area of 23,800 m<sup>2</sup></li> </ul>
<b>Transmission</b>	66kV/ 230kV / 161kV HVAC
<b>Export Cables</b>	<ul style="list-style-type: none"> <li>▪ Offshore: Two (2) 220 or 275 kV export cables (from offshore station to landing points) with length of no more than 75 km each to landing points</li> <li>▪ Onshore: 220 or 275 kV export cables (from onshore substation to grid connection point) with length of not exceeding 3.7 km</li> </ul>
<b>Grid Point of Connection</b>	An onshore substation (in Changhua County) operated by Taiwan Power Company (TPC)
<b>Project Schedules</b>	
<b>Construction Commencement</b>	<ul style="list-style-type: none"> <li>▪ Onshore construction to commence in Q4 2023</li> <li>▪ Offshore installation to commence in Q1 2024</li> </ul>
<b>Commercial Operation Date (COD)</b>	Q4 2025

### 2.2 Project Rationale and Alternative Analysis

The analysis of alternatives in environmental and social (E&S) assessment is required to bring considerations into the upstream stages of development planning as well as the later stages of site selection, design, and implementation.

Under Annex A: Climate Change – Alternative Analysis, Quantification and Reporting of Greenhouse Gas Emissions of the Equator Principles 2013 (EPIII), alternatives analysis requires the evaluation and consideration of alternative fuel or energy sources if applicable.

In addition, the IFC Performance Standard 1 (Assessment and Management of Environmental and Social Risks and Impacts) (“PS1”) requires an assessment process that identifies the risk and potential impacts associated with a project. Specifically, “the process may comprise a full-scale E&S impact assessment, a limited or focused environmental assessment or straight forward application of environmental siting, pollution standards, design criteria or construction standards”. PS1 also states, “Projects with potential significant adverse impacts that are diverse, irreversible, or unprecedented will have comprehensive social and environmental impact assessments. This assessment will include an examination of technically and financially feasible alternatives to the source of such impacts, and documentation of the rationale for selecting the course of action proposed”, with the following objectives:

- To describe the basis of selection of preferred alternatives including location, energy/fuel sources and technology and facilities design.
- To provide the information of the analysis will need if they wish to check its conclusions or apply their own methods to compare alternatives.

During the local EIA preparation - the E&S aspects are taken into consideration by Project, while selecting the Project’s location, fuel sources, design, and technology. As such, the Project Alternatives Assessment has been developed through an existing and iterative design process and to provide in satisfying the consideration of E&S constraints with aim of mitigating the most significant impacts.

### **2.2.1 Alternative Energy and Fuel Sources**

In meeting 2025 Nuclear Free Country with a power generation of 30% of coal, 50% of combustible gas and 20% of renewable energy, the Project will further facilitate the development goal of national renewable energy industry by 2025. In response to government's renewable energy policies, Project will also support to accelerate the implementation of energy conservation and carbon reduction policies (such as the Renewable Energy Development Act, the Sustainable Energy Policy, the Environmental Protection Administration Executive Yuan); and corresponds with the goals of environmental protection, economic growth, social welfare, and sustainable development as per the Central Region Planning.

Within the context of global commitments to reduce the GHG emissions and the need to rapidly deploy low carbon energy sources in the place of fossil fuels, the benefits of Project development provide advantages in building energy supply system which satisfy the six (6) percent of economic growth and annual economic development goal target.

### **2.2.2 Alternative Project Location**

The selection of Project area is defined in the provisions of the local zoning plans; as well as enables a secure effectively the environment against the risk of emergency and unplanned incidents and minimise and avoid

worsening living standards of the nearby affected local communities. Hence, no other Project location and site alternatives is considered a feasible alternative.

### **2.2.3 Alternative Technology and Project Design**

The Project wind turbine will be installed via a single pin-pile or suction bucket jacket structure method. An alternative option is to use gravity seabed foundation. A gravity seabed foundation is made with reinforced concrete or steel structure to which the pillar of a wind turbine is attached. The gravity seabed foundation is further fixed with ballast consisting of sand, iron ore, or rock. As the gravity of seabed foundation requires no piling activity but requires a solid geological seabed to uphold the structure. This method has less negative impact on the marine biodiversity.

However, the Project area consists of sediments carried from the Zhuoshui River, of which soil liquefaction may occur due to the seismic activities and resulted in the loss of ground shear stress and capacity. Additionally, Project will use human-based monitoring method during construction phase. A qualified Marine Mammal Observer (MMO) will be placed on an installation vessel to conduct cetacean monitoring activities, an alternative is to place the MMO on a small monitoring vessel – which is cost effective.

Considering that the Project area is 48.5 km away from the coast, severed environmental conditions within the Project area may impact the monitoring activities. Hence, an installation vessel is considered more effective and provides better Health & Safety (H&S) conditions for the MMOs.

Given to the above, the alternative technology and facilities design is not considered a feasible alternative in this instance.

### **2.2.4 No Alternative Project**

This alternative considers the consequences of a decision not to proceed with the Project. In this scenario, the possible positive and negative impacts of the proposed activities on the receiving environment and social receptors would not occur.

Project aims to support the Taiwanese government's energy policy in establishing the country as a non-nuclear area by 2025. The Project also supports the development of offshore wind farm in energy sources diversification, energy self-sufficiency, and environmental protection. Project will also bring international experience to Taiwan's wind power industry, and to integrate the resources from various industries, local authorities, and academic institutions, including to realise the development of local economic.

By not developing the Project, local power supply would remain severely constrained at least until an alternative electricity supply becomes available. Power importation would have to continue at the higher tariff and load management interventions, with the consequent negative economic impacts, would likely also be necessary. In addition, not developing this Project may result in the need of establishment of alternative plants using other energy and fuel sources e.g., thermal, or nuclear power plants, or the utilisation of oil or coal. These would have adverse impacts on the environment from an increase in greenhouse gas emissions and are not as sustainable as using a renewable source for energy production.

Specific benefits of the no project option are the following:

- Construction of Project components will not have environmental consequences on the terrestrial and aquatic biodiversity habitats and ecosystem services.
- The possible socioeconomics disruption and health impacts arising from the construction and operation activities would be avoided.
- The land at the proposed Project area would be unaltered and remain available for alternative use.

Given to the above, the No Project option is not considered a feasible alternative in this instance.

#### **2.2.5 Evaluation Criteria**

Taking into consideration the available environmental and social receptors within the Project area, the assessment of Project alternatives analysis is considered “Low”. Additional assessment i.e., Climate Change Risk Assessment will be conducted to further identify and address the current and anticipated physical and transition climate-related risks over the 20-year contract period, to incorporate plans and processes appropriate in managing such risks; and to address potential policy-related and other transition risks, including alignment with the Taiwan’s national climate commitments.

### 2.3 Project Location

The Project offshore wind farm is in Taiwan, 48.5 km off the coast of Changhua County (**Figure 2.1**).

**Figure 2.1 Overview of Project Location**

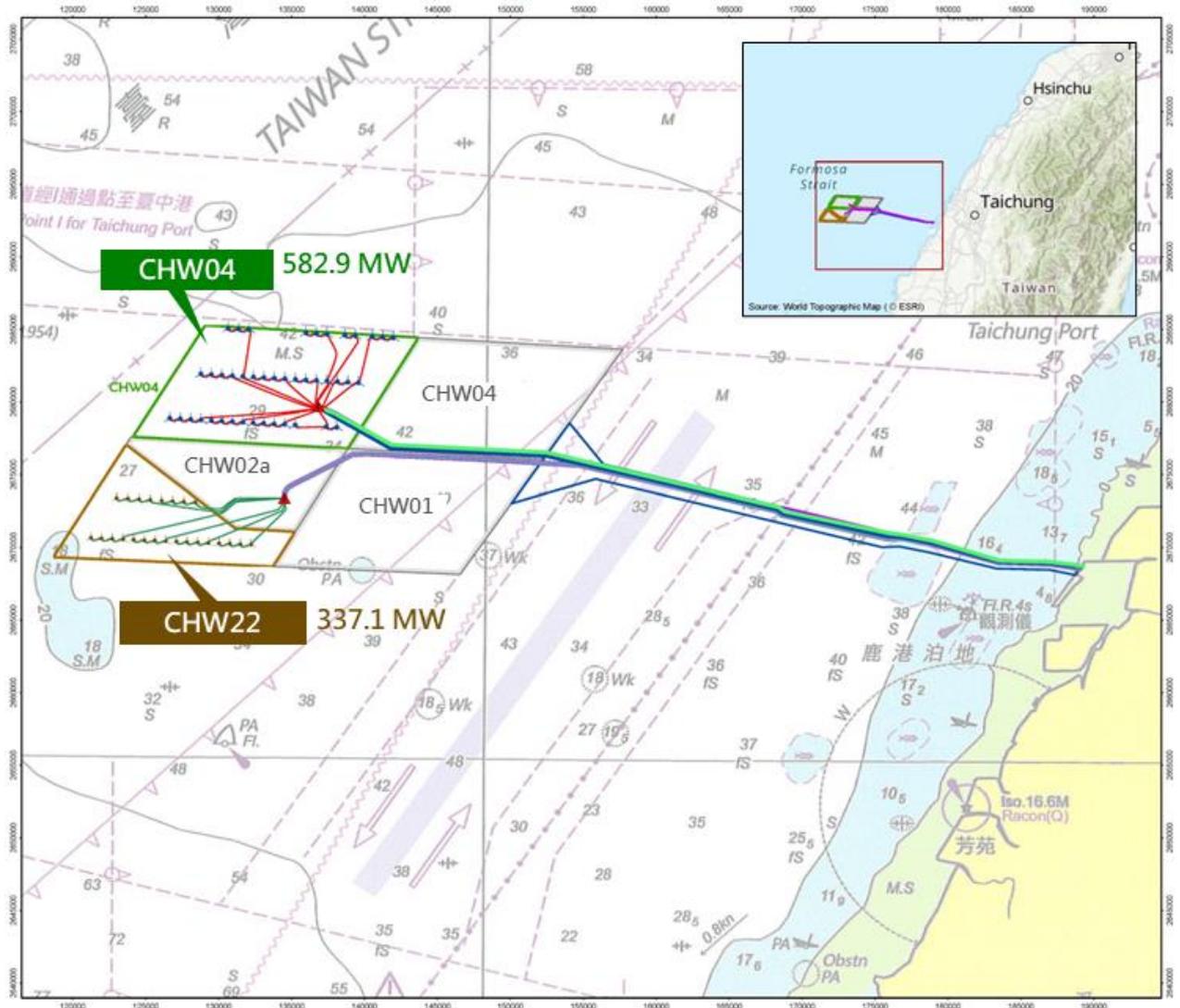


Figure 2.2 Project Offshore Wind Farm – Proposed Site Layout

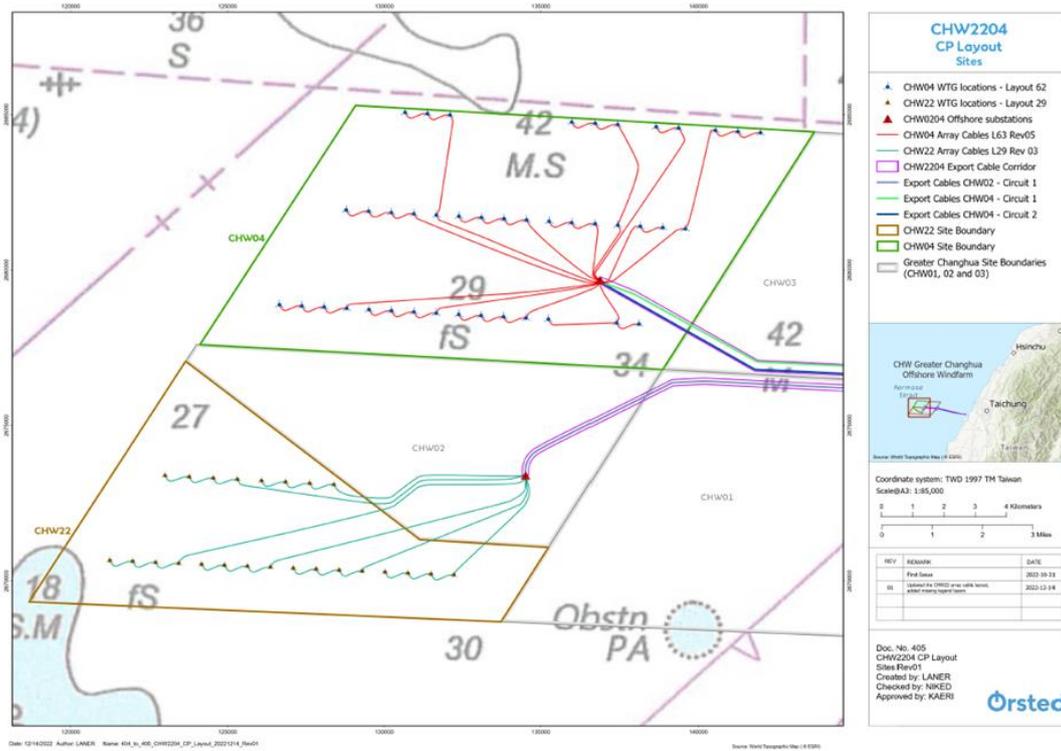
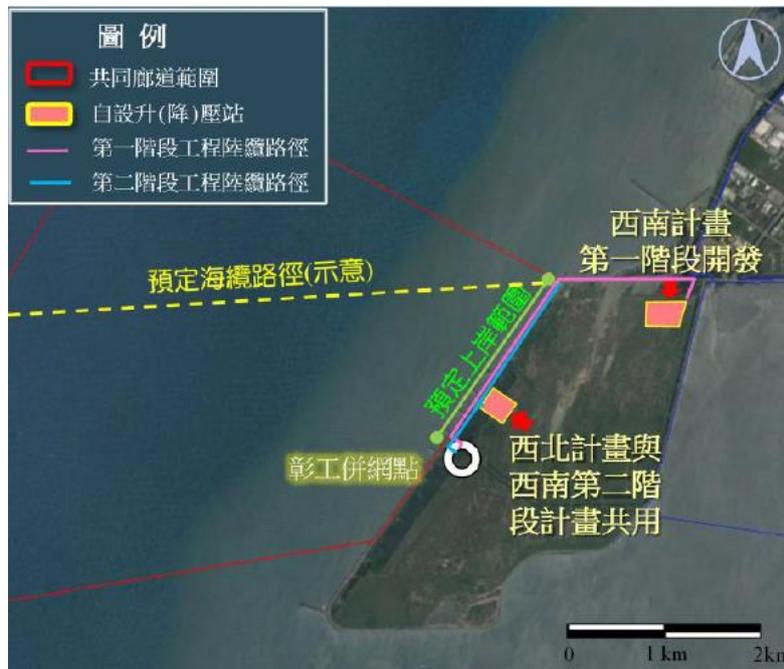


Figure 2.3 Project Onshore Substation



Source: EIA Amendment, 2022

**Figure 2.4 Summary of Project Components**

Offshore wind farm	Offshore substation	Transition Joint Bay	Onshore Substation	Grid Connection
<ul style="list-style-type: none"> <li>Total area: 117.4 km<sup>2</sup></li> <li>42 WTGs (14 MW)</li> </ul>	One (1) (HVAC) offshore substation	Located near the landfall to connect offshore cables to onshore cables via a trenchless approach	An onshore substation including control room, GIS and supporting facilities	Cables will be connected into an onshore substation operated by Taiwan Power Company (TPC) to the Chun Kong grid point

**Submarine Cables**

- Array cables will interconnect the WTGs and then connect to the offshore substation

**Land Cables**

- Export cables will run underground to reach the onshore substation

The Project Company intends to use Taichung Port as the base port for onshore construction activities (i.e., inspection and pre-assembly works) and logistical support. It will also be the base for the operation and maintenance phase in line with the approved EIA.

**2.4 Implementation Schedule**

The key milestones for Project implementation are summarised in **Figure 2.5** which will be updated, should there be any changes throughout Project life cycle.

**Figure 2.5 Key Project Milestones**

Phase	2023			2024			2025			2026		
Onshore construction												
Offshore construction – FOU, OSS & Cables												
Offshore Construction - WTG												
Commercial operation date (COD)												

Note: Given the relatively benign nature of the operation phase and limited potential legacy issues it is suggested that the requirement for the Project Decommissioning Plan to be developed no later than five (5) years prior to the end of the operation phase.

### 3 Environmental and Social Baseline Conditions

#### 3.1 Overview

As part of the local EIA, primary and secondary baseline data were collected for key environmental and social (E&S) parameters to inform the potential Project impact assessment process. Key E&S baseline conditions are presented in the following subsections. Further details on survey monitoring frequency and number of locations can be found in **Appendix A** of this Report, and in the local EIA which is available online.

#### 3.2 Environmental Baseline

Environmental components that are most relevant to the Project within the context of potential environmental impacts include air quality, noise (including air-borne noise and underwater noise), vibration, surface water quality, groundwater quality, soil/sediment quality, electromagnetic field (EMF), and biodiversity.

Several environmental surveys were conducted as part of the EIA process to establish the baseline conditions. Monitoring data from the existing EPA monitoring stations were also obtained to assess baseline conditions. The environmental baseline conditions of the Project area and its surroundings were generally in compliant with the national standards (and the applicable international standard e.g., the WHO Ambient Air Quality Guidelines for air quality) and are summarised in **Appendix B**. Details of the environmental baseline surveys conducted are available in the EIA published online (Source: <https://orsted.tw/en/renewable-energy-solutions/eia-documents>).

#### 3.3 Social Baseline

Details of the social baseline surveys conducted are available in the EIA published online (Source: <https://orsted.tw/en/renewable-energy-solutions/eia-documents>). Key social baseline conditions for the Project are summarised in **Appendix C**. These social baselines include:

- Socioeconomics and labour.
- Land use.
- Fisheries resources and communities.
- Economic displacement.
- Indigenous people.
- Cultural heritage resources – land based and marine.
- Landscape/ visual and tourism.
- Public infrastructure.
- Traffic and transportation.

A key stakeholder group identified through the social baseline was the Changhua Fishery Association, whose designated fishing zone overlaps with the Project offshore export cable route (**Figure 3.1**). Multiple stakeholder engagement activities (i.e., information disclosure, consultation, and participation) have been undertaken as part of the local EIA process, which is summarised in **Section 6.4** of this document.

**Figure 3.1** Changhua Fishery Association Designated Fishing Zone



## 4 Key Potential Environmental and Social Impacts

### 4.1 Overview

Typical construction-related and operation-related impacts from the Project activities are presented, along with the studies conducted as part of the local EIA to assess the impacts on key E&S components. Mitigation and monitoring measures have also been proposed as part of the EIA to manage the potential E&S impacts.

### 4.2 Project Environmental and Social Impacts

Potential E&S impacts may arise throughout the Project lifecycle, particularly during the construction phase. Typical construction phase activities that may impact the environment include land clearing for site preparation and access routes, excavation, construction activities, laying of land cables, and transportation of materials for onshore activities. Offshore activities with environmental impacts may include piling, laying of submarine cables, installation of Wind Turbine Generator (WTG) foundations and WTG installation.

Various methodologies were carried out during the impact assessment to determine the potential Project impacts throughout development. The methodologies and corresponding results are detailed in the local EIA available online and are summarised in **Appendix D** for each E&S aspect relevant to the Project.

The Project impacts on E&S receptors that being assessed include:

- Construction phase:
  - Air quality.
  - Greenhouse Gas (GHG) emissions.
  - Airborne noise.
  - Vibration.
  - Underwater noise.
  - Surface water quality.
  - Groundwater quality.
  - Waste management.
  - Seawater quality.
  - Terrestrial biodiversity – flora.
  - Terrestrial biodiversity – fauna.
  - Marine biodiversity – mammals.
  - Coastal and marine biodiversity – avian.
  - Marine biodiversity – marine ecology (fishes, microbenthos, macrobenthos).
  - Socioeconomics and labour.
  - Economic displacement.
  - Fisheries resources and communities.
  - Cultural heritage resources – land based and marine.
  - Landscape/visual and tourism.
  - Public infrastructure.
  - Traffic and transportation.
- Operation phase
  - Greenhouse Gas (GHG) emissions.
  - Airborne noise.

- Underwater noise.
- Surface water quality.
- Groundwater quality.
- Waste management
- Electromagnetic field (EMF).
- Marine biodiversity – mammals.
- Coastal and marine biodiversity – avian.
- Marine biodiversity – marine ecology (fishes, microbenthos, macrobenthos).
- Socioeconomics and labour.
- Economic displacement.
- Fisheries resources and communities.
- Landscape/visual and tourism.
- Public infrastructure.

Based on the impact assessment, mitigation measures will be implemented in accordance with national regulations (detailed in **Section 5** of this Report) to ensure that impacts from the Project activities are limited and short-term.

### **4.3 Additional Environmental and Social Impact Assessment**

In ensuring the on-going E&S risk management, Project conducts additional technical E&S assessment<sup>1</sup> to consider and record any additional commitments made by the Project, above and beyond the approved local EIA. **Section 4.3.1 – 4.3.4** will also be updated in the Project ESMS throughout Project lifecycle, should there be any additional information required.

#### **4.3.1 Cumulative Impact Assessment (CIA)**

A CIA is undertaken in accordance with the International Finance Corporation (IFC) Performance Standard (PS) 1, the corresponding guidance note, and the IFC's guidance document named "Good Practice Handbook on Cumulative Impact Assessment and Management: Guidance for the Private Sector in Emerging Markets" (hereafter as "IFC CIA Handbook").

The CIA is performed on the valued environmental and social components (VECs) and potential impacts on them. The following VECs are discussed within the CIA in terms of baseline status and impact assessment:

- Marine habitat, flora, and fauna.
- Community livelihood: fisheries resources and zones.
- Migratory birds (including seabirds).

For the respective VECs discussed, a set of actions, mitigation and monitoring plans already in place or planned to be implemented in the approved local EIA and relevant reports. In summary, the CIA has identified a total of 13 impacts and risks of which are identified to be of a minor to moderate impacts, with significance of cumulative impact after mitigation measures implemented are considered as 'non-significant' (refer **Appendix E**), with further details are presented in *the Cumulative Impact Assessment, 2023*.

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<sup>1</sup> The additional E&S assessments are conducted by Ørsted, or by a team of personnel of Independent Environmental and Social Consultant (IESC) who have a thorough knowledge of the work to be assessed with support provided by Ørsted's Project teams.

The 'moderate' impacts from Project activities include:

- Impact on marine habitat:
  - Marine fragmentation or disturbance due to the disturbance effect from construction activities.
  - Area of habitat loss due to the Project footprint during operation phase falls permanently into sensitive marine habitat.
- Impact on marine flora and fauna ❓
  - Change in fragmentation / displacement of marine flora/fauna population due to Project footprint causes permanent loss/change in the habitat of marine fauna during construction phase.
  - Change in / displacement of population due to the underwater noise during construction phase, increased marine traffic and the associated risk of collision with construction vessels, and water quality degradation due to sediment suspension.
  - Population or range fragmentation because of electromagnetic field (EMF) during operation phase.
  - Population or range fragmentation, and creation of artificial habitats through WTG foundations due to the Project footprint that causes permanent loss/change in the habitat of marine fauna during operation phase.
- Impact on community livelihood: fisheries resources and zones ❓
  - Shifts in livelihoods due to spatial conflict between fishing ground and construction area, Increased marine traffic, and displacement of fisheries resources during construction phase ❓
  - Sustainability livelihoods due to the reduction of fisheries resources during construction phase.
- Impact on migratory birds (including seabirds) ❓
  - Change in migratory/sea bird population due to collision with wind turbine blades and barrier effect ❓

Further recommendations are also made on strategies in achieving effective mitigation and monitoring of cumulative impacts on the VECs in the broader context are summarised in **Appendix G**, and the status of its implementation will be updated throughout project lifecycle.

#### 4.3.2 Climate Change Risk Assessment (CCRA)

In meeting the requirements of the EPIV, a CCRA is conducted to identify and address current and anticipated climate-related risks (both 'physical' and 'transition') facing the Project's operation over the 20-year contract period, including plans and processes appropriate to managing the climate-related risks. The CCRA addresses potential policy-related and other transition risks, including alignment with Taiwan's national climate commitments.

Based on the assessment, no fatal flaws in the form of high or extreme risks to the Project is identified due to the projected climate change by 2050, however a watching brief of risks identified must be maintained throughout the Project lifetime and adaptively managed.

In summary, the CCRA has identified a total of 32 impacts/risks of which 19 are identified to be of a low rating and the remaining 13 are of a medium rating. The 'medium'-rated impact/risks are summarised in **Appendix E**, with further details presented in *the Climate Change Risk Assessment, 2023*. These 'medium'-rated impact/risks include:

- Impact of climate change on Wind Turbine Generator (WTG):

- Fatigue and degradation of turbines due to extreme heat).
- Impact of climate change on offshore substation & export cable:
  - Increased temperatures can increase power losses within substations and transformers.
  - Flooding if precipitation rates exceed the drainage capacity of the substation.
  - Scour could cause failure at a cable joint.
  - Extreme surge events generated by typhoons can raise sea levels and in combination with high tides and sea-level rise result in flooding of infrastructure.
  - Waves overtopping and salt spray may lead to damage or degradation of assets.
- Impact of climate change on onshore substation & grid connection:
  - Increased temperatures can reduce the carrying capacity of lines, increase losses within substations and transformers, and leading to failure of electrical equipment.
  - Heavy precipitation can cause surface water flooding of sites and damage to underground cables.
  - Extreme surge events generated by typhoons can raise sea levels and in combination with high tides and sea-level rise result in flooding of infrastructure.
  - Increase in erosion risk to infrastructure.
  - Wave overtopping of coastal flood defenses during extreme events leading to flooding.
- Impact of climate change on construction, operation & maintenance activities
  - Extreme heat impacts on workers.
  - Heavy precipitation and flooding can impact access to onshore and offshore sites for construction, operation, and maintenance.

**Appendix G** summarises the list of additional management and monitoring plans, and the status of its implementation will be updated throughout project lifecycle.

#### 4.3.3 Critical Habitat Assessment (CHA)

A CHA is undertaken to determine whether the Project footprint and its relevant ecological appropriate area of analysis (EAAAs) is in ‘critical habitat’ as defined by the IFC PS6 with elaborations provided in the corresponding guidance note, IFC Guidance Note (GN) 6. The EAAAs established for this CHA will be delineated based on the habitats of relevant species/groups.

Integrated Biodiversity Assessment Tool (IBAT) is applied to obtain potential biodiversity-related features (i.e., species, protected areas and Key Biodiversity Areas) in the EAAAs. Project documentation including the approved local EIA of this Project is reviewed as part of this CHA. Various international and national checklists [e.g., the International Union for Conservation of Nature (IUCN) Red List of Threatened Species, Taiwan protected species lists (Important Bird Areas in Taiwan and Map of Taiwan’s Wetlands as well as research papers were also reviewed to inform the critical habitat determination process.

The CHA determined that the Project is in critical habitat for the following biodiversity values:

- Criterion 1 (C1) (a), (b) and (c): the presence of critically endangered, endangered, and vulnerable (global range overlapping with >0.5% of the EAAAs) species, namely:
  - Marine flora and fauna: Taiwanese humpback dolphin (*Sousa chinensis ssp. taiwanensis*) and Taiwanese Wedgefish (*Rhynchobatus immaculatus*).

- Migratory birds (including seabirds at sea): Black-faced spoonbill (*Platalea minor*), Saunders's Gull (*Saundersilarus saundersi*), Oriental stork (*Ciconia boyciana*), Chinese crested tern (*Thalasseus bernsteini*).
- Criterion 2 (C2): the presence of restricted-range species:
  - Marine flora and fauna: Taiwanese humpback dolphin (*Sousa chinensis ssp. taiwanensis*), Taiwan picnic seabream (*Acanthopagrus taiwanensis*), and Taiwanese Wedgefish (*Rhynchobatus immaculatus*).
- Criterion 3 (a) and (b): the presence of migratory and congregatory species:
  - Migratory birds (including seabirds at sea): Black-faced spoonbill (*Platalea minor*), Saunders's Gull (*Saundersilarus saundersi*), Kentish Plover (*Charadrius alexandrinus*), Oriental stork (*Ciconia boyciana*), and Chinese crested tern (*Thalasseus bernsteini*).
- Criterion 5 (C5): the presence of key evolutionary processes
  - EAAA for marine fauna and flora and coral reef ecosystems

The Project's offshore and onshore impacts during construction and operation phases, as described in the Project EIA, were assessed against the critical habitat features. Mitigation measures proposed in the Project EIA and Coastal Zone Management Assessment (CZMA) were also evaluated against the critical habitat triggers to determine if adequate measures are established to prevent measurable adverse impacts to the critical habitat triggers and prevent a net reduction in the global and/or national/regional population of any Critically Endangered or Endangered species.

The proposed mitigation measures contained within the local EIA will be implemented to prevent significant impacts to the biodiversity values for which critical habitat has been designated and the supporting habitat, as well as prevention of a net reduction in the global, national and/or regional population of any Critically Endangered or Endangered species.

The relevant topics assessed in the Project CHA potential impacts/risk are tabulated in **Appendix E. Appendix G** summarises the list of additional management and monitoring plans, and the status of its implementation will be updated throughout project lifecycle. In addition, to address residual impacts that are deemed to be significant, a Biodiversity Action Plan (BAP) containing additional recommendations and further details on the actions required to achieve net gains for critical habitats and species is developed. Further information on the BAP is provided in **Section 5.2** of this document and in the *Biodiversity Action Plan, 2023*.

#### 4.3.4 Focused Social Impact Assessment (FSIA) and Human Rights Impact Assessment (HRIA)

A Focused Social Impact Assessment (FSIA) is developed to provide an identification and assessment of potential social impacts associated with the Project and its activities. The following are the steps undertaken for the FSIA:

- Referencing and presenting the currently available socio-economic baseline data and analysis as relevant to the Project. This includes establishing the Project and its associated activities to:
  - Define the Project's area of influence (AoI).
  - Identify people within the Project's AoI who may be impacted by the Project.
- Screening and scoping and of relevant social impacts by identifying potential interactions between the Project and the affected parties within the AoI. The scoping matrix assesses the potential interactions between the various activities and components of the Project and the social receptors identified within the AoI at the different project phases. The social sensitivities included in the scoping exercise includes:

- Human Rights.
- Labour and working conditions including employment generation, working conditions for Project and supply chain workers.
- Community Health and Safety including exposure to communicable diseases, workers influx (impacts on infrastructure and services), and increased onshore and offshore traffic.
- Land acquisition, displacement, and livelihoods including economic displacement and livelihoods.
- Evaluating and rating the type of interaction for each impact for each social aspect.
- Identifying the extent that already existing or relevant assessment and mitigation/management measures within the current documentation suite have addressed the scoped social impacts/aspects.
- Recommending Project-specific management plans to be updated (if required) to capture required management actions.

Social aspects are discussed within this report in terms of baseline status, impact assessment, impact significance, mitigation measures and residual impact significance. This includes:

- Employment generation, labour and working conditions including for the supply chain.
- Economic displacement and livelihoods.
- Human rights.
- Community health, safety, and security issues, including workers' influx effects, exposure to disease.
- Offshore and onshore traffic.

The relevant topics assessed in the Project FSIA with the potential impacts/risk are tabulated in **Appendix E**. **Appendix G** summarises the list of additional management and monitoring plans, and the status of its implementation will be updated throughout the Project lifecycle.

Additionally, Human Rights Impact Assessment (HRIA) is conducted for the Project to identify and assess any potential human rights impacts and assist in improving the social management and mitigation measures. It provides measures to safeguard and facilitate meaningful engagement with affected communities and workers. Those whose human rights may be infringed include:

- Project and supply chain workers.
- local onshore communities who may be impacted by construction and transport activities.
- coastal and offshore fishers, and other sea users whose offshore activities and livelihoods may be disrupted.

The HRIA also includes marginalised and unprotected affected workers and communities in delivering more socially inclusive outcomes by assessing and mitigating impacts through a human rights lens. The focus is on the Project's salient human rights risks and impacts, and an emphasis is placed upon impacts to rights-holders.

The relevant human rights topics assessed in the Project HRIA includes the following, with the potential impacts/risk are tabulated in **Appendix E**. Further details of this impact assessment are presented in the *Human Rights Impact Assessment, 2024*.

- Livelihood Restoration.
- Labour Rights and Working Conditions.
- Community Health and Safety.
- Access to Remedy.
- Participation.
- Security.

- Supply Chain.
- Potential for discrimination in distribution of CSR Funds.

The HRIA also incorporates primary data gathering based on the Key Informant Interview (KIIs) and Focus Group Discussions (FGDs) as endorsed by the Danish Institute for Human Rights' Human Rights Impact Assessment Guidance and Toolbox (2016).

The FGDs and KIIs were carried out for CHW01: Greater Changhua Southeast Offshore Wind Farm project (herein referred to as the "Project Mercury") in February 2021. Given the proximity of the developments (i.e., the Project and the Greater Changhua Southeast), the stakeholders are considered similar, and in many cases the same as for the previous project. Additional baseline surveys were also conducted between December 2023 to January 2024 which includes the following:

- Self-assessment questionnaires with the internal Ørsted stakeholders such as Ørsted Quality, Health, Safety and Environment (QHSE) Manager; Ørsted Human Resource Business Partners Manager; Ørsted Regulatory & Public Affairs; Ørsted Environment & Permitting Manager; and Ørsted Sustainability Managers
- 15 respondents via KIIs with the following stakeholders i.e.:
  - Community representatives i.e., Head of Xianxi Township; Head of Lukang Township; Head of Fangyuan Township; Village Head of Haipu Village; Village Head of Wenzhi Village; Village Head of Wanggong Village; and female community representative.
  - Representatives of fisher folk groups i.e., Chairman of Aquaculture Development Association; Chairman of Changhua County Aquaculture and Fisheries Development Association; Chairman and Secretary of CFA; and Representative of Lukang Industrial Park Manufacturers Association.
  - Government officials Representative of Fisheries Division under Department of Agriculture, Changhua County Government; and Director of Fisheries Agency under Council of Agriculture, Executive Yuan
  - Taiwan Association for Human Rights.
- Five (5) respondents via FGDs with the following groups:
  - Coastal vessel crew members (i.e., Taiwanese workers).
  - Offshore vessel crew members (i.e., Taiwanese workers and migrant/foreign workers.)
  - Coastal vessel owners (by self-identification of home port).
  - Offshore vessel owners (by self-identification of home port).
  - Women in local communities.

**Appendix G** summarises the list of additional management and monitoring plans, and the status of its implementation will be updated throughout the Project lifecycle.

## 5 Environmental and Social Management Plan

### 5.1 Overview

During the Project phases, there are planned and unplanned activities that occur which, if not managed effectively, may cause impacts to the sensitive receptors identified in and around the Project area. The temporal and spatial spread of activities mean that actual impacts will be dependent on specific activities. As such, mitigation and monitoring measures will be effectively addressing impacts, measures and offsets are reducing effects to the extent predicted, as well as that any associated residual impacts will be expected to remain in conformance with the applicable standards.

### 5.2 Mitigation and Monitoring Measures

Although the local EIA has determined negligible or low predicted impacts for most aspects (refer **Appendix D** of this Report), Ørsted has proposed the implementation of various mitigation measures for different phases of the Project (i.e., pre-construction, construction, and operation). Project has also established the following management plans for Project construction and operation phases:

- Environmental Mitigation and Monitoring Plan, including Waste Management Plan.
- For Project construction phase, the Onshore Substation Health, Safety, and Environmental Plan and the Local Emergency Response Plan. Ørsted will further develop and implement the detailed Project HSE Plan (for offshore construction phase) relevant to the scope of work and in line with Ørsted's QHSE requirements. Further information on the Project HSE Plan is provided in **Section 5.3.5** of this document.
- Ørsted personnel appointed in performing Project's activities will be provided with agreement or contracts, which describes the employment relationship with Ørsted, and includes the relevant local procedures related to working conditions including:
  - Ørsted Taiwan Ltd Employee Handbook (January 2021) (the "Handbook").
  - Ørsted Taiwan Work Rules (May 2019) (the "Work Rules").

For disclosure, Ørsted publishes the quarterly local EIA environmental monitoring reports, Ørsted on the official website: <https://orsted.tw/zh/renewable-energy-solutions/eia-documents>.

In addition to the above, Ørsted will also develop the following Project E&S management plans and additional E&S assessment to meet the applicable international requirements (e.g., the EPIV and IFC PS). These plans will further address, where appropriate, opportunities to achieve additional E&S benefits of the Project (refer **Section 5.3**). **Appendix F** summarises these mitigation and monitoring measures during the Project pre-construction, construction, and operation phase.

Any Project updates and information on the implementation of this E&S management plans will be led by Ørsted's Programme Asset Manager and supported by various Project teams - such as:

- TW Environment & Permitting for local EIA commitments and other environmental monitoring and the biodiversity action plans, with a support from Ørsted Group Sustainability (Biodiversity).
- TW Regulatory & Public Affairs for stakeholder engagement, grievance mechanism, and livelihood restoration.
- QHSE APAC ("QHSE") for Health & Safety information.

- Responsible Business Partners Programme (RPP), Global Sustainability (with supports from Ørsted TW Human Resource Business Partners (HRBP)) for labour rights and human rights management, as well as contractors/suppliers' relevant information (in collaboration with QHSE which also advises the contractors/suppliers H&S related matters).

These management programmes will be continually updated and reviewed internally to ensure the programmes remain relevant and are effectively mitigating the risks identified in **Section 4**, including in the event of an unforeseen impact and design change with respect to the Project Standards, and the proposed mitigation measures proposed based on the outcomes of additional impact assessment (refer **Section 4.3**). The implementation progress of these proposed recommendations will be continuously updated in **Appendix G** and **Appendix H**. In addition, these measures will also be applicable to all Project activities carried out by the contractors/suppliers, where relevant.

Note: Ørsted does not currently include a decommissioning plan however given the relatively benign nature of the operation phase and limited potential legacy issues it is suggested that the requirement for a decommissioning plan be included in the Environmental and Social Action Plan (ESAP) to be developed no later than five (5) years prior to the end of the operation phase.

### 5.3 Additional Project Environmental and Social Management Plan

In meeting the Lenders E&S requirements, Ørsted has and will also establish additional associated E&S management programmes (i.e., plans, procedures) to address the mitigation and monitoring plans in further avoiding, minimising or compensating the E&S risks and impacts identified above and beyond the approved local EIA (refer **Section 5.3.1 – 5.3.5**).

These management programmes will be continually updated, revised, and reviewed internally to ensure the programmes remain relevant and are effectively mitigating the risks identified in **Section 4**, including in the event of an unforeseen impact and design change with respect to the Project Standards, and the proposed mitigation measures proposed based on the outcomes of additional impact assessment (refer **Section 4.3**). In addition, these measures will also be applicable to all Project activities carried out by the contractors/suppliers, where relevant.

Note: In accordance to the International standards (i.e., EPIV Principle 4 and IFC PS1), the Project Environmental and Social Management System (ESMS) is also developed to provide the overall Project-level document in providing a consolidated summary of Project's Environmental and Social (E&S) commitments relevant to the Project construction phase; and an overview of the Project ESMS that is being implemented, to ensure systematic and effective execution of these commitments. An ESMS is a "live" document, of which Ørsted will continue to be developed and updated further in response to the different stages of Project development and the outcomes of on-going stakeholder engagement.

#### 5.3.1 Biodiversity Action Plan (BAP)

As an outcome of the Project's CHA (refer Section 4.3.3), a Biodiversity Action Plan (BAP) has been developed. The aim of the BAP is to consolidate the Project's biodiversity related actions and mitigations within the relevant Project documents. The BAP also serves to assist the Project in complying with national legislation and regulations and international standards.

The BAP describes the Project's strategy to achieve a net gain for species for which critical habitat has been determined as defined by the IFC PS6 assessment process as well as no net loss of natural habitats and species groups. A total of six (6) BAP actions were outlined as per the final stage of the mitigation hierarchy to achieve no net loss in natural habitats and net gain of critical habitat features in accordance with the IFC PS6 guidance.

The BAP is intended to be a live document and is subjected to reviews and updates as the Project progresses. The monitoring and progress of each BAP action will be reported as described within **Appendix H** of this NTS. Specific details on the BAP (and its specific actions) can be referred to in the *Biodiversity Action Plan, 2023*.

The Programme Asset Manager will supervise the implementation of Project BAP's action plans and performance, and to report directly to the Programme Director. With the support of the TW Environment & Permitting and Global Sustainability (Biodiversity) on site, the BAP is to be implemented and updated. The Programme Asset Manager will also advice the relevant Project ESMS team to communicate and disclose relevant information and action plans to Project contractors/suppliers, where required.

### 5.3.2 Livelihood Restoration Plan (LRP)

In meeting the IFC PS 5, a Project-specific LRP is developed which details the livelihood restoration programmes proposed for local and affected communities. The LRP incorporates the outcomes of the primary and secondary socio-economic baseline survey as well as the following considerations:

- Entitlements based upon prevailing Taiwanese regulations, the 'Fishermen Compensation Agreement' (FCA) between the Project Company and Changhua Fishermen Association (CFA), and the IFC PS 5 eligibility criteria.
- The development of a framework for potential livelihood restoration measures to supplement those already being proposed through the FCA signed on 7 September 2020. These include:
  - Assisting affected people in their efforts to improve, or at least restore, their livelihoods to a pre-economic displacement level.
  - Implementing livelihood restoration activities as sustainable development programmes and providing sufficient investment resources to enable affected people to benefit from the Project.
- Overview of the implementation processes, schedules, budgets and monitoring and evaluation mechanisms.
- Activities that are planned and implemented with appropriate disclosure of information, meaningful consultation, and informed participation of those affected.

This LRP documentation is a live document and will continue to be kept to maintain a record of how the Project has engaged with Project Affected Persons (PAPs), particularly fisher folk, to determine the appropriateness and likely effectiveness of the livelihood restoration measures proposed.

The proposed livelihood restoration programmes and action plans that will be reported as part of Lenders E&S monitoring report are provided in **Appendix H** of this ESMS, and in the *Livelihood Restoration Plan (LRP), 2024* - which includes details on:

- Livelihood restoration and enhancement programmes of the financial support and programmes from the Project under the FCA as well as funds support from the Project Company include.
- Other programmes and initiatives planned by the Project in adopting and continuing livelihood support programmes (as required) to restore standard of living as agreed under the LRP.

With the support of the TW Regulatory & Public Affairs on site, Programme Asset Manager will supervise the implementation of Project LRP's action plans and performance, and to report directly to the Programme Director.

### 5.3.3 Labour Management Plan (LMP)

This LMP is intended to set out responsibilities and the management practices associated with the management of labour (internal and external i.e., suppliers/contractors) during Project lifecycle, and it applies to all Projects' personnel. This LMP aims to set out responsibilities and a system associated with the effective management of labour during Project lifecycle including to:

- ensure that the Projects comply with applicable environmental, health and safety, and social requirements.
- ensure that all internal personnel involved in the Project fully comply Project's obligations on labour management.

- implement applicable Good International Industry Practices (GIIPs) to manage suppliers'/contractors' labour related issues in an appropriate manner.

The action plans that will be reported as part of Lenders E&S monitoring report are provided in **Appendix H**, as well as in the *IFC Performance Standard 2 (PS2) Gap Analysis, 2023*; and the *Labour Management Plan, 2023* – which includes details on:

- Project Labour and Working Conditions Management
- Roles and Responsibilities
- Monitoring, Reporting, and Evaluation
- Training and Disclosure

In relation to the Ørsted's Project employee - the Programme Director, together with the Project Management team and leaders, will ensure to close knowledge or competencies gaps in the Project teams either via internal or external training, where needed. In adherence to the Ørsted's Code of Conduct for Business Partners, the Project contractors/suppliers must also set requirements within their own organisation in providing relevant training opportunities to workers to enhance abilities and skills to perform their daily work.

In terms of overall Project QHSE management, the Project will be designated with a QHSE team headed by a Project QHSE Manager. The responsibilities for managing QHSE aspects including relevant trainings for various Project components are distributed between Ørsted and the contractors/suppliers. The Project QHSE requirements for contractors and suppliers are also included within the contracts which address key occupational health and safety risks of the Project. Contractors are also required to prepare their own QHSE plans that are aligned with the Project QHSE management plan and submit to the Project prior to commencing their scope of work (refer **Section 5.6.1** of this ESMS).

Monitoring and internal assessment on the contractors and suppliers will be conducted to help Ørsted identify and address QHSE and E&S risks, and continuously improve the collaboration with contractors and suppliers to enhance business continuity. Monitoring requirements are set up to meet the commitments in accordance with the applicable QHSE and E&S requirements and standards as well as to respond to any unanticipated issues and impacts which arise during construction and/or operation phases. The overall objective of the monitoring programme is to routinely monitor compliance to policies and progress against actions on gaps identified. It also ensures overall compliance with applicable standards and ensure there is follow-up on any grievances raised by workers, and where relevant, other stakeholders. Further, it aids in ongoing communication with relevant stakeholders or authorities. Monitoring can be conducted via predefined audit/reviews/ site walks with the contractors/suppliers, worker interviews, or data/documentation received from the contractors. Methods would potentially include workers interviews and confirmation from contractors/suppliers and employees on practices followed on site.

In addition, the Project Lead Procurement Manager is overall responsible for all procurement, oversees and approves the procurement process. This includes the obligation of the appointed Project contractors/suppliers to adhere to the Ørsted's Code of Conduct for Business Partners, of which they must demonstrate its respect for workers' rights and cultures and ensure compliance with national laws and international labour and human rights standards through the implementation of its management system. Project contractors/suppliers must also set requirements within their organisation that protect workers, and to provide a safe and healthy workplace. The requirements pursuant to human and labour rights also extend to any form of accommodation

and transportation provided to the workers will be assessed and monitored throughout Project life cycle by the Ørsted's Responsible Business Partners (RPP) team, and with the support of Project QHSE.

Programme Asset Manager will supervise the implementation of Project LMP's action plans and performance, and to report directly to the Programme Director (refer **Figure 6.1**). With the support of the RPP team, Project QHSE on site, and ESG Partnerships Manager - the LMP is to be disclosed to all relevant contractors/suppliers on the topics of human rights/labour rights and QHSE respectively. Ørsted will recommend improvement plan(s) to the contractors/suppliers based on the outcome of the on-going monitoring and assessment exercise (for RPP scope in line with the Code of Conduct for Business Partners' requirements) and QHSE audit (for QHSE scope in line with Ørsted's QHSE requirements) throughout the Project lifecycle.

#### **5.3.4 Stakeholder Engagement Plan (SEP)**

This SEP aims to:

- Identify stakeholder groups that could be affected or may have an interest in the Project including women and vulnerable groups.
- Ensure that such stakeholders are appropriately engaged through a process of information disclosure and meaningful consultation on E&S issues that could potentially affect them. Key principles of consultation are target-specific, early consultation, information dissemination with culturally appropriate manner, two-way dialogues, gender-inclusive where women and men usually have different views and needs, local context in terms of timeframe, location, and language, free from manipulation, documented and report it back to the stakeholders.
- Establish and maintain a cooperative approach with local authorities such that local regulatory processes can be followed and information regarding the Project can be disseminated in a manner that is consistent with good international industry practice (GIIP).
- Maintain a constructive relationship with stakeholders including and social groups (e.g., local fishermen association) on an on-going basis through meaningful engagement during Project implementation.
- Provide a Grievance Mechanism (GM) to allow communities and other stakeholders to register complaints, queries or comments and have them addressed in a timely manner and agreeable manner by the Project.

The action plans that will be reported as part of Lenders E&S monitoring report are provided in **Appendix H**, as well as in the *Stakeholder Engagement Plan, 2023* – which includes details on:

- Stakeholder identification and categorisation.
- Stakeholder engagement to date.
- Future stakeholder engagement activities.
- Resources and Responsibilities for managing stakeholder engagement activities.
- Grievance redress mechanism.
- Monitoring, evaluation, and reporting.

With the support of the TW Regulatory & Public Affairs on site and ESG Partnerships Manager, Programme Asset Manager will supervise the implementation of Project SEP's action plans and performance, and to report directly to the Programme Director.

#### **5.3.5 Quality, Health, Safety and Environment (QHSE) Management Plans**

For Project site investigation phase, Ørsted QHSE Plan CHW2204 Project Development Plan and Local Level Project Development Emergency Response Plan for Taiwan have been developed. Guided by the Global QHSE Policy, the documents outline the QHSE targets, reporting and management review, training development programme and communication. Ørsted and contractors/suppliers will further develop and implement the detailed Project HSE Plan (during construction and operation phase) relevant to the scope of work and in line with Ørsted's QHSE requirements.

Additionally, Project will also develop programmes and carry out periodic QHSE and E&S inspections, and to keep records (documentary evidence) of all communications with personnel/workers and commitments from contractors/suppliers.

The responsibilities for managing QHSE aspects for various Project components will be distributed between Ørsted and the contractors/suppliers. The QHSE Management Plans during construction and operation phase specific to the scope of works (i.e., offshore and onshore components) will also be developed and are described in **Section 5.3.5.1 – 5.3.5.2**.

#### **5.3.5.1 Construction Phase QHSE Management Plan**

##### ***Offshore works***

An offshore works Construction Phase HSE Plan will be developed as part of the main QHSE documentation for the Project. It is written to comply with the local Taiwanese legislations, in particular the Occupational Safety and Health Administration Guidelines for Safe Working at Sea for Offshore windfarms (January 2019); Occupational Safety and Health Administration for Offshore Windfarm Labour Supervision and Inspection Guideline (July 2021); the Occupational Safety and Health Act (Articles 23 and 34); Enforcement Rules of the Occupational Safety and Healthy Act Article 31 (February 2020); and Enforcement Rules of the Occupational Safety and Healthy Act Article 41 (February 2020).

This document is provided as one of the core package information, and other task and package specific documents required for the various aspects of the offshore works will be provided to contractors via the respective Projects package manager. Prior starting work, Project will review all procedures are in place and that the work has been carefully planned. Project is responsible for maintaining a safe workplace in which hazards have been identified and risks have been reduced to As Low as Reasonably Practicable (ALARP).

In ensuring a safe working environment, Project requires contractors to submit the following documents, at a minimum, for review at least four (4) weeks prior to the start of works or as indicated in their contractual obligations:

- Project Management.
- QHSE Management Plan.
- Risk Assessments and Method Statement (RAMS) for the works.
- Emergency Response Plan.
- Waste Management Plan.
- Certificates for all equipment to be used during the work execution.
- Personnel training records and/or record of competency of personnel.
- Vessel documentation and certification.

Project personnel will also be designated for the primary Project QHSE team, and each contractor will also ensure to appoint their own Project QHSE organisation and defined the details of the roles, responsibilities, and interfaces with Ørsted. During the execution of their scope of work, contractors will be expected to attend regular QHSE meetings and induction trainings organised by the Project's QHSE management team. The

contractors would also need to prepare monthly QHSE reports to be submitted to the Site QHSE manager and Project QHSE manager.

Information relating General Management i.e., communication management; training and access requirements; medical examination & physical capability assessment; monitoring and incident reporting & investigation; emergency response; general HSE requirements including navigational safety on site; significant construction hazards; environmental management i.e., waste, water, and accidental release and spillage; and information for general Operations and Maintenance are provided in the *Greater Changhua (CHW2204) Project HSE Management Plan*.

Further information on the action plans that will be reported as part of Lenders E&S monitoring report, will be updated in **Appendix H**.

### **Onshore substation**

The Project Onshore Substation (OnSS) Health, Safety, and Environmental Management Plan is prepared and issued to align QHSE requirements between the contractor and Ørsted. The purpose of the Plan is to outline and define the approach that the Ørsted and contractor is required to take to ensure, that the management of health, safety and environmental is sufficient and appropriate, to prevent the occurrences of unforeseen incidents throughout the life cycle of the project phases. The plan content is also compiled to assist in raising awareness to any known hazards, particularly those which may be regarded as unknown to Ørsted and contractor SEC during all phases of the works.

In addition, this Plan is written to comply with the following Taiwanese Legislation; Occupational Health and safety Administration (OSHA) Guidelines for Safe Working at Sea for Offshore windfarms (January 2018) and the Occupational Safety and Health Act Enforcement Rules (Articles 31 and 41). This document does not replace or remove any responsibility to that or other Taiwanese legislation.

Action plans that will be reported as part of Lenders E&S monitoring report are provided in **Appendix H**, and further information is detailed out and provided in the *Greater Changhua Offshore Wind Farm 2204 Health, Safety, and Environmental (HSE) Management Plan, 2023 (Ref No.: 07919442)*. In line with its contractual commitment, the appointed OnSS contractor, Star Energy Corporation (SEC) has also developed its *HSE Management Plan (Ref No.: 07919442-CHWA2-SEC-GEN-H-PLN-001)*.

### **5.3.5.2 Local Emergency Response Plan**

The Project Local Emergency Response Plan (LERP) describes a series of standard procedures required in the event of several emergency situations both onshore and offshore. This document will be issued to all contractors and suppliers – and they are required to participate and co-operate with Project and provide an interface to the Emergency Response Plan (ERP) in their own emergency procedures.

### **5.3.5.3 Vessels and Navigational Safety Procedure**

As part of the *CHW2204 HSE Plan*, Project also implements vessels and navigation procedures to provide Health & Safety related guidance for Project's offshore marine operation including to address potential marine traffic and safety issues identified in relation to vessel operations associated with the construction and operation phases of the Project i.e., personal tracking offshore, working from vessels, notices to Taiwanese Marine Authorities, sea fastenings and storage of materials (offshore), vessel coordination, vessel loading inspection, vessel loading inspection, navigational safety on site, anchoring and use of jack-ups, as well as information on guard vessels, dynamic positioning operations, and site boundary and adjacent sea.

Note: Details in relation to vessel and navigational safety procedure is incorporated in the *CHW2204 HSE Management Plan*.

In addition, other task and package specific documents required for the various aspects of the offshore works will be provided to the contractors via the respective Project Package Managers. Subject to each of the contractors/suppliers Risk Assessments and Method Statements (RAMS) and Work Authorisation Procedure – contractors/suppliers may be required to submit their own vessel and navigational safety documentations, which will be reviewed and approved prior to start of work.

### **5.3.6 Operation Phase QHSE Management Plan**

An Operation and Maintenance (O&M) HSE Plan will be developed prior to the commencement of operation.

### **5.3.7 Decommissioning Plan**

Ørsted does not currently include a Project Decommissioning Plan, however given the relatively benign nature of the operation phase and limited potential legacy issues it is suggested that the requirement for a decommissioning plan to be developed no later than five (5) years prior to the end of the operation phase.

## 6 Stakeholder Engagement

### 6.1 Overview

Stakeholder engagement (including information disclosure, public consultation, and surveys) have been conducted throughout the Project development as part of the local EIA process. A Stakeholder Engagement Plan (SEP) is developed (refer **Section 5.3.4** of this Report), which details out the Project’s future stakeholder engagement planning and events, as well as methods and process by which the Project’s stakeholders and other interested parties are consulted in relation to the proposed Project. It also demonstrates Ørsted’s commitment to a meaningful and effective stakeholder engagement throughout the Project life cycle.

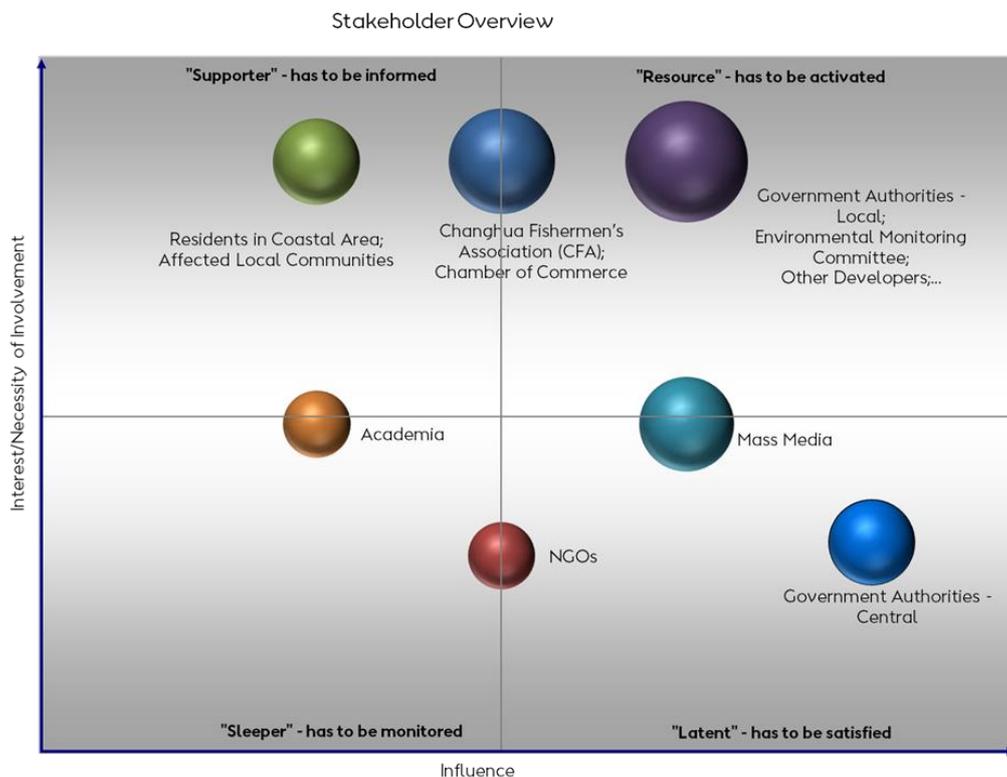
Ørsted has identified and grouped Project stakeholders. A desktop stakeholder identification and mapping exercise are carried out to identify all Project stakeholders. **Table 6.1.** provides the overview of Project potential key stakeholders, and **Figure 6.1** illustrates the stakeholder mapping matrix to help identifying where stakeholders stand depending on their influence and interests.

**Table 6.1: List of Project Key Stakeholders**

Category	Stakeholder
<b>Government Authorities – Central</b>	Executive Yuan
	Ministry of Economic Affairs
	Environmental Protection Administration
	Ministry of Transportation and Communications
	Ministry of the Interior
	Ministry of Culture
	Ministry of Labour
	Ministry of National Defense
	Council of Agriculture
<b>Government Authorities – Local</b>	Changhua County Government
	Taichung City Government
	Lukang Township
	Xianxi Township
	Fuxing Township
<b>Impacted Communities</b>	Residents in coastal areas
	Changhua Fishermen’s Association (CFA) and fishermen members
	Affected local communities e.g., fishermen households which are poor or having physical and mental disabled persons, fishery associated labour and workers on vessels; women groups and other vulnerable groups
	Environmental Monitoring Committee
<b>Chamber of Commerce</b>	Changhua Chamber of Commerce
	Changhua Industrial Association
<b>Academia</b>	National Changhua University of Education
	Private universities in Changhua, such as Da-Yeh University, Mingdao University, Chienkuo Technology University, and Chungchou University of Science and Technology

Category	Stakeholder
<b>NGOs</b>	Changhua Environmental Protection Alliance
	Taiwan Ocean and Environmental Sustainability Law Center
	Wild Bird Society of Chang Hwa
<b>Other developers</b>	Nearby project developers
<b>Mass Media</b>	National media
	Regional media
<b>Internal Stakeholders</b>	Contractors and Suppliers
	International Finance Institution

**Figure 6.1: Stakeholders Mapping Matrix<sup>1</sup>**



Based on the result of the above stakeholder mapping, the stakeholder groups are analysed to determine the most appropriate method of engagement for each key group. This analysis has considered the concerns, their level of interest in the Project and their potential to be impacted (including positive/negative and direct/indirect). **Table 6.2** provides stakeholder engagement strategies for each stakeholder group.

<sup>1</sup>

- Influence: Influence indicates stakeholders' ability to support or resist Project's recommendation or change. A stakeholders' influence is typically classified in the range of low to very high.
- Interest: Interest is the (positive or negative) concern or interest that stakeholders might have and helps Project to build a better relationship and to manage them more effectively. A stakeholders' interest is typically classified in the range of low to very high.

**Table 6.2: Stakeholder Engagement Strategies for each Stakeholder Group**

Sleeper – has to be monitored	Supporter – has to be informed	Latent – has to be satisfied	Resource – has to be activated
<ul style="list-style-type: none"> <li>▪ Academia</li> <li>▪ NGOs</li> </ul>	<ul style="list-style-type: none"> <li>▪ Residents in coastal areas.</li> <li>▪ Affected Local Communities.</li> <li>▪ Changhua Fishermen’s Association (CFA).</li> <li>▪ Chamber of Commerce.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Government Authorities - Central.</li> <li>▪ Mass Media.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Government Authorities – Local.</li> <li>▪ Environmental Monitoring Committee.</li> <li>▪ Other Developers.</li> <li>▪ Internal Stakeholders.</li> <li>▪ Optional: Changhua Fishermen’s Association (CFA).</li> </ul>
<ul style="list-style-type: none"> <li>▪ Inform via general communications such as newsletter and website or as contacted/ requested.</li> <li>▪ Monitor for their feedback.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Make use of interest by informing in low risks areas.</li> <li>▪ Keep informed and consulted in interest area.</li> <li>▪ Formal<sup>1</sup> communication.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Involved in governance and decision making.</li> <li>▪ Keep engaged and consulted regularly via informal<sup>2</sup> and formal engagement and consultation.</li> <li>▪ Involve in governance and decision making.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Inform and consult in interest area through formal communications, such as meetings letters, and written documents.</li> <li>▪ Attempt to obtain their support and technical guidance.</li> <li>▪ Attempt to increase level of interest.</li> </ul>

## 6.2 Stakeholder Engagement Plan

Project Stakeholder Engagement Plan (SEP) is developed to document the methods and process by which its stakeholders and other interested parties are identified and consulted. It is prepared in accordance with the relevant local regulations and international standards and guidelines including i.e., the EPIIV and the IFC PS, the 2017’s IFC Stakeholder Engagement: A Good Practice Handbook for Companies Doing Business in Emerging Markets, as well as the IFC World Bank Group (WBG) Environmental Health and Safety (EHS) General Guidelines (2007) and sector specific EHS guidelines i.e., the EHS Wind Energy Guidelines (2015) and the EHS Guidelines for Electric Power Transmission and Distribution Guidelines (2007

The SEP is designed with the aim of providing a platform for consultation and information disclosure with all Project stakeholders throughout all phases of the development. It also considers all impacted communities as well as updated consultation activities to date.

Details of the stakeholder identification and categorisation as well as the to-date stakeholder engagement activities are available in the SEP.

<sup>1</sup> Formal communication channel: e.g., official letters, official announcement on Ørsted’s website, approved newsletter via local authorities’ offices or fisheries association etc.

<sup>2</sup> Informal communication channel: e.g., social media such as Facebook or LINE groups, etc.

The SEP also outlines the Grievance Mechanism (GM) that will be adopted and implemented by Ørsted and contractors/suppliers. It provides a process by which stakeholders and / or interested parties can raise their complaints, concerns, and observations and for the Project to address genuine items in a timely and agreeable manner. Both internal (Ørsted employees) and external (subcontractors, local communities, stakeholders... etc.) grievance mechanisms are implemented by Ørsted / the project respectively. The SEP will be regularly updated to reflect Project and stakeholder changes and is considered as a live document, particularly includes an establishment of effective reporting.

### 6.3 Roles and Responsibilities

Ørsted will disclose engagement planning into local language, publish relevant documents and ensuring Project-related materials are distributed to the appropriate stakeholders. The SEP will also record comments received during the disclosure of Project information. Comments can be submitted to the contact details provided in **Table 6.3** below.

**Table 6.3: Contact Information**

Item	Details
Name	Mei-Yu Liu
Company	Ørsted, Changhua Representative Office
Office Address	Rm.2C, 11F, No. 37, Huashan Rd., Changhua City, 500007, Taiwan
e-mail	infoapac@orsted.com
Telephone	+886 4 727 6899
Project website	<a href="https://orsted.tw">https://orsted.tw</a>

The Changhua Representative Office has been running since 2018 for interaction with local stakeholders. The office is managed by a senior local stakeholder manager and supported by a coordinator in charge of communication and local event delivering, both of whom are Changhua natives. The main tasks of the Changhua Representative Office include:

- Communicate with local stakeholders.
- Receive local opinions and coordinate relevant internal departments to make appropriate responses.
- Participate in proposing the stakeholder engagement activities and executing the programmes.

### 6.4 Past Stakeholder Engagement Activities

The Project has undertaken several disclosure and consultation activities as part of the initial stakeholder engagement to understand public opinion and compensation requirements for the Project and are in accordance with the local EIA requirements. **Table 6.4** summarises the main stakeholder engagement activities that have been conducted as part of the EIA process.

**Table 6.4: Previous Stakeholder Engagement Activities during EIA Process**

Activities	Date
Online publication of Project information on the Environmental Protection Administration (EPA) website for 15 days	9 January 2016

Activities	Date
Four (4) meetings/visits with the Changhua Fishermen Association	10 February 2016 – 6 April 2017
Online publication of project development information and EIA survey aspects on the EPA website for 20 days	21 September – 12 October 2016
Public seminar (open meeting) for EIA report at drafting stage	21 & 24 October 2016
Public opinion survey of the Project (750 local community members, 209 fishermen and 67 local leaders)	19 November – 11 December 2016
Online publication of major EIA chapters on the EPA website for 20 days	24 January – 14 February 2017
Opinion Presentation Meeting	20 June 2017
The 1 <sup>st</sup> EIA Review Meeting	30 June 2017
The 2 <sup>nd</sup> EIA Review Meeting	11 September 2017
The 3 <sup>rd</sup> EIA Review Meeting	27 November 2017
EPA EIA Vetting Committee Meeting on the Project (the 327th meeting)	9 February 2018
Eight (8) meetings with the Changhua Fishermen Association	17 July 2018 – 16 October 2018
Review meeting on EIA report deviation comparison	20 November 2018
CZMA Public Hearing	22 May 2019
EP On-site Audit Meeting	29 October 2019
1st EDA Review Meeting	21 October 2021
2nd EDA Review Meeting	22 December 2021
EPA Vetting Committee (414th meeting)	2 March 2022
Pre-construction EIA Public Hearing CHW04	26 September 2022
Pre-CP Application Public Hearing of CHW04	16 December 2022
1st EIA Supervisory Committee Meeting	23 December 2022

Source: Unitech, 2018 and EIA Project Forum (<https://eiadoc.epa.gov.tw/EIAFORUM/>)

Ørsted conducted a Public Hearing session for Coastal Utilisation and Management of CHW04 on May 22, 2019. Ørsted has also set up an office in Changhua to facilitate the dialogues locally. A Project stakeholder engagement team is set out at local level and supported by the wider communications and government and regulatory affairs teams for APAC.

## 6.5 Future Stakeholder Engagement Activities and Reporting

Stakeholder engagement is an ongoing process throughout Project life cycle. Project will develop regular reporting to present the updates and progress of construction and operation activities. This will be the on-going activities between Project and stakeholders, among others to provide an immediate update if new E&S risks emerge; on the issues that interest the local community. The on-going reporting will also be supported by information on various stakeholder engagement tools and methods. It will be supported by i.e., documented engagement activities, grievances, and minutes of key meetings. Where applicable, the reports will also detail the measures taken to address the issues, timeline of responses, as well as corrective and mitigation measures.

Given that direct impacts to the local community are anticipated in addition to the feedback received in previous consultations, Stakeholder Engagement Plan (SEP) for Project is developed (refer **Section 5.3.4** of this

Report). The SEP will be regularly updated to reflect Project related stakeholder engagement activities and stakeholder changes and therefore should be considered as a live document. This will also allow Ørsted to improve the strategies by using rigorous information acquired from the monitoring activities.

The on-going reporting to affected communities for the Project will be reflected in Stakeholder Engagement Plan (SEP). Data collected and reported pertaining to stakeholder engagement activities will include the following, but not limited to:

- A brief update on stakeholder engagement processes and any material changes to the Project that have been published in the reporting period.
- A summary of output-level data, taken from Ørsted internal reports (e.g., total number of meetings, total number male/female participants).
- A summary of new materials used for information distribution on the Project (e.g., number of newsletters received).
- Total number of grievances raised, how many are resolved, and how many remain open.
- Information on how the issues raised during engagement are taken into consideration.

In addition, different proposed consultation and disclosure methods, materials, and communication channels with stakeholders designed during the Project lifecycle and are summarised in **Table 6.5**.

**Table 6.5: Proposed Communication Channel**

Proposed Disclosure Methods	Proposed Communication Channels
Notification, key documents, and invitations to meet with Project addressed to specific stakeholders.	<ul style="list-style-type: none"> <li>▪ Email, telephone, post and in person.</li> <li>▪ Meeting and correspondence with the Project representatives.</li> <li>▪ Secure comment boxes.</li> <li>▪ Community meetings and public hearings.</li> <li>▪ Private and roundtable meetings with the Project.</li> </ul>
Paper copies of documents made available in central community location (e.g., town halls, cultural centres, village head office, traditional market, etc.)	<ul style="list-style-type: none"> <li>▪ Email, telephone, post and in person.</li> <li>▪ Secure comment boxes.</li> <li>▪ Community meetings and public hearings.</li> </ul>
Relevant information to directly to Affected Communities	<ul style="list-style-type: none"> <li>▪ Email, telephone, post and in person.</li> <li>▪ Meeting and correspondence with the Project representative.</li> </ul>
Press releases and media interviews regarding Project updates and disclosure periods	<ul style="list-style-type: none"> <li>▪ Media contacts.</li> </ul>

Note: Proposed communication channel will be subjected to Project updates and internal approval as well as agreement and confirmation with the stakeholders.

The Project communication team is managed by Ørsted Taiwan Country Management, and fully supported by Ørsted's Communication APAC and TW Regulatory & Public Affairs teams. Reporting on the communication channels will also be reflected in the Project Stakeholder Engagement Plan (SEP).

## 6.6 Grievance Mechanism for Local Communities

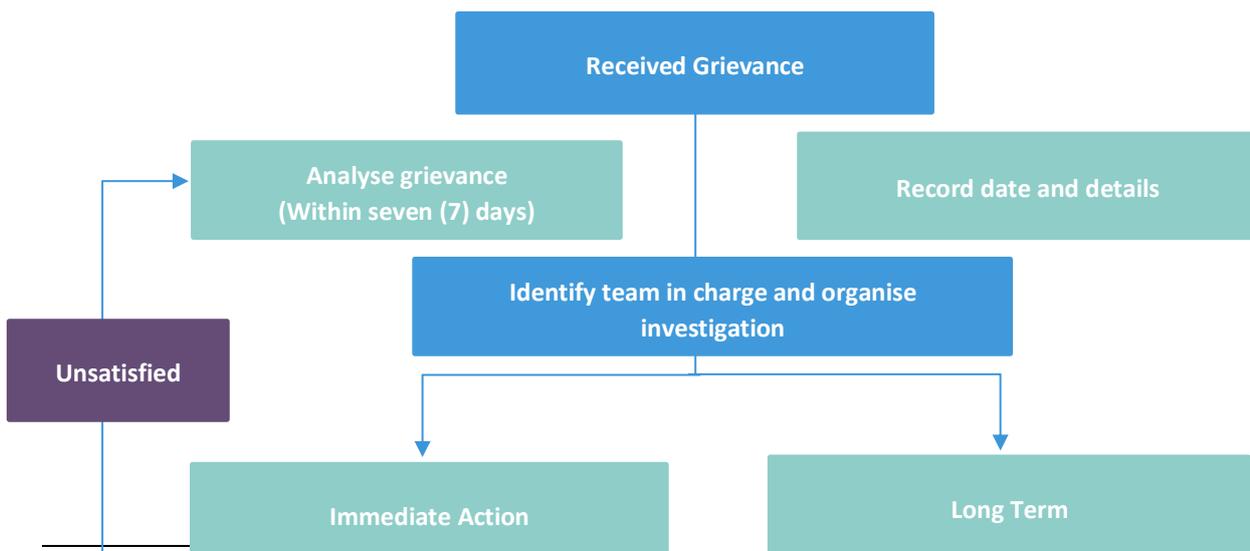
The Project Grievance Mechanism (GM) is a step-by-step approach for receiving, acknowledging, and registering, reviewing, investigating, and resolving complaints and grievances from all stakeholders who consider themselves adversely affected by the Project activities. Establishing and implementing a GM is an important aspect of the Project as it ensures that the Affected Communities' (i.e., both internal and external stakeholders) grievances are managed in a fair and timely manner.

As a general policy, Project will work proactively towards preventing grievances through the implementation of impact mitigation measures and community liaison. Anyone will be able to submit a grievance to the Project if they believe a practice is having a detrimental impact on the community, the environment, or on their quality of life. They may also submit comments and suggestions. The sections below consider confidentiality and anonymity and the grievance resolution process.

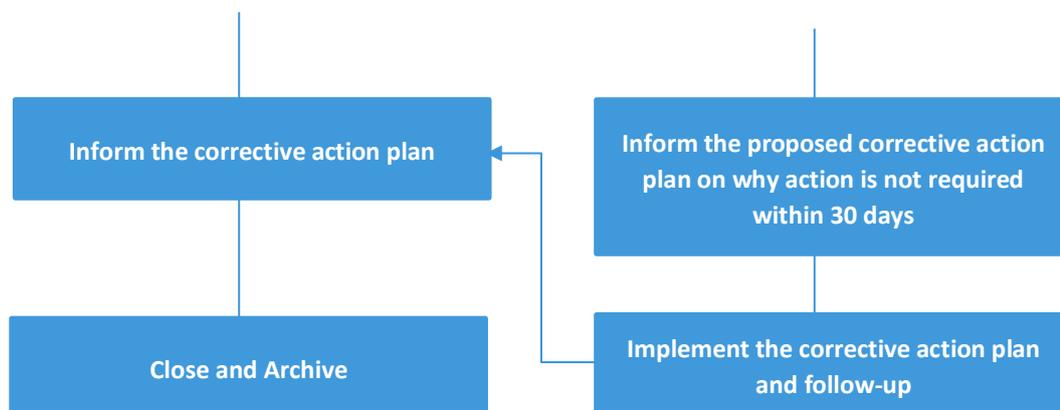
Project will aim to protect a person's confidentiality when requested and will guarantee anonymity in annual reporting. Stakeholders may also register grievances by submitting official letters, contacting the Changhua Representative Office, or reporting to their community leader, or other community representative. The procedure for processing grievances is depicted in **Figure 6.2**.

The Project intends to also disclose the GM via formal and informal meetings internally and externally. It will also prepare promotional materials that can be presented and around the Project area. The Changhua Representative Office will summarise grievances, which will be logged in a formal system. The grievance log will be updated regularly and reviewed. Reporting on grievance mechanism and its resolution will also be reflected in the Project Stakeholder Engagement Plan (SEP). To date, Project GM is promoted via social media group chat to the local communities, and Project contractors/suppliers will be required to establish mechanisms accessible to all workers, rights holders, and stakeholders, providing for safe and confidential reporting of any concerns related to the scope of the Ørsted's Code of Conduct for Business Partners. Additional steps and initiatives will be taken to promote the Project GM for a wider stakeholders' groups.

**Figure 6.2: Flowchart of Grievance Mechanism<sup>1</sup>**



<sup>1</sup> Currently, complainant will be notified within 24-48 hours after the grievance is received. Subject to the severity of the grievances, resolution is aimed to be addressed and closed within seven (7) – 20 days, depending on the severity of the grievance. The process is currently being reviewed for improvement, and will be reflected in this SEP.



Source: Stakeholder Engagement Plan, 2021

## 6.7 Other Project Grievances Channels and Platforms

### 6.7.1 Ørsted Internal Employee Grievance and Complaints

Ørsted is committed to ensuring a sustainable, safe, and inclusive working environment where all employees can thrive. As being outlined in the Global Labour and Employment Rights Policy - the Company is dedicated to creating transparency for the employees within labour and employment rights by describing the commitment to actively safeguarding labour, employment, and human rights standards. The global labour and employment right policy is available on both the company intranet and Ørsted’s official website. All employees, regardless of work location, position and level, can access it both within and outside Ørsted’s network. All personnel policies (including the Global labour and employment rights policy) and employee handbooks are located on a dedicated webpage on the company intranet called “Employment terms and policies”, and all employees in Ørsted can find global and country specific policies related to their employment on this page. News/ articles are also published on the intranet, including when the Global labour and employment rights policy was introduced. In APAC, new joiners will be invited to an orientation session in the first week where they will be briefed on local employment terms and introduced to the company intranet, where they can find/ locate certain information etc., an APAC onboarding page also exists on the intranet that collates all information that employees would need to pay attention to or frequently asked about for their easy access, and that includes a link to the “Employment terms and policies” page. In addition, in terms of the Labour-Management Committee meeting in TW, prior to every meeting, all employees are informed via email about the date of the meeting and encouraged to share any feedback/ comments with the representatives either via email or in person.

In Ørsted, an appropriate and accessible mechanisms for internal employees to raise labour- and employment-related grievances or complaints is established (either related or not related to H&S, bullying, discrimination, and harassment). With various grievance and complaint mechanisms in place which employees can use for raising their concerns or complaints - an employee can firstly always go to their direct people leader for support.

Second, an employee can reach out to the People & Development organisation if they have a question or a concern (either related or not related to H&S, bullying, discrimination, and harassment) via either:

- Human Resource Business Partner.
- the local/regional People & Development experts.
- via the annual People Matter survey.

In Ørsted Taiwan office – Head of PEOPLE & DEVELOPMENT APAC would be a member of the reporting committee and the investigation team will be led by a trained PEOPLE & DEVELOPMENT APAC staff. Employees can escalate/ report grievances via Zero Tolerance or Whistleblower Hotline (refer **Section 6.7.2** of this ESMS), the escalating/ reporting channel would depend on the nature of the incident. The Zero Tolerance one is managed by PEOPLE & DEVELOPMENT and the Whistleblower Hotline is managed by Internal Audit. For cases filed to the Zero Tolerance, a reporting committee (i.e., APAC Zero Tolerance Committee) and investigation team will be formed after receiving a case.

During the investigation process, all employees involved, including the complainant, the respondent, and witnesses, will be invited to an interview. The investigation team will also investigate all evidence provided (e.g., emails, text messages). Upon completion of investigation, the investigation team will prepare a report and present to the reporting committee, and finally the case will be categorised as either “substantiated” or “not substantiated” based on the investigation result. Within seven (7) days upon receiving a case, the reporting committee and the investigation team will confirm receipt of case, communicate with parties involved and come up with an action plan. Cases are expected to be closed within 30 days, but timeline may vary depending on the complexity of the case and number of employees involved. Any necessary extension will be communicated with relevant parties.

All employees have the right to make a complaint or raise a grievance without fear of retaliation. If an employee wishes to report an instance of bullying, discrimination, or harassment, a global process, supplemented by country-specific appendices, where employees can contact People & Development to report their experience (refer **Section 6.7.4** of this document). Such cases are handled by trained PEOPLE & DEVELOPMENT colleagues from People & Development. All concerns and complaints raised to People & Development will be taken seriously and handled confidentially to the extent possible.

All cases will be treated and handled with care and confidentiality, non-dependent on categorization. Once a grievance/ complaint has been filed, the manager/ PEOPLE & CULTURE will engage relevant parties and come up with an action plan to address the concerns. An investigation process may be initiated if needed, noting that, this is not a standard process as it depends on the matter raised and such actions may not be appropriate/relevant.

### **6.7.2 Ørsted Whistle Blower Hotline**

Supplementary to the grievance procedure noted above, an Ørsted Whistle Blower Hotline (<https://orsted.whistleblownetwork.net/WebPages/Public/FrontPages/Default.aspx>) has been established and available online. Internal employees, contractors and suppliers will also have Ørsted Whistle Blower Hotline mechanism briefed, disclosed, and incorporated during the tender due diligence process. This hotline is for personnel to report concerns quickly and easily about actual or suspected misconduct to help protect Ørsted's integrity.

Through the Ørsted Whistleblower Hotline, whistleblowers may file a confidential report – including an anonymous option - on inappropriate and illegal conduct in the company. All reports filed to the Whistleblower

Hotline will be received and investigated by Internal Audit. Internal Audit is an independent function in Ørsted reporting directly to Ørsted's Board of Directors.

### **6.7.3 Ørsted QHSE Management and Analysis System "Synergi"**

Synergi is the Ørsted's Quality, Health, Safety, Environment (QHSE) system that Project uses for the recording and analysing of health and safety related complaints, incidents with actual consequence, near misses, and observations. Project QHSE team will assess the matter of the inquiry and to decide on appropriate action(s).

In some cases, it can be sufficient to receive the inquiry or give the enquirer an immediate explanation. If feasible and needed, Project QHSE team will also initiate appropriate action(s) to handle complaint by mitigating impacts. Where relevant, Project QHSE team will explain what has been done to correct the situation and if applicable what has been done to prevent further and similar cases.

In line with the contractual requirements, Project contractors and suppliers will be expected to monitor their activities and the activities of any subcontractors they employ to ensure that health and safety matters are being effectively managed. All contractors'/suppliers' QHSE data, observations etc. will also be recorded on the Synergi system.

### **6.7.4 Ørsted Bullying, Discrimination, and Harassment**

Ørsted is dedicated to ensuring a safe and inclusive working environment for all employees. Upholding Ørsted's guiding principles means actively working to create a working environment that is free from bullying, discrimination, and harassment.

Employees have the right to name and describe their experience in a report and have that report taken seriously and investigated thoroughly. This among other things include that Ørsted as an organisation has the responsibility to take all reported cases seriously and provide fair outcomes for investigated cases that take all parties' needs into consideration.

This is also supplemented and further elaborated on a local level in separate country appendices to the global bullying, discrimination, and harassment policy. Ørsted has also created both global employee and people leader training and guides. There may also be supplemental local courses catering for the relevant and applicable local legislation and processes.

Specifically for the Project, the anti-bullying and harassment training is held once every year. When relevant, the Human Resource Business Partners team engages with the local lawyers to deliver sessions or leverage group's resources, in compliance with the applicable local legislation and requirements. This is also aligned with Ørsted's Human Rights Policy, of which Ørsted is committed to provide or helping appropriate remediation to harmed stakeholders.

Bullying, discrimination, and harassment programs will also be implemented at contractors' and suppliers' levels. Further progress on this program will be updated in the Project's Stakeholder Engagement Plan (SEP).

### **6.7.5 Contractors and Suppliers owned Grievance Mechanism**

In line with the tender due diligence process and contractual requirements, Project contractors and suppliers will need to establish mechanisms accessible to all their workers, rights holders, and stakeholders, providing for safe and confidential reporting of any concerns related to the scope of the Ørsted's Code of Conduct for Business Partners. Ørsted's Responsible Business Partner Programme team to monitor the implementation at contractors' and suppliers' level to verify that action plans are taken and closed in a timely manner in addressing the reported grievances.

## 7 Further Information and Contact Details

This NTS has provided an outline of the information presented in the Project's approved local EIA (and subsequent EIA amendment report as well as additional reporting per Lenders Environmental and Social requirements and standards) that is in a relatively simple format for the public.

The full local EIA is available on the EPA's website in accordance with disclosure requirements of the local Taiwan EIA legislations. In addition, Ørsted also publishes the quarterly local EIA environmental monitoring reports on the official website: <https://orsted.tw/zh/renewable-energy-solutions/eia-documents>

For further Project information, please contact:

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Appendix A Local EIA Environmental and Social Baseline Surveys – Methodology and Monitoring Locations

Receptor	Baseline Survey	Year
Meteorology	<ul style="list-style-type: none"> <li>Meteorological data is based on secondary data collection from the Central Weather Bureau (Wuqi Weather Station) database. Data collected includes temperature, air pressure, wind direction and speed, precipitation and evaporation levels, relative humidity, typhoon etc.</li> </ul>	2006 - 2016
Oceanography	<ul style="list-style-type: none"> <li>Oceanography data is based on secondary data collection from the MOEA. Data collected includes tidal level, wave heights, wind rose etc.</li> </ul>	2012 - 2015
Geology	<ul style="list-style-type: none"> <li>Historical and secondary data on terrestrial and marine topography, regional and site geological conditions, seismic data, seabed surface sediment conditions, earthquake fault and tectonic data, and geological hazard</li> </ul>	2001 - 2016
Air Quality and Greenhouse Gas (GHG) Emissions	<ul style="list-style-type: none"> <li>Three (3) EPA monitoring locations (i.e., Changhua City, Xianxi and Erlin).</li> </ul>	2014 - 2016
	<ul style="list-style-type: none"> <li>Three (3) 24-hour air quality surveys (measuring SO<sub>2</sub>, NO<sub>x</sub>, NO<sub>2</sub>, NO, CO, O<sub>3</sub>, total suspended particles (TSP), PM<sub>10</sub>, PM<sub>2.5</sub> and lead), Lead, wind speed, wind direction, temperature, and relative humidity at six (6) onshore monitoring locations near the coastline.</li> </ul>	2016
	<ul style="list-style-type: none"> <li>Eight (8) monitoring surveys at two (2) locations i.e., Lunwei Industrial Park and Wuqi Fishing Port &amp; two (2) supplemental monitoring surveys at Lukang Industrial Park.</li> </ul>	2019 - 2021
Noise and Vibration	<u>Airborne noise</u> <ul style="list-style-type: none"> <li>Two (2) 24-hour noise and vibration surveys at nine (9) monitoring locations along the land cable route, main transportation roads and Taichung Port (where assembly works will be carried out).</li> <li>Two (2) 24-hour low-frequency noise surveys at 10 monitoring locations around the Project affected areas.</li> <li>An additional survey at the Lunweu Changhua Coastal Park Service</li> <li>Supplemental noise and vibration monitoring at Zhangbin Industrial Park</li> </ul>	2016 2016 2017 2020
	<u>Underwater noise</u> <ul style="list-style-type: none"> <li>Four (4) monitoring locations within and around the wind farm area for a minimum of 30 minutes before and after high and low tide in a day.</li> </ul>	2016
	<u>Vibration</u> <ul style="list-style-type: none"> <li>Nine (9) monitoring locations in line with the Tokyo Public Hazard and Vibration Control Standards of Japan.</li> <li>Supplemental noise and vibration monitoring at Zhangbin Industrial Park</li> </ul>	2016 2020
	<u>Onshore substation and cable area</u> <ul style="list-style-type: none"> <li>Seven (7) monitoring locations within the substation area and three (3) monitoring locations along the cable route.</li> </ul>	2016

Receptor	Baseline Survey	Year
Surface Water Quality	<ul style="list-style-type: none"> <li>Hydrological data and water quality is based on secondary data per Hydrological Yearbook of Taiwan</li> <li>Additional survey at five (5) monitoring locations to evaluate the levels of total coliform, total suspended solids, water temperature, pH levels, Nitrate, Ammonia Nitrogen, Total Phosphorus, Dissolve Oxygen, Biochemical Oxygen Demand, conductivity and RPI.</li> </ul>	2013 - 2016
		2016
Groundwater Quality	<ul style="list-style-type: none"> <li>Baseline groundwater quality data monitoring results at an EPA monitoring location (at Xianxi Elementary School, located more than four (4) km east of Lunwei Zone of Changhua Coastal Industrial Park).</li> </ul>	2014 - 2016
Waste Management and Soil Disposal	<ul style="list-style-type: none"> <li>Secondary data collection from the EPA database on Changhua's domestic waste production, characteristics (physical and chemical composition), treatment and disposal methods.</li> </ul>	2005 - 2015
Electromagnetic Field (EMF)	<ul style="list-style-type: none"> <li>14 monitoring locations around the Project substation and land cable route. An additional survey in 2017 at four (4) monitoring locations.</li> <li>Six (6) monitoring locations between submarine cable landfall and the Zhanggong Substation.</li> </ul>	2016 – 2017
		2020
Terrestrial Biodiversity – Flora and Fauna	<ul style="list-style-type: none"> <li>Three (3) surveys i.e., two (2) seasons of plant species through plot sampling; terrestrial mammals through line transects, animal traps, and anabat system investigation; terrestrial birds through daytime point count surveys and night crossing live surveys; amphibians and reptiles through visual detection, stone flipping and chance observations; and butterflies and dragonflies through net capturing and visual observations.</li> <li>Nine (9) ecological surveys within Changbin Industrial Park including mammals/reptiles/amphibians/butterflies surveys and plant sampling.</li> <li>Additional bird radar surveys.</li> </ul>	2016 – 2017
		2019 – 2021
		2018 – 2021
Marine Water Quality	<u>Offshore windfarm and cable area</u> <ul style="list-style-type: none"> <li>Three (3) EPA monitoring locations and other neighboring projects.</li> <li>Three (3) surveys at 12 monitoring locations in the Project area and three (3) monitoring locations along the common corridor.</li> <li>Two (2) supplemental surveys at 12 monitoring locations in the Project area.</li> </ul>	2014 - 2016
		2016 – 2017
		2020
	<u>Submarine cable area (intertidal)</u> <ul style="list-style-type: none"> <li>Seven (7) monitoring locations along the intertidal cable area.</li> </ul>	2016 - 2017
Marine Sediment	<ul style="list-style-type: none"> <li>Two (2) surveys at 12 monitoring locations in the Project area</li> <li>Three (3) monitoring locations along the common corridor</li> <li>Two (2) supplemental surveys at 12 monitoring locations in the Project area.</li> </ul>	2016 – 2017
		2020

Receptor	Baseline Survey	Year
Marine Biodiversity – Mammals	<ul style="list-style-type: none"> <li>Z-shaped crossing lines within the Project area over 20 days for visual observations of cetaceans.</li> </ul>	2016 - 2017
Coastal and Marine Biodiversity – Avian	<ul style="list-style-type: none"> <li>Two (2) seasons of eight (8) monthly surveys using transect lines in the Project area and coastal area. Radars survey for raptor and nocturnal bird studies.</li> </ul>	2016 – 2017
	<ul style="list-style-type: none"> <li>Additional supplemental surveys during pre-construction phase.</li> </ul>	2018 - 2021
Marine Biodiversity – Marine Ecology (Fishes, Microbenthos, Macrobenthos)	<ul style="list-style-type: none"> <li>Six (6) marine surveys at 12 monitoring locations for the identification of phytoplankton and zooplankton, and macrobenthos communities. Dredging samples used to identify marine benthic organisms, and plot sampling used for marine plants.</li> </ul>	2016 – 2017
	<ul style="list-style-type: none"> <li>Six (6) fish surveys at 12 monitoring locations for juvenile fishes and fish eggs (including via bottom trawling and gill netting at three (3) monitoring locations for juvenile and adult fishes). Local fish markets are visited to verify local catch species via questionnaire session, including secondary data collation of fish species from the artificial reef and protected reef area.</li> <li>Two (2) supplemental monitoring surveys at 12 locations for phytoplankton, zooplankton, fishes, and benthic organisms.</li> </ul>	
<ul style="list-style-type: none"> <li>Socioeconomics and Labour</li> <li>Economic Displacement</li> <li>Fisheries Resources and Communities</li> </ul>	<ul style="list-style-type: none"> <li>Secondary data collection and desktop assessment, correspondence with local authorities and/or engagement activities to identify affected communities, assess the Project impacts to the affected communities.</li> <li>Data collected includes fishery environment, fishery facility and industry, fishermen population and methods used during the fishing activities, number of boats and main fishing ports, etc.</li> <li>Other information includes demographics statistics, educational level, workforce and existing industries within the region, land use and its utilisation,</li> </ul>	Historical data up to 2018 (on-going)
Cultural Heritage Resources – Land based and Marine	<u>Land-based cultural heritage resources</u> <ul style="list-style-type: none"> <li>Literature review and field surveys along the landing points, substation, and cable route.</li> </ul>	2016 - 2017
	<u>Underwater cultural heritage resources</u> <ul style="list-style-type: none"> <li>Literature review and various sonar detection surveys within and around the Project area.</li> </ul>	2016 - 2017
Landscape/Visual and Tourism	<ul style="list-style-type: none"> <li>Photomontages from three (3) viewing points along the coast nearest to the WTG area to assess potential visual impact of the Project during construction and operation.</li> <li>Secondary data collection from desktop assessment for the tourism spots e.g., cultural/ recreational sites.</li> </ul>	2016 - 2017
Public Infrastructure	<ul style="list-style-type: none"> <li>Secondary data collection on water supply, healthcare infrastructure etc.</li> </ul>	Historical data up to 2016

Receptor	Baseline Survey	Year
Traffic and Transportation	<ul style="list-style-type: none"><li data-bbox="555 231 1845 300">▪ Traffic impact assessment to predict traffic service levels around the Project area and determine if there would be potential impacts to tourists accessing tourism/recreational sites near the Project area.</li></ul>	2016

Appendix B Local EIA Environmental Baseline Surveys – Summary of Findings

Receptor	Description
Air Quality	<ul style="list-style-type: none"> <li>▪ Surface meteorology of this Project is in accordance with the Regulations of Air Quality Model.</li> <li>▪ According to “Air Pollution Control Zone of Municipal and County (City)” promulgated by the Environmental Protection Administration, Executive Yuan and results of Environmental Protection Bureau- Changhua County - air quality is in compliant with the National Ambient Air Quality Standards (NAAQS) Class II Air Pollution Zone for Particulate Matter (PM<sub>10</sub>), Ozone (O<sub>3</sub>), Sulphur Dioxide (SO<sub>2</sub>), Nitrogen Dioxide (NO<sub>2</sub>), and Carbon Monoxide (CO); and Class III Air Pollution Control Zone for PM<sub>2.5</sub> (based on the Official Letter 1050061014 promulgated by the Environmental Protection Administration).</li> <li>▪ In the light of “Operational Rules of Environmental Impact Assessment for Development”, supplementary surveys were conducted from August to November of 2016, with exceedances in Total Suspended Particulate (TSP), PM<sub>10</sub> and PM<sub>2.5</sub> at Lugang Industrial Zone, Putian Temple, Tianbao Temple and Fushun Temple.<sup>1</sup></li> <li>▪ Additional eight (8) surveys for air quality were conducted between June 2019 and March 2021, and the results comply with the applicable standard.</li> </ul>
Noise and Vibration	<p><u>Airborne Noise</u></p> <ul style="list-style-type: none"> <li>▪ A 24-hour continuous environmental noise monitoring points were performed in August, September, and October in 2016, and a supplementary monitoring was performed at one (1) point in July 2017.</li> <li>▪ Results shows that baseline of airborne noise levels are in complaint with the nationally prescribed standards (i.e., Class III or Class IV Control Zone), except the exceedances during night-time measurement (against the Class II Control Zone) at Show Chwan Memorial Hospital i.e., within the range of 51.0 – 60.1 dBA<sup>2</sup>.</li> <li>▪ In 2013, the Environmental Protection Administration, Executive Yuan issued an Official Letter 1020065143 to revise noise control standards to include low-frequency noise for wind turbines. The results show exceedances against the nationally prescribed standards at two (2) monitoring points i.e., Wuqi Elementary School (Class II) and Changhua Coastal Industrial Park (Class IV).</li> <li>▪ Additional noise surveys were conducted between August 2019 and March 2021, and the results comply with the applicable standard.</li> </ul> <p><u>Vibration</u></p> <ul style="list-style-type: none"> <li>▪ All results from monitoring stations conforms with the standard values specified in the Tokyo Public Hazard and Vibration Control Standards of Japan.</li> </ul>

<sup>1</sup> All PM<sub>10</sub> and PM<sub>2.5</sub> levels are in compliance with the Interim Target-1 24-hours Averaging period of WHO Ambient Air Quality Guidelines (as per the IFC General EHS Guidelines), with the exception of one (1) point i.e., Lugang Industrial Zone in September 2016.

<sup>2</sup> A 1974 U.S. Environmental Protection Agency report (EPA 1974) recommended a 70 dB(A) over 24-hour average exposure limit for environmental noise.

Receptor	Description
	<ul style="list-style-type: none"> <li>▪ Additional noise and vibration surveys were conducted between August 2019 and March 2021, and the results comply with the applicable standard.</li> </ul> <p><u>Underwater Noise</u></p> <ul style="list-style-type: none"> <li>▪ The underwater noise profile of the offshore windfarm and cable area was conducted during low and full tides by deploying the shipborne acoustic measurement via SM2M of Wildlife Acoustic through 1Hz spectrograms and 1/3 octave band frequency levels.</li> <li>▪ The sound pressure level of underwater acoustic level is in line with ANSI S1.1- 1994 and stated in <math>\mu\text{Pa}</math>.</li> <li>▪ The results are affected due to the existing shipping navigation channel within the vicinity of monitoring points. In addition, unidentified biological noises are also recorded, suggesting that marine fauna to be present within the area.</li> </ul>
Soil	<ul style="list-style-type: none"> <li>▪ Sampling survey is conducted to test the soil pH value and content of heavy metals e.g., Copper, Mercury, Lead, Zinc, Nickel, Cadmium, Chromium, and Arsenic.</li> <li>▪ Based on the Soil Pollution Monitoring Standards and the Soil Pollution Control Standards', heavy metal content of soil is below the required levels.</li> </ul>
Surface Water Quality	<ul style="list-style-type: none"> <li>▪ Nearby surface water bodies:               <ul style="list-style-type: none"> <li>○ Yang Zai Cuo Bridge, Fubao Bridge and Old Zhuo Shui Rive are classified as moderate-serious polluted.</li> <li>○ Qing An Waterway, Xlanxi Wateray, and Yang Zai Cua are classified as mildly-slightly polluted.</li> <li>○ Yuanlin is classified as mildly polluted.</li> </ul> </li> </ul>
Groundwater Quality	<ul style="list-style-type: none"> <li>▪ Groundwater quality report at the nearest monitoring point within the vicinity of Project area i.e., Xianxi Elementary School Inspection Station was issued by the Environmental Protection Administration</li> <li>▪ It is noted that Ammonia Nitrogen and Manganese levels exceeded the allowable limits due to the soil fertility and potential discharge of domestic wastewater.</li> </ul>
Waste Management	<ul style="list-style-type: none"> <li>▪ According to the report published by Environmental Protection Agency, Executive Yuan, the annual domestic waste in 2005 for Changhua County was 385,328 tons. The daily waste production per capita was 0.818kg. Domestic waste collection in Changhua County is managed by the municipal government.</li> <li>▪ Most of the sanitary landfills in Changhua County have been closed and rehabilitated. Current waste will be transported to and disposed at an incineration facility and waste recycling plant in Xizhou. There are also four (4) soil disposal sites are located on Changhua County (annual processing capacity of 1.75million <math>\text{m}^3</math>), whereas the are 11 sites in Taichung City (annual processing capacity of 4.91 million <math>\text{m}^3</math>) and three (3) sites in Yunlin County (annual processing capacity of 2.796 million <math>\text{m}^3</math>).</li> </ul>
Electromagnetic Field (EMF)	<ul style="list-style-type: none"> <li>▪ In accordance with the Electric Field and Magnetic Field Inspection Method in the Environment (Overhead High Voltage Line, Substation, Floor Type Transformer, and the Radio Frequency Electromagnetic Field Wave Detection Method in the Environment (NIEA P203.92B), the environmental Electromagnetic Field (EMF) survey was conducted along the Project transmission line.</li> </ul>

Receptor	Description
	<ul style="list-style-type: none"> <li>The EMF background values are within the limit of 50/60 Hz magnetic limits recommended by e.g., the International Radiation Protection Association (IRPA).</li> </ul>
Seawater Quality and Sediment	<ul style="list-style-type: none"> <li>Compliant with the nationally prescribed Class B Marine Water Quality Standard.</li> <li>The sediment has no special high values for all heavy metal, and Probable Effect Level (PEL) does not exceed based on the National Ocean and Atmosphere Administration (NOAA) standards. The Threshold Effect Level (TEL) value also indicates chemical substances in the sediment sample will not cause any harm to marine species.</li> </ul>
Terrestrial Biodiversity	<p><u>Flora</u></p> <ul style="list-style-type: none"> <li>A total of 107 (1<sup>st</sup> Quarter) 112 (2<sup>nd</sup> Quarter), and 142 (supplementary survey at Changhua Coastal Industrial Park) species of plants are recorded. Six (6) species are endemic i.e., Taiwan Golden-rain tree; Chloris formosana (Honda) Keng; Formosan peacock-plume; Formosan date palm; Phoenix hanceana; and Tashiro Indian Hawthorn; and three (3) are rare species (but considered to be artificially introduced) i.e., Thespesia populnea; Lanyu Podocarp; Common Garcinia; and Bhendi tree.</li> <li>No natural forests within the Project area. Man-made forest is mainly made as the costal wind-protection plantation which few autochthonous or naturalised species grown naturally and moved towards secondary forest. The vegetation on the roadside is mainly composed of weeds i.e., Gramineae and Asteraceae, as well as plants such as Bidens pilosa radiate, Rhynchelytrum repens, goose grass and Bermuda grass.</li> <li>Four (4) woody species are found i.e., Casuarina, Astragalus, Qiliuli and Umbellifera, and 42 species of land-covering herbaceous plants.</li> <li>As per additional survey conducted in 2019-2020, no rare and valuable species was recorded.</li> <li>Changhua Coastal Industrial Park was formed by sea reclamation. It also contains various habitats including natural grass land, inner seawall salt land, uncultivated grass land, man-made forest, and secondary forest.</li> </ul> <p><u>Fauna – Mammals</u></p> <ul style="list-style-type: none"> <li>Up to 13 species, of which four (4) are endemic i.e., Rattus losea; Mus caroli; Myotis secundus; Murina puta and one (1) endemic subspecies, Eptesicus serotinus horikawai. Additional species are found (including eight (8) types of bats via Anbat system with Myotis rufoniger watasei as the common species. Other type of bats includes Japanese house bat, yellow bat, Miniopterus fuliginosus, free tailed bat). Supplementary survey also identified six (6) bat species including unidentifiable species. No protected species are present; however, four (4) species are considered endemic.</li> </ul> <p><u>Fauna – Avian</u></p> <ul style="list-style-type: none"> <li>Up to 48 species, of which seven (7) are endemic. Four (4) nationally protected species were identified, namely:             <ul style="list-style-type: none"> <li>Common kestrel (<i>Falco tinnunculus</i>): Taiwan Category II protected species</li> <li>Black-winged kite (<i>Elanus caeruleus</i>): Taiwan Category II protected species</li> <li>Oriental pratincole (<i>Glareola maldivarum</i>): Taiwan Category III protected species</li> <li>Brown shrike (<i>Lanius cristatus</i>): Taiwan Category III protected species</li> </ul> </li> </ul>

Receptor	Description
	<ul style="list-style-type: none"> <li>▪ In addition, 23 species are recorded in the Lunwei District with four (4) are endemic and three (3) species of conservation birds i.e., the black-winged pheasant, young terns and summer migratory bird of Yanling.</li> <li>▪ In 2019-2020 survey - little tern, Greater crested tern, Common kestrel, Black-winged kite, and Eastern marsh harrier was reported. Three (3) other species recorded were the brown shrike, Chestnut munia, and Oriental pratincole.</li> </ul> <p><u>Fauna – Herpetofauna</u></p> <ul style="list-style-type: none"> <li>▪ Up to six (6) species i.e., three (3) amphibians and three (3) reptiles, of which one (1) species was endemic i.e., Stejneger's grass lizard, are recorded. None were nationally protected.</li> </ul> <p><u>Fauna – Hexapoda</u></p> <ul style="list-style-type: none"> <li>▪ A total of 10 butterflies' species is recorded, with two (2) are endemic i.e., striped policeman and Polygonia c-aureum lunulata. No protected and exotic species are found. In addition, up to five (5) dragonflies' species is recorded and none is protected nor endemic species.</li> </ul>
Coastal Biodiversity	<p><u>Fauna – Avian</u></p> <ul style="list-style-type: none"> <li>▪ 24,359 counts from 40 species were identified. A total of seven (7) nationally protected species were identified namely:               <ul style="list-style-type: none"> <li>○ Black-faced spoonbill (<i>Platalea minor</i>): Taiwan Category I protected species</li> <li>○ Black-winged kite (<i>Elanus caeruleus</i>): Taiwan Category II protected species</li> <li>○ Osprey (<i>Pandion haliaetus</i>): Taiwan Category II protected species</li> <li>○ Common kestrel (<i>Falco tinnunculus</i>): Taiwan Category II protected species</li> <li>○ Little tern (<i>Sterna albifrons</i>): Taiwan Category II protected species</li> <li>○ Eurasian curlew (<i>Numenius arquata</i>): Taiwan Category III protected species</li> <li>○ Oriental pratincole (<i>Glareola maldivarum</i>): Taiwan Category III protected species</li> </ul> </li> </ul>
Marine Biodiversity	<p><u>Fauna – Mammals</u></p> <ul style="list-style-type: none"> <li>▪ Indo-pacific bottlenose dolphins (<i>Tursiops aduncus</i>), a Taiwan Category II protected species, are observed.</li> <li>▪ While the Project offshore cable alignment cuts across the proposed Major Wildlife Habitat, no Taiwanese humpback dolphins (<i>Sousa chinensis ssp. taiwanensis</i>) are observed during the surveys.</li> </ul> <p><u>Fauna – Avian</u></p> <ul style="list-style-type: none"> <li>▪ A total of 265 counts from 18 are identified. Three (3) species are found to be nationally protected, namely:               <ul style="list-style-type: none"> <li>○ Bridled tern (<i>Onychoprion anaethetus</i>): Taiwan Category II protected species.</li> <li>○ Roseate tern (<i>Sterna dougallii</i>): Taiwan Category II protected species.</li> <li>○ Greater crested tern (<i>Thalasseus bergii</i>): Taiwan Category II protected species.</li> </ul> </li> <li>▪ There are also three (3) raptor species i.e.:               <ul style="list-style-type: none"> <li>○ Black-faced Spoonbill (<i>Platalea minor</i>): Taiwan Category I protected species.</li> <li>○ Grey-faced buzzard (<i>Butastur indicus</i>): Taiwan Category II protected species.</li> </ul> </li> </ul>

Receptor	Description
	<ul style="list-style-type: none"> <li>○ Chinese sparrowhawk (<i>Accipiter soloensis</i>): Taiwan Category II protected species.</li> </ul> <p><i>Note: The protected common terns are also identified to be presence, however the migration route and whether they will pass through the Project area will be assessed throughout the Project life cycle.</i></p> <ul style="list-style-type: none"> <li>▪ An additional survey was conducted on December 15, 2021. No protected bird species was identified.</li> </ul> <p><u>Fauna – Marine Ecology (Fishes)</u></p> <ul style="list-style-type: none"> <li>▪ Up to 6 families and 7 taxa of fish roes; and up to 10 families and 14 taxa of fish larvae. Survey findings include up to 24 families and 47 taxa of fish eggs and up to 46 families and 81 taxa of juvenile fishes.</li> <li>▪ In terms adult fishes, adult fish species that has been caught the most for e.g., <i>Secutor ruconius</i>, <i>Trichiurus lepturus</i>, <i>Upeneus japonicus</i>, <i>Decapterus russelli</i>, <i>Polydactylus sextarius</i>, <i>Pennahia pawak</i>, <i>Priacanthus macracanthus</i>, <i>Synodontidae</i>, <i>Arius maculatus</i>, <i>Ephippus orbis</i>, <i>Evynnis cardinalis</i>, sea catfish, <i>Diodon holocanthus</i>, <i>Engyprosopon multisquama</i>, <i>Dasyatis akajei</i> and <i>Dasyatis zugei</i>, Russell's mackerel-scad and <i>Thamnaconus modestus</i>, sea barbel constituted, (Ballon, Spotfin and Longspined) porcupine fishes, yellow band goatfish, <i>Lagocephalus lunaris</i>, <i>Caranx sexfasciatus</i>, woline tonguesole, pale-edged stingray, Bensasi goatfish, <i>Leiognathus berbis</i>, <i>Benthoema pterotum</i>, <i>Pennahia macrocephalus</i>, <i>Muraenesox cinereus</i>, Pampus minor, skinnycheek lanternfish, hite month croaker etc.</li> <li>▪ Many artificial reef and protected reefs (e.g., Xianxi Protected Reef, Shenggang Protected Reef and Dadu Estuary Protected Reef) are located at south-east side of the Project area, and there has no coral reef fish species been identified. In addition, the nearest feeding and spawning area of sea turtles is located 50 km from the Project location.</li> </ul> <p><u>Fauna – Marine Ecology (Microbenthos)</u></p> <ul style="list-style-type: none"> <li>▪ Phytoplankton           <ul style="list-style-type: none"> <li>○ Composition of Species: Cyanophyta, Pyrrophyta, Bacillariophyta, Phaeophyceae, Haptophyceae. Haptophyta, and Euglenophyta.</li> <li>○ Dominant Species (&lt;10%): <i>Chaetoceros spp.</i> and <i>Chaetoceros curvisetus</i> of <i>Chaetoceros</i>, <i>Nitzschia spp.</i> of <i>Nitzschia</i>, <i>Thalassiosira spp.</i> of <i>Coscinodiscus</i>, <i>Trichodesmium spp.</i> of <i>Trichodesmium</i></li> <li>○ Diversity Index (H') of 0.92 – 3.13; and Uniformity Index (E) of 0.3 – 0.98.</li> <li>○ Chlorophyll-a: a range of 0.01 – 1.68 µg/L.</li> <li>○ Primary productivity: 0.7 - 142.97 µgC/L/d.</li> </ul> </li> <li>▪ Zooplankton           <ul style="list-style-type: none"> <li>○ Composition of Species: up to 27 zooplankton species</li> <li>○ Dominant Species (&lt;10%): Cyclopidae, Calanoida, Caudata, Radiolaria, and Copepodid larva.</li> <li>○ Diversity Index (H') of 1.09 – 2.23; and Uniformity Index (E) of 0.38 – 0.83.</li> </ul> </li> </ul>

Receptor	Description
	<ul style="list-style-type: none"> <li>▪ Additional surveys were conducted between 2019 – 2020. For phytoplankton, six (6) phyla, 58 genre and 84 species were recorded, the abundance of phytoplankton in each layer is between 5,790-78,933 cells/L. Eight (8) phyla and 28 groups of zooplankton were recorded, with 15 additional species were reported.</li> </ul> <p data-bbox="609 347 1055 371"><u>Fauna – Marine Ecology (Macrobenthos)</u></p> <ul style="list-style-type: none"> <li>▪ Up to 20 species, with dominant species (&lt;10%) such as spear shrimp, <i>Metapenaeopsis barbata</i>, <i>nereis</i>, <i>Crassatellidae</i>, <i>Turricula javana</i> and <i>zeuxis exilis</i>. The diversity Index (H') ranges from 0 – 1.59; and Uniformity Index (E) of 0.5 – 1.</li> <li>▪ Surveys are also conducted at the Intertidal Zone area are the findings as below:               <ul style="list-style-type: none"> <li>○ Composition of Species: up to 53 macrobenthos species</li> <li>○ Dominant Species (&lt;10%): <i>Amphibalanus amphitrite</i>, <i>Fistulobalanus albicostatus</i>, <i>Granulilittorina exigua</i>, <i>Nodilittorina pyramidalis</i>, and sea slaters.</li> <li>○ Diversity Index (H') of 0.65 – 2.70; and Uniformity Index (E) of 0.47 – 0.97.</li> </ul> </li> <li>▪ Additional surveys were conducted between 2019 – 2020, with seven (7) new species were reported.</li> </ul>

Source: EIA, 2018; EIA Amendment, 2022

Appendix C Local EIA Socioeconomics Baseline Surveys – Summary of Findings

Receptor	Description
Socioeconomics and Labour	<ul style="list-style-type: none"> <li>▪ In 2015, the population number of Changhua County is reported to be at 1,289,072 or 1,199.81 people per km<sup>2</sup>. The estimated workforce population over the age of 15 is 1,094,000 (57.8%, male and 42.2% female). The unemployment rate is at 3.7%.</li> <li>▪ According to the 2015 Changhua County Statistical Annual Report, there were 34,755 of registered businesses. Agriculture, forestry, animal husbandry and fisheries sectors account for 9.24% of employment, whereas the remaining are in industrial (47.61%) and service (43.15%) sectors.</li> </ul>
Land Use	<ul style="list-style-type: none"> <li>▪ In 2015, the registered land area of Changhua County is 104,337.86 hectares with 79.07% is private owned, 20.37% public land and 0.56% is public co-owned. Among the registered, 86.01% is the non-urban land is with more than 2/3 or 68.15% is used for agriculture and animal husbandry activities, and the remaining is accounted for economic development (i.e., Type D construction land), preservation, and water use.</li> <li>▪ Changhua County has completed an urban planning area of 133.87 km<sup>2</sup> that is inhabited by 638,571 inhabitants or 49.54% of the county's population.</li> </ul>
Fisheries Resources and Communities	<ul style="list-style-type: none"> <li>▪ The Project offshore export cable route overlaps with the designated fishing zone of the Changhua Fishery Association. There are other conservation and protected areas within and around the designated fishing zone but do not overlap with the Project area, e.g., the mud shrimp breeding conservation area and Dadu Estuary Wildlife Refuge, which are located about five (5) – seven (7) km north of the Project landfall locations.</li> <li>▪ There are currently two (2) fishing ports in Changhua County with 10 berths for boat mooring. The coastal fishery accounts for 2~4% of the total fishery catches production. The fishing population in the county is 14,330 people (2015). Fishing is carried out all year-round. Within the Changhua Fishery Association designated fishing zone, key fishery activities include the following:               <ul style="list-style-type: none"> <li>○ Gill net fishery, with main catch such as Spanish mackerel, pomfret and mullet.</li> <li>○ Push/scoop net fishery, with main catch such as eel fry and mullet.</li> <li>○ Pole and line fishery, with main catch such as sweetlip and croaker.</li> <li>○ Shallow sea aquaculture, with main catch such as oyster, clam and other bivalves.</li> <li>○ Other fishery methods catching a variety of coastal fish.</li> </ul> </li> <li>▪ The aquaculture fishery in Changhua County accounts for about 63% of the total fishery population. The main catches of cultured fisheries are oysters, Hard clam, freshwater clam, Eel, Tilapia, Trionychidae, etc. There is currently no cage culture in deeper waters. In addition, Project may form an artificial reef effect and may attract and protect several high-economic fish species such as grunts (Haemulidae), snapper, Oplegnathus, Serranidae, <i>Siganus guttatus</i> etc.</li> </ul>

Receptor	Description
	<ul style="list-style-type: none"> <li>The highest fish catch is recorded between December (coastal fishery) – May (aquaculture fishery). Most catches are sold directly by fishermen, but only a few will be sent to the fish markets (Changhua Fish Market and Puxin Fish Market).</li> </ul>
Economic Displacement	<ul style="list-style-type: none"> <li>The Project offshore export cable route overlaps with the designated fishing zone of the Changhua Fishery Association. Economic displacement is expected as non-Project vessels will be prohibited from entering the fishing ground during construction.</li> </ul>
Indigenous People	<ul style="list-style-type: none"> <li>No indigenous peoples or communities are identified within the Project area of influence.</li> </ul>
Cultural Heritage Resources – Land based	<ul style="list-style-type: none"> <li>Literature review indicated that 27 tangible forms of cultural heritage and 23 archaeological sites are in the larger Changhua County.</li> <li>No tangible and intangible forms of cultural resources were identified within two (2) km of the Project area.</li> </ul>
Cultural Heritage Resources - Marine	<ul style="list-style-type: none"> <li>Literature review indicated that 13 shipwrecks are located near the windfarm.</li> <li>No underwater cultural resources were identified by the sonar surveys.</li> </ul>
Landscape/ Visual and Tourism	<ul style="list-style-type: none"> <li>The Project is located at least 48.5 km off the coast of Changhua County. The coastal area around the Project components comprises mainly of industrial zones, fish farms, river swamps, farming areas and residential areas. The main activities in the coastal areas are mostly based on aquaculture and fishery such as oysters and clams. The important local landmark includes the Wang-Gong Fishing Harbor.</li> <li>In terms of tourism/recreation features that may attract local visitors, natural landscape elements include Wildlife Sanctuary in Dadu Estuary; coastal wetlands e.g., Dacheng, Fubao, and Hanbao, while man-made landscape features include fish farms and various cultural/historical sites (as mentioned above under land-based Cultural Heritage Resources). The historical sites include e.g., Fuhai Temple, Chaofan Temple, and Putian Temple; and the Folk Arts Museum, National Monument (Longshan Temple), monuments such as the City God Temple, Mazu Temple, Wenwu Temple, Dizangwang Temple, Sanshan King Temple in Lukang.</li> </ul>
Public Infrastructure	<ul style="list-style-type: none"> <li>In 2015, there are 568 educational infrastructures (pre-school level to tertiary level). Over 1,054 medical institutions are reported a ratio of one medical professional to 96 patients) with a total of 6,967 sickbeds (or 59 per 10,000 people). The water utility serves up to 1,203,920 people or 94% penetration rate.</li> </ul>
Traffic and Transportation	<ul style="list-style-type: none"> <li>Taichung Harbor is used as the main port, with Project materials will be transported via suburban highway with multiple lanes systems within Taichung City and Changhua County. No information is provided relating to the commercial shipping lanes i.e., tourism, recreational.</li> </ul>

Source: EIA, 2018; EIA Amendment, 2022

Appendix D Summary of Project Environmental and Social impacts

Receptor	Activity / Aspect	Identified Impact
<b>Construction Phase</b>		
Air Quality	<ul style="list-style-type: none"> <li>Fugitive dust from exposed construction sites.</li> <li>Emissions from construction machinery, vehicles, and working vessels.</li> </ul>	<ul style="list-style-type: none"> <li>Exceedances in TSP, PM2.5 and PM10 are predicted at locations within the Changhua Coastal Industrial Park, but baseline levels at these locations had already exceeded local standards.</li> <li>The construction activities will be temporary and dust generation is likely to be localised to active work areas. Impact is assessed to be limited and short-term.</li> </ul>
Greenhouse Gas (GHG) Emissions	<ul style="list-style-type: none"> <li>Machinery and vessel fuel.</li> <li>Electricity consumption.</li> </ul>	<ul style="list-style-type: none"> <li>Total GHG emissions (from both onshore and offshore construction activities) was calculated to be 19,527 metric tons.</li> </ul>
Airborne Noise	<ul style="list-style-type: none"> <li>Movement of construction vehicles.</li> </ul>	<ul style="list-style-type: none"> <li>Noise levels at the nearest receptors (i.e., Show Chwan Memorial hospital and Changhua Coastal Industrial Park Service Centre) are found to be compliant with nationally prescribed standards for the daytime. Airborne noise is assessed to have negligible impact.</li> </ul>
Vibration	<ul style="list-style-type: none"> <li>Construction machineries and vehicles.</li> </ul>	<ul style="list-style-type: none"> <li>Vibration impact is assessed to have negligible to low impact.</li> </ul>
Underwater Noise	<ul style="list-style-type: none"> <li>WTG foundation piling activities.</li> <li>Construction vessels.</li> </ul>	<ul style="list-style-type: none"> <li>Sound pressure level at 750 m from the point source i.e., at the four (4) monitoring locations modelled, and is predicted to range from 155 - 170dB. This is expected to comply the local EIA commitment of 95% of the underwater noise results not exceeding 160dB, with the maximum noise level not exceeding 190dB.</li> <li>Noise disturbance is unlikely to occur at all locations simultaneously and will be localised. Underwater noise is assessed to have negligible impact.</li> </ul>
Surface Water Quality	<ul style="list-style-type: none"> <li>Runoff from onshore substation site.</li> <li>Domestic wastewater from construction workers.</li> </ul>	<ul style="list-style-type: none"> <li>Wastewater generation rates are calculated and considered to be manageable.</li> </ul>
Groundwater Quality	<ul style="list-style-type: none"> <li>Maximum excavation depth at the onshore substation is one (1) – three (3) m, which would not cause groundwater upwelling.</li> </ul>	<ul style="list-style-type: none"> <li>Development does not extract groundwater. Temporary impact due to infiltration of direct runoff may be expected, no significant impact is expected.</li> </ul>
Waste Management	<ul style="list-style-type: none"> <li>Solid waste would be generated from the construction activities.</li> </ul>	<ul style="list-style-type: none"> <li>Up to 179.96kg of solid waste may be generated daily. Waste will be collected at each construction site and the disposal routes and the appropriately licensed waste hauliers will be managed by the local authority. It is acknowledged that</li> </ul>

Receptor	Activity / Aspect	Identified Impact
		waste infrastructure of the type required by the Project does exist in and around the area, and Project waste is not expected to burden local waste handling capacity.
Seawater Quality	<ul style="list-style-type: none"> <li>Foundation associated works for WTG.</li> <li>Laying of subsea cables.</li> </ul>	<ul style="list-style-type: none"> <li>Increment in suspended solid (SS) levels are expected but assessed to be localised and temporary with limited impact due to local diurnal tidal patterns. Significant impacts to seawater quality are unlikely to occur, particularly in the context of affecting baseline accretion rates.</li> </ul>
Terrestrial Biodiversity – Flora	<ul style="list-style-type: none"> <li>Vegetation clearance during construction activities.</li> <li>Pollution (e.g., dust, wastewater, and waste)</li> </ul>	<ul style="list-style-type: none"> <li>The existing onshore areas to be utilised by the Project are mainly artificial forest (i.e., windbreaks) and wasteland.</li> <li>The three (3) rare plants species found during the surveys are artificially introduced and are not considered to be naturalised or abundant. The overall impact is therefore negligible.</li> </ul>
Terrestrial Biodiversity - Fauna	<ul style="list-style-type: none"> <li>Loss of habitats (due to vegetation clearance)</li> <li>Roadkill by construction vehicles</li> </ul>	<ul style="list-style-type: none"> <li>The existing Project area is an industrial zone. It is expected that animals that occupy the area would be adaptable to anthropogenic presence.</li> <li>With regards to the protected bird species, the Project area is relatively small compared to their typical range in Taiwan and would not be considered an important habitat for the bird species. The overall impact is therefore negligible.</li> </ul>
Marine Biodiversity – Mammals	<ul style="list-style-type: none"> <li>The main impact to cetaceans would be underwater noise (mainly from impulsive piling) and vessel traffic. The use of vessels may also present a risk of collision with cetaceans.</li> </ul>	<ul style="list-style-type: none"> <li>Sound pressure level at 750 m from the point source is predicted to range from 155 - 170dB at the four (4) monitoring locations modelled. It is recommended that mitigation measures be proposed during construction to minimise impacts to cetaceans.</li> </ul>
Coastal and Marine Biodiversity – Avian	<ul style="list-style-type: none"> <li>Construction activities may result in habitat loss (i.e., breeding sites and food foraging area) for marine avian species.</li> </ul>	<ul style="list-style-type: none"> <li>The identified three (3) protected tern species may be part of the breeding population from Penghu islands, which is ~ 60 km from the Project area. Since the number of individuals recorded is not high, impact of habitat loss to the terns is assessed to be limited.</li> </ul>
Marine Biodiversity – Marine Ecology (Fishes, Microbenthos, Macrobenthos)	<ul style="list-style-type: none"> <li>The most significant impact to fish during construction would be the loss of habitat.</li> <li>Other impacts include underwater noise and increased SS levels.</li> </ul>	<ul style="list-style-type: none"> <li>Loss of habitats during construction is temporary. Underwater noise and increased SS levels are not expected to be significant as only individual species within a close range would be affected and impacts are expected to be localised and temporary.</li> </ul>

Receptor	Activity / Aspect	Identified Impact
<ul style="list-style-type: none"> <li>▪ Socioeconomics and Labour</li> <li>▪ Economic Displacement</li> <li>▪ Fisheries Resources and Communities</li> </ul>	<ul style="list-style-type: none"> <li>▪ Fishing activities would be affected as non-Project vessels are prohibited from entering the fishing ground during construction.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Piling will certainly change the topography and sediments of the original seabed, but the area affected is localised and it will have a slight effect on benthic organisms.</li> <li>▪ Ørsted has been communicating with the Changhua Fishery Association regarding compensations matters. Compensation is calculated according to the Taiwan’s offshore wind farm fishery compensation guidelines. <i>Note: Ørsted has established a Code of Conduct (CoC) for Business Partners that outlines requirements to comply with applicable laws, respect for labour and human rights and anti-corruption. The CoC is included in the contracts with contractors to ensure compliance with the applicable law and standards. A Human Resources Policy and associated procedures incorporating the requirements of the IFC PS2 and Taiwanese Labour Laws have also been developed. With regards to migrant workers (if engaged by the Project), the Project would be expected to adhere to the Dakar Principles. Any accommodation provided by Ørsted or its contractors will have to follow the joint the IFC/EBRD Guidance on workers accommodation<sup>1</sup>).</i></li> </ul>
Cultural Heritage Resources – Land based and Marine	<ul style="list-style-type: none"> <li>▪ Construction activities (both onshore and offshore) may reveal additional cultural heritage resources.</li> </ul>	<ul style="list-style-type: none"> <li>▪ The possibility of encountering archaeological sites within the onshore construction sites is relatively low, considering the artificial backfill condition of the existing land.</li> <li>▪ Literature review indicated that one (1) shipwreck is located within the Project area. Sonar surveys does not identify any underwater cultural resources.</li> </ul>
Landscape/Visual and Tourism	<ul style="list-style-type: none"> <li>▪ Coastal recreational and scenic area may be affected by the presence of construction activities.</li> </ul>	<ul style="list-style-type: none"> <li>▪ The construction work will take place at relatively far distance (i.e., at least 48.5 km from the shore), extent of change in the existing landscape is determined to be negligible.</li> <li>▪ Traffic impact to visitors accessing local recreation/tourism sites is assessed to be insignificant as traffic conditions can be maintained at service levels of A-C.</li> </ul>
Public Infrastructure	<ul style="list-style-type: none"> <li>▪ The influx of Project labour may impact public facilities (e.g., roads and healthcare facilities).</li> </ul>	<ul style="list-style-type: none"> <li>▪ The Project intends to use community hospitals or clinics only in the event of emergencies or accidents.</li> </ul>

<sup>1</sup> Workers' Accommodation: Processes and Standards. A Guidance Note the by IFC and the EBRD. (2009). Source: [https://www.ifc.org/wps/wcm/connect/topics\\_ext\\_content/ifc\\_external\\_corporate\\_site/sustainability-at-ifc/publications/publications\\_gpn\\_workersaccommodation](https://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/sustainability-at-ifc/publications/publications_gpn_workersaccommodation)

Receptor	Activity / Aspect	Identified Impact
Traffic and Transportation	<ul style="list-style-type: none"> <li>Transportation of construction materials</li> </ul>	<ul style="list-style-type: none"> <li>Service standards at road sections and intersections are assessed to be generally unaffected by the construction activities.</li> </ul>
<b>Operation Phase</b>		
Greenhouse Gas (GHG) Emissions	<ul style="list-style-type: none"> <li>Electricity consumption</li> <li>Fuel consumption for maintenance vessels</li> </ul>	<ul style="list-style-type: none"> <li>Total GHG emissions from operational activities was calculated to be 7,165 metric tons.</li> <li>Total GHG reductions from the operation of the wind farm was calculated to be 1,269,600 metric tons.</li> </ul>
Airborne Noise	<ul style="list-style-type: none"> <li>The key source of airborne noise during the operation stage is expected to be from the WTG rotating blades.</li> </ul>	<ul style="list-style-type: none"> <li>Both full and low frequency noise levels follow the nationally prescribed standards.</li> </ul>
Underwater Noise	<ul style="list-style-type: none"> <li>Underwater noise may be generated from vibrations of the WTG that are transmitted through the water body.</li> </ul>	<ul style="list-style-type: none"> <li>Assuming a noise source level of 144dB, a 40dB reduction in the noise level could be achieved within 100 - 400m from the source and no significant impact is expected.</li> </ul>
Surface Water Quality	<ul style="list-style-type: none"> <li>Runoff from onshore substation</li> <li>Domestic wastewater from onshore substation</li> </ul>	<ul style="list-style-type: none"> <li>Wastewater generation rates are calculated and considered to be manageable.</li> </ul>
Groundwater Quality	<ul style="list-style-type: none"> <li>Groundwater extraction will not be required as water will be supplied by the Taiwan Water Supply Company.</li> </ul>	<ul style="list-style-type: none"> <li>No significant impact is expected.</li> </ul>
Waste Management	<ul style="list-style-type: none"> <li>Solid waste would be generated from the onshore substation.</li> <li>Where vessels are required during operation, solid waste may also be generated on board.</li> </ul>	<ul style="list-style-type: none"> <li>An estimated 81.8 kg of solid waste may be generated daily assuming up to 100 workers would be hired during peak construction period. This is not expected to burden local waste handling capacity.</li> <li>180 litre of marine waste may be generated offshore daily on a crew transport vessel. Crew transport vessels will be equipped with the capacity to contain waste generated by workers on board.</li> </ul>
Electromagnetic Field (EMF)	<ul style="list-style-type: none"> <li>The onshore substation and land cables may have an impact on the existing EMF level</li> </ul>	<ul style="list-style-type: none"> <li>Calculated electromagnetic field values at the receptors are all compliant with EPA standard.</li> </ul>
Marine Biodiversity – Mammals	<ul style="list-style-type: none"> <li>The main impact to cetaceans would be underwater noise (from vibrations of the operation WTGs) and vessel traffic (for maintenance activities).</li> </ul>	<ul style="list-style-type: none"> <li>Assuming a noise source level of 144dB, a 40dB reduction in the noise level could be achieved within 100-400m from the noise source, which would not lead to the Temporary Threshold Shift (TTS) impacts (i.e., temporary physiological injury to hearing organs) to cetaceans.</li> </ul>

Receptor	Activity / Aspect	Identified Impact
Coastal and Marine Biodiversity – Avian	<ul style="list-style-type: none"> <li>During the operation of the wind farm, there is a potential impact on avian species that may collide with the rotating blades of the WTGs.</li> </ul>	<ul style="list-style-type: none"> <li>Simulation results indicate an overall avoidance rate of 0.98, with total collision counts for all species estimated at 47 individuals assuming WTG capacity of eight (8) MW.</li> <li>Breeding avian species would be the most vulnerable due to specificity in their habitat, although it is noted that their flight altitude falls within five (5) - 10m. The sweeping range of the WTG is estimated at 55 - 265m.</li> </ul>
Marine Biodiversity – Marine Ecology (Fishes, Microbenthos, Macrobenthos)	<ul style="list-style-type: none"> <li>The presence of the WTGs (and offshore substation) would present a change in the marine habitat.</li> <li>Noise and electromagnetic impacts may also be anticipated.</li> </ul>	<ul style="list-style-type: none"> <li>Operational underwater noise (and electromagnetic waves) may affect larger marine organisms in closer range, but there has been no concrete studies or evidence to support this claim.</li> <li>It is also expected that the foundation structure and protection may serve as artificial reef and provide a new habitat for many species.</li> </ul>
<ul style="list-style-type: none"> <li>Socioeconomics and Labour</li> <li>Economic Displacement</li> <li>Fisheries Resources and Communities</li> </ul>	<ul style="list-style-type: none"> <li>The presence of the WTGs may affect fishing activities depending on the fishing method.</li> <li>Labour and workers accommodation.</li> </ul>	<ul style="list-style-type: none"> <li>The wind farm is located 20 - 30 nautical miles from the shore whilst local fishing activity is mostly confined within 12 nautical miles from the shore. Therefore, the wind farm is not expected to obstruct local fishing activities.</li> <li>Similarly, the CoC for Business Partners will be included in the contracts with contractors to ensure compliance with the applicable law and standards. A Human Resources Policy and associated procedures incorporating the requirements of the IFC PS2 and Taiwanese labour laws will also be communicated. Any accommodation provided by Ørsted, or its contractors will have to follow the joint the IFC/EBRD Guidance on workers accommodation.</li> </ul>
Landscape/Visual and Tourism	<ul style="list-style-type: none"> <li>Coastal recreational and scenic area may be affected by the presence of the WTGs.</li> </ul>	<ul style="list-style-type: none"> <li>The operational of WTG will take place at relatively far distance (i.e., at least 48.5 km from the shore), extent of change in the existing landscape is determined to be negligible.</li> </ul>
Public Infrastructure	<ul style="list-style-type: none"> <li>The presence of Project labour may impact public facilities (e.g., public road and healthcare facilities).</li> </ul>	<ul style="list-style-type: none"> <li>Service standards at road sections and intersections are assessed to be generally unaffected.</li> <li>The WTGs will be operated under a wholly automated surveillance system and there would not be a need for on-site operators except for maintenance personnel during maintenance. Provision of services by local public facilities are not expected to be impacted.</li> </ul>

Source: EIA, 2018; EIA Amendment, 2022

Appendix E Summary of Project Environmental and Social impacts and Risk (CIA, CCRA, CHA, FSIA & HRIA<sup>1</sup>)

Receptor	Activity / Aspect	Identified Impact
<b>Cumulative Impact Assessment (CIA)</b>		
Marine habitat	<ul style="list-style-type: none"> <li>Disturbance effect from construction activities</li> </ul>	<ul style="list-style-type: none"> <li>Marine habitat fragmentation or disturbance.</li> </ul>
Marine habitat	<ul style="list-style-type: none"> <li>Project footprint during operation phase falls permanently into sensitive marine habitat</li> </ul>	<ul style="list-style-type: none"> <li>Area of habitat loss.</li> </ul>
Marine flora and fauna	<ul style="list-style-type: none"> <li>Project footprint causes permanent loss/change in the habitat of marine fauna during construction phase</li> </ul>	<ul style="list-style-type: none"> <li>Change in fragmentation / displacement of marine flora/fauna population.</li> </ul>
Marine flora and fauna	<ul style="list-style-type: none"> <li>Underwater noise during construction phase</li> </ul>	<ul style="list-style-type: none"> <li>Change in / displacement of population.</li> </ul>
Marine flora and fauna	<ul style="list-style-type: none"> <li>Increased marine traffic and the associated risk of collision with construction vessels</li> </ul>	<ul style="list-style-type: none"> <li>Change in / displacement of population.</li> </ul>
Marine flora and fauna	<ul style="list-style-type: none"> <li>Water quality degradation due to sediment suspension</li> </ul>	<ul style="list-style-type: none"> <li>Change in / displacement of population.</li> </ul>
Marine flora and fauna	<ul style="list-style-type: none"> <li>Effect of electromagnetic field (EMF) during operation phase</li> </ul>	<ul style="list-style-type: none"> <li>Population or range fragmentation.</li> </ul>
Marine flora and fauna	<ul style="list-style-type: none"> <li>Project footprint causes permanent loss/change in the habitat of marine fauna during operation phase</li> </ul>	<ul style="list-style-type: none"> <li>Population or range fragmentation, and creation of artificial habitats through WTG foundations.</li> </ul>
Community livelihood: fisheries resources and zones	<ul style="list-style-type: none"> <li>Spatial conflict between fishing ground and construction area</li> </ul>	<ul style="list-style-type: none"> <li>Shifts in livelihoods.</li> </ul>
Community livelihood: fisheries resources and zones	<ul style="list-style-type: none"> <li>Increased marine traffic during construction phase</li> </ul>	<ul style="list-style-type: none"> <li>Shifts in livelihoods.</li> </ul>
Community livelihood: fisheries resources and zones	<ul style="list-style-type: none"> <li>Displacement of fisheries resources during construction phase</li> </ul>	<ul style="list-style-type: none"> <li>Shifts in livelihoods.</li> </ul>
Community livelihood: fisheries resources and zones	<ul style="list-style-type: none"> <li>Reduction of fisheries resources due to construction activities</li> </ul>	<ul style="list-style-type: none"> <li>Sustainability of livelihoods.</li> </ul>
Migratory birds (including seabirds)	<ul style="list-style-type: none"> <li>Collision with wind turbine blades and barrier effect</li> </ul>	<ul style="list-style-type: none"> <li>Change in migratory/sea bird population.</li> </ul>
<b>Climate Change Risk Assessment (CCRA)<sup>2</sup></b>		

<sup>1</sup> Appendix E will be updated once FSIA and HRIA are finalised and approved.

<sup>2</sup> only medium-rated impact/risk as per *Climate Change Risk Assessment (CCRA), 2023*.

Receptor	Activity / Aspect	Identified Impact
Climate Change on WTG	<ul style="list-style-type: none"> <li>Temperature (increases in mean temperature and increased extreme high temperatures)</li> </ul>	<ul style="list-style-type: none"> <li>Fatigue and degradation of turbines due to extreme heat.</li> </ul>
Climate Change on Offshore substation & export cable	<ul style="list-style-type: none"> <li>Temperature (increases in mean temperature and increased extreme high temperatures)</li> </ul>	<ul style="list-style-type: none"> <li>Increased temperatures can increase power losses within substations and transformers.</li> </ul>
Climate Change on Offshore substation & export cable	<ul style="list-style-type: none"> <li>Precipitation changes (increase in extreme precipitation events, uncertain changes in annual average precipitation)</li> </ul>	<ul style="list-style-type: none"> <li>Flooding if precipitation rates exceed the drainage capacity of the substation.</li> <li>Scour could cause failure at a cable joint.</li> </ul>
Climate Change on Offshore substation & export cable	<ul style="list-style-type: none"> <li>Sea-level rise and extreme water levels (increase to both average sea level and more extreme acute events)</li> </ul>	<ul style="list-style-type: none"> <li>Extreme surge events generated by typhoons can raise sea levels and in combination with high tides and sea-level rise result in flooding of infrastructure.</li> </ul>
Climate Change on Offshore substation & export cable	<ul style="list-style-type: none"> <li>Waves (increase in wave heights during extreme events)</li> </ul>	<ul style="list-style-type: none"> <li>Wave overtopping and salt spray may lead to damage or degradation of assets.</li> </ul>
Climate Change on Onshore substation & grid connection	<ul style="list-style-type: none"> <li>Temperature (increases in mean temperature and increased extreme high temperatures)</li> </ul>	<ul style="list-style-type: none"> <li>Increased temperatures can reduce the carrying capacity of lines, increase losses within substations and transformers, and leading to failure of electrical equipment.</li> </ul>
Climate Change on Onshore substation & grid connection	<ul style="list-style-type: none"> <li>Precipitation changes (increase in extreme precipitation events, uncertain changes in annual average precipitation)</li> </ul>	<ul style="list-style-type: none"> <li>Heavy precipitation can cause surface water flooding of sites and damage to underground cables.</li> </ul>
Climate Change on Onshore substation & grid connection	<ul style="list-style-type: none"> <li>Sea-level rise and extreme water levels (increase to both average sea level and more extreme acute events)</li> </ul>	<ul style="list-style-type: none"> <li>Extreme surge events generated by typhoons can raise sea levels and in combination with high tides and sea-level rise result in flooding of infrastructure.</li> <li>Increase in erosion risk to infrastructure.</li> </ul>
Climate Change on Onshore substation & grid connection	<ul style="list-style-type: none"> <li>Waves (increase in wave heights during extreme events)</li> </ul>	<ul style="list-style-type: none"> <li>Wave overtopping of coastal flood defences during extreme events leading to flooding.</li> </ul>
Climate Change on Construction, operation & maintenance activities	<ul style="list-style-type: none"> <li>Temperature (chronic increases and increased extreme high temperatures)</li> </ul>	<ul style="list-style-type: none"> <li>Extreme heat impacts on workers.</li> </ul>

Receptor	Activity / Aspect	Identified Impact
Climate Change on Construction, operation & maintenance activities	<ul style="list-style-type: none"> <li>Precipitation changes (increase in extreme precipitation events, uncertain changes in annual average precipitation)</li> </ul>	<ul style="list-style-type: none"> <li>Heavy precipitation and flooding can impact access to onshore and offshore sites for construction, operation, and maintenance.</li> </ul>
<b>Critical Habitat Risk (CHA)</b>		
Marine fauna and flora	<ul style="list-style-type: none"> <li>Habitat loss or change during construction activities</li> </ul>	<ul style="list-style-type: none"> <li>Footprint of WTGs foundations underwater will result in the loss of benthic habitats during construction.</li> <li>Laying and burying of submarine cables will result in loss of habitat within the nearshore environment, which is within the proposed Taiwanese Humpback Dolphin MWH.</li> </ul>
Marine fauna and flora	<ul style="list-style-type: none"> <li>Underwater noise during construction activities</li> </ul>	<ul style="list-style-type: none"> <li>Offshore trenching, dredging, filling and piling activities and the use of construction vessels would generate underwater noise and sound pressure which can impact marine fauna (especially marine mammals) in the following ways:               <ul style="list-style-type: none"> <li>Temporary/ permanent hearing loss</li> <li>Behavioural change / reactions, eg temporary loss of feeding / breeding habitats resulting in habitat displacement</li> </ul> </li> <li>Interference with communication between individuals due to masking effects (ie in terms of audibility and frequency).</li> </ul>
Marine fauna and flora	<ul style="list-style-type: none"> <li>Vessel strike during construction activities</li> </ul>	<ul style="list-style-type: none"> <li>Use of construction vessels may increase potential collision risks with marine mammals leading to injury or death.</li> <li>In addition, marine species which are unable to swim, or crawl would be less able to escape collision from vessels, increasing risks of injury or death.</li> </ul>
Marine fauna and flora	<ul style="list-style-type: none"> <li>Decreased water quality during construction activities</li> </ul>	<ul style="list-style-type: none"> <li>Piling works and laying of submarine cables will result in an increase of suspended solids, and as such increased turbidity levels in the water column. This will adversely affect water quality, thereby indirectly impacting the marine organisms. However, concentration of the</li> </ul>

Receptor	Activity / Aspect	Identified Impact
		suspended solids will not be high, and suspension will be of a short duration.
Marine fauna and flora	<ul style="list-style-type: none"> <li>Physical processes from the presence of new structures during construction activities</li> </ul>	<ul style="list-style-type: none"> <li>The presence of new subsurface structures may affect local water movements which may in turn influence sediment transport and behaviour of some aquatic species.</li> </ul>
Marine fauna and flora	<ul style="list-style-type: none"> <li>Accidental pollution events/ contaminant release during construction activities</li> </ul>	<ul style="list-style-type: none"> <li>Pollutants may be unintentionally released into the environment as a result accidents or natural disasters.</li> </ul>
Marine fauna and flora	<ul style="list-style-type: none"> <li>Underwater noise during operation phase</li> </ul>	<ul style="list-style-type: none"> <li>Operational wind turbines will generate a constant, low, basal level of underwater noise which may affect the behaviour of marine fauna.</li> </ul>
Marine fauna and flora	<ul style="list-style-type: none"> <li>Vessel strikes during operation phase</li> </ul>	<ul style="list-style-type: none"> <li>Use of maintenance vessels may increase potential collision risks with marine mammals leading to injury or death.</li> <li>In addition, marine species which are unable to swim, or crawl would be less able to escape collision from vessels, increasing risks of injury or death.</li> </ul>
Marine fauna and flora	<ul style="list-style-type: none"> <li>EMF during operation phase</li> </ul>	<ul style="list-style-type: none"> <li>Electric currents in the inter-array submarine cables and submarine cables connecting the WTGs to the cable landing point may induce electromagnetic fields, influencing the behaviour of marine ecology.</li> </ul>
Marine fauna and flora	<ul style="list-style-type: none"> <li>Barrier effect during operation phase</li> </ul>	<ul style="list-style-type: none"> <li>The presence of marine structure may initiate avoidance behaviour and result in marine mammals having to swim around the WTG area.</li> </ul>
Marine fauna and flora	<ul style="list-style-type: none"> <li>Accidental pollution events/ contaminant release during operation phase</li> </ul>	<ul style="list-style-type: none"> <li>Pollutants may be unintentionally released into the environment as a result accidents or natural disasters.</li> </ul>
Marine fauna and flora	<ul style="list-style-type: none"> <li>Reef effect during operation phase</li> </ul>	<ul style="list-style-type: none"> <li>The presence of turbine foundations and rock armour in marine waters will result in the development of a reef community. This includes an increase of reef-dwelling fishes surrounding the Project.</li> </ul>

Receptor	Activity / Aspect	Identified Impact
Migratory birds (including seabirds at sea)	<ul style="list-style-type: none"> <li>Habitat loss, disturbance, and displacement during construction phase</li> </ul>	<ul style="list-style-type: none"> <li>Laying of submarine cables and above-ground cables would result in the temporary loss of habitat within the nearshore environment and intertidal environment. This may potentially affect the behaviour of birds (e.g., daily movement and loss of feeding/foraging grounds).</li> </ul>
Migratory birds (including seabirds at sea)	<ul style="list-style-type: none"> <li>Collision with wind turbine blades during operation phase</li> </ul>	<ul style="list-style-type: none"> <li>Bird injury and fatalities may result due to collision with rotating wind turbine. Frequency and likelihood of such event is dependent on the bird species, and their flight altitude. Migratory waterbirds and breeding seabirds are most likely to collide with the wind turbines.</li> </ul>
Migratory birds (including seabirds at sea)	<ul style="list-style-type: none"> <li>Barrier effect during operation phase</li> </ul>	<ul style="list-style-type: none"> <li>The presence of WTG may initiate avoidance behaviour and result in birds having to fly around the array area.</li> </ul>
Terrestrial fauna and flora	<ul style="list-style-type: none"> <li>Habitat loss and disturbance during construction phase</li> </ul>	<ul style="list-style-type: none"> <li>Some vegetation clearance is expected during the construction of onshore Project components (i.e., land cables and substation)</li> </ul>
Terrestrial fauna and flora	<ul style="list-style-type: none"> <li>Accidental pollution events/ contaminant release during construction phase</li> </ul>	<ul style="list-style-type: none"> <li>Pollutants may be accidentally released into the environment due to accidents or natural disasters.</li> </ul>
Terrestrial fauna and flora	<ul style="list-style-type: none"> <li>Road traffic collisions during construction phase</li> </ul>	<ul style="list-style-type: none"> <li>Use of construction vehicles may result in collisions with terrestrial fauna and lead to injury or death</li> </ul>
Terrestrial fauna and flora	<ul style="list-style-type: none"> <li>Road traffic collisions during operation phase</li> </ul>	<ul style="list-style-type: none"> <li>Use of maintenance vehicles may result in collisions with terrestrial fauna and lead to injury or death.</li> </ul>
Terrestrial fauna and flora	<ul style="list-style-type: none"> <li>Accidental pollution events/contaminant release during operation phase</li> </ul>	<ul style="list-style-type: none"> <li>Pollutants may be accidentally released into the environment due to accidents or natural disasters.</li> </ul>
Ecosystem Services – Provisioning (Food: Fisheries catches)	<ul style="list-style-type: none"> <li>The fishing ground under the Changhua County Exclusive Fishing Right does not overlap with the offshore windfarm site of this Project. The area of the Changhua Northern Common Corridor for submarine cable installation overlaps with the exclusive designated fishing rights area (of Changhua Fishermen Association), but this will only be limited to short periods within the construction phase during the construction of cable trenches</li> </ul>	<ul style="list-style-type: none"> <li>The Project is expected to result in temporary loss of the marine open water habitat. However, as this is considered a short-term loss it is unlikely to significant residual impact the provisioning of this ecosystem service.</li> </ul>

Receptor	Activity / Aspect	Identified Impact
	<p>and laying of submarine cables. The impact is considered short term and localised as the construction activities will be conducted in sections (no more than 200m) and the area will be reinstated.</p> <ul style="list-style-type: none"> <li>▪ Increased marine traffic, underwater noise from pile driving and increased in sediment dispersal may cause disturbance to fish habitats and subsequent displacement of fish and interference with spawning activities, which may result in shift of productive fishing grounds and affect the livelihood of fishermen in the short term.</li> </ul>	
<p>Ecosystem Services – Provisioning (Food: Fisheries catches)</p>	<ul style="list-style-type: none"> <li>▪ During the operation phase of the Project, loss in fisheries resources or fish ground is not expected as the WTG locations have avoided the Exclusive Fishing Right area, Protected Reef Areas and Artificial Reed Areas.</li> <li>▪ The WTGs are located at an estimated 50km from shore, which is outside the operating range of the fishing vessels registered with Changhua Fishermen Association. Where there are fishing vessels that could possibly operate at such offshore distance (approximately 50km from coast), this would imply that the vessel would have correspondingly a very large operating range.</li> <li>▪ The area of the fishing exclusion zone established around the operating WTGs would thus become a very minimal portion of the vessel’s range. The foundations of the WTGs can serve the function as artificial reefs, providing substratum for colonisation of marine fauna.</li> </ul>	<ul style="list-style-type: none"> <li>▪ No adverse impact on marine open water habitat is identified during the operation phase of the Project and is therefore unlikely to significantly impact the provisioning of this ecosystem service.</li> </ul>
<p>Ecosystem Services – Regulating (Regulation of local, regional and/or global climate)</p>	<ul style="list-style-type: none"> <li>▪ Coastal forest and seabeds can act as sources of carbon storage which can reduce the amount of atmospheric carbon.</li> <li>▪ The laying of submarine cables requires construction of cable trenches in seabeds which may release stored carbon in the process.</li> <li>▪ Laying of the cable on land to the grid may cause accidental damage to coastal vegetation which can also release stored carbon.</li> </ul>	<ul style="list-style-type: none"> <li>▪ The Project is expected to only result in temporary disturbance to coastal forest and wetland habitat and is therefore unlikely to significantly impact the regulating service of this ecosystem.</li> </ul>

Receptor	Activity / Aspect	Identified Impact
	<ul style="list-style-type: none"> <li>However, a common corridor for submarine cable installation has been identified which can minimise disturbance and carbon release. The proposed alignment of the onshore cables is not expected to remove large amount of coastal vegetation, and any removal is likely to be accidental. Affected areas will also be reinstated.</li> </ul>	
Ecosystem Services – Regulating (Regulation of natural hazards)	<ul style="list-style-type: none"> <li>Coastal forest can provide protection of the coasts against natural hazards, protecting communities from severe wind, storms, and floods. However, it is expected that there will be minimal loss of coastal forest due to the laying of the cable on land to the grid during construction phase. Affected areas will also be reinstated.</li> </ul>	<ul style="list-style-type: none"> <li>The Project is expected to only result in temporary disturbance to coastal forest and is therefore unlikely to significantly impact the regulating service of this ecosystem.</li> </ul>
Ecosystem Services – Cultural (Aesthetic enjoyment)	<ul style="list-style-type: none"> <li>Construction machinery/ WTG structure will obstruct the natural landscape view along the coast of Changhua County, which the communities use for aesthetic purposes such as viewing sunsets/sunrise and enjoying the sea breeze and waves.</li> <li>Construction machineries are temporary and will be demobilised once construction is completed. Positioning of machinery and storage of construction materials need to take into consideration the impact on landscape and will be neatly placed.</li> <li>As assessed by the EIA, during the operation stage, the WTGs are far from the coast (i.e., approximately 50km) for the human eye to see and is of very limited visibility even during good weather.</li> </ul>	<ul style="list-style-type: none"> <li>The Project is expected to only result in temporary disturbance to the natural landscape during construction and has no significant adverse impact on landscape during operation. Hence, it is unlikely to significantly impact the cultural service that are provided by this area.</li> </ul>
Ecosystem Services – Cultural (Recreational value)	<ul style="list-style-type: none"> <li>The Project site is located near to the Dadu Wildlife Sanctuary which is used especially during peak migratory season for birds watching.</li> <li>The windfarm is of limited visibility from the coast. The construction/ operation of the windfarm is unlikely to result in any significant changes to the recreational value (i.e., bird watching) in the wildlife sanctuary.</li> </ul>	<ul style="list-style-type: none"> <li>No adverse impact on the wildlife sanctuary is identified during the operation phase of the Project and is therefore unlikely to significantly impact the cultural services that are provided by this area.</li> </ul>
Ecosystem Services - Supporting	<ul style="list-style-type: none"> <li>Supporting services are services that are necessary to produce other ecosystem services, some examples include soil formation, nutrient cycling, and primary productivity. These have not been assessed separately as it has been covered through the provisioning, regulating and cultural services that they support.</li> </ul>	

Receptor	Activity / Aspect	Identified Impact
<b>Focused Social Impact Assessment</b>		
Social Impact – employment generation	<ul style="list-style-type: none"> <li>▪ Local employment generation during both construction and operation phases</li> </ul>	<ul style="list-style-type: none"> <li>▪ Local employment opportunities in the Area of Influence (Aoi) will be generated by the Project, with minor residual impact during operational phase.</li> </ul>
Social Impact – economic displacement and livelihoods	<ul style="list-style-type: none"> <li>▪ Economic displacement and livelihoods due to the installation of the submarine cable, restricting coastal fishery activities within the cable corridor</li> </ul>	<ul style="list-style-type: none"> <li>▪ Economic livelihood for offshore and coastal fisher folk will be mainly affected by the installation of the submarine cable, restricting coastal fishery activities within the cable corridor. The main impact will be on coastal fisher folk who fish within three (3) nautical miles from the coast.</li> </ul>
Human Rights Risks	<ul style="list-style-type: none"> <li>▪ Human rights risks during construction and operation phase</li> </ul>	<ul style="list-style-type: none"> <li>▪ Human right risks of high severity include livelihood, impacts to access to remedy and human rights within supply chain for the construction phase. Impact to rights to health or life are applicable to both construction and operation phase. The impact assessment upon human rights may be found in the Project Human Rights Impact Assessment (HRIA) below.</li> </ul>
<b>Human Rights Impact Assessment</b>		
Livelihood Restoration <sup>2</sup>	<ul style="list-style-type: none"> <li>▪ Infringement of basic needs (e.g., water and sanitation, housing, food, health, and education) and rights by impacting livelihoods to such an extent that services are no longer economically accessible or by causing an environmental impact (such as a spill or abstraction) throughout Project lifecycle. These includes:               <ul style="list-style-type: none"> <li>○ Fishing activities will be affected during the construction and O&amp;M phase of the wind farm due to exclusion zones.</li> <li>○ Presence of unlicensed fishing vessels, reduced fishing areas, industrial wastewater discharges harming the marine environment, and the influence of fluctuating fish prices and Chinese fish products on the market.</li> <li>○ Access restriction of fishing vessels (and prohibition for bottom trawling and bottom gill net fishing) within</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>▪ The right to an adequate standard of living through failure to compensate all persons affected by fishing impacts due to a non-inclusive compensation agreement. Additionally, there are concerns amongst those who are included in compensation that there will be negative livelihood impacts.</li> </ul>

Receptor	Activity / Aspect	Identified Impact
	<p>windfarm area and during the installation of submarine cable alignment during construction and operational phase.</p> <ul style="list-style-type: none"> <li>○ Minimum safety distance of 50 m from the cable route, temporary access restriction from cable segments during cable maintenance and emergencies, and safety distance of 500 m in all directions from Project-related vessels during operational phase.</li> </ul>	
Labour Rights and Working Conditions	<ul style="list-style-type: none"> <li>▪ Presence of workers including contractors/suppliers and its subcontractors during pre-construction and construction phase</li> </ul>	<ul style="list-style-type: none"> <li>▪ Labour rights infringements could occur amongst Project workers relating to contracts and working hours. There could be potential areas of discrimination, potential for workers not to be provided contracts, to be expected to work long working weeks and the potential for excessive working hours amongst security guards. There could also be some dissatisfaction with working conditions, and lack of understanding of the grievance mechanism.</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Presence of blue-collar workers during operation phase</li> </ul>	<ul style="list-style-type: none"> <li>▪ Labour rights infringements could occur in the operations phase, particularly for lower paid and subcontracted workers, and those undertaking shift work.</li> </ul>
Community Health and Safety	<ul style="list-style-type: none"> <li>▪ Traffic accidents or collisions on land or at sea, if there are infrastructure design or construction faults or if there are spills, pollution events, explosions, or other industrial accidents during construction phase.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Environmental or industrial accidents, poor design or construction of Project infrastructure, equipment failure or other types of accidents could cause loss of life for mariners, fishers, workers, road users or other community members in the worst-case scenario. Accidental spills or collision leads to pollution to the environment (e.g., water and marine aquatic life) could harm the safety and quantity of affected communities.</li> <li>▪ Fish stocks may be temporarily impacted by noise, spills, habitat disturbance which could in turn affect community access to food.</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Traffic (marine vessels) and maintenance activities during operation phase</li> </ul>	<ul style="list-style-type: none"> <li>▪ Environmental or industrial accidents, poor design or construction of Project infrastructure leading to failure</li> </ul>

Receptor	Activity / Aspect	Identified Impact
		structural or other types of accidents could cause loss of life for mariners, workers, road users or other community members in the worst-case scenario.
Access to Remedy	<ul style="list-style-type: none"> <li>Workers and communities need to have access to effective remedy if their human rights are breached during the Project lifecycle.</li> </ul>	<ul style="list-style-type: none"> <li>Failure to effectively provide access to remedy for Project impacts affecting human rights.</li> </ul>
Participation	<ul style="list-style-type: none"> <li>Consultation that is not participatory and not representative of all those who will be impacted by Project.</li> </ul>	<ul style="list-style-type: none"> <li>The needs of women and vulnerable groups may have been overlooked in past consultation activities carried out for the EIA and their rights to freedom of opinion, information and expression may have been infringed.</li> </ul>
Security	<ul style="list-style-type: none"> <li>Hiring of security guards who have records of past abuse, inadequate security risk assessment and planning, and inappropriate use of force by security guards against community members or Project workers throughout Project lifecycle</li> </ul>	<ul style="list-style-type: none"> <li>Infringements on several human rights including the right to liberty and security, the right not to be subjected to torture, cruel, inhuman and/or degrading treatment or punishment, the right to health and the right to life.</li> </ul>
Supply Chain	<ul style="list-style-type: none"> <li>Human rights that affect supply chain in mining industry.</li> </ul>	<ul style="list-style-type: none"> <li>Human rights impact in the supply chain of wind turbines and it seems likely that this includes the supply chain of the WTG supplier. Rights impacted range from workers' rights, environmental effects leading to impacts on the rights to health and impacts on the right to an adequate standard of living.</li> </ul>
Potential for discrimination in distribution of CSR Funds	<ul style="list-style-type: none"> <li>Livelihoods restoration programmes that will be integrated into the firm's overarching Corporate Social Responsibility (CSR) programme for the of the Project Affected Persons (PAPs).</li> </ul>	<ul style="list-style-type: none"> <li>Lack of thought in selecting recipients of CSR funds, or management of the process by untrained individuals could result in unintentional discrimination and unequal opportunities against applicants.</li> </ul>

Source: CIA, 2023; CCRA, 2023; CHA, 2023; FSIA, 2024; HRIA, 2024

Appendix F Summary of Mitigation and Monitoring Measures (as per the approved local EIA)

Receptor	Mitigation Measure	Monitoring Measure	Monitoring Location	Monitoring Frequency
<b>Pre-construction Phase</b>				
Air Quality	<ul style="list-style-type: none"> <li>Monitoring campaign will be conducted during pre-construction phase</li> </ul>	Wind direction, wind speed, TSP, PM <sub>10</sub> , PM <sub>2.5</sub> , SO <sub>2</sub> , NO <sub>x</sub> , NO, NO <sub>2</sub> , O <sub>3</sub>	Two (2) locations: <ul style="list-style-type: none"> <li>Wuqi fishing port</li> <li>Project substation</li> </ul>	Once before the construction phase
Underwater Noise <sup>1</sup>	<ul style="list-style-type: none"> <li>Monitoring campaign will be conducted during pre-construction phase</li> </ul>	Low frequency sound level, analysis of spectrogram, 1Hz band and 1/3 octave band	Two (2) locations at the boundary of the Project area	30 days each season for a year (i.e., four (4) surveys/year)
Surface Water Quality	<u>Project design</u> <ul style="list-style-type: none"> <li>Ørsted will submit a runoff wastewater pollution reduction plan to the relevant local authority for approval before commencing construction.</li> </ul>	In case of any accidents that may pollute the surface water, relevant response and notification should follow the requirements of Marine Pollution Act.	-	-
Seawater Quality	<ul style="list-style-type: none"> <li>Monitoring campaign will be conducted during pre-construction phase</li> </ul>	Temperature, pH, biological oxygen demand (BOD), salinity, dissolved oxygen (DO), ammonia nitrogen, nutrient levels, suspended solids (SS), chlorophyll A, <i>e.coli</i>	12 locations near the Project area	Once every season for a year (i.e., four (4) surveys/year)
Marine Biodiversity – Mammals	<ul style="list-style-type: none"> <li>Monitoring campaign will be conducted during pre-construction phase</li> </ul>	Cetacean activity Note: Marine reptiles will also be monitored.	Project area	20 vessel surveys within a year; one (1) year cetacean survey

<sup>1</sup>

- This plan will require the underwater acoustic survey team to deploy at the beginning of each season as a principle, continuously monitor for 30 days, and proceed with instrument recovery at sea as soon as the sea conditions permit.
- In the event of missing survey equipment during the recovery process, proof of the project's sea operations for monitoring purposes will be provided to facilitate subsequent explanations.
- Subsequent underwater acoustic surveys will be scheduled as soon as the sea conditions permit. To ensure the recovery of survey data, the survey vessel will recover the instruments at each point after 24 hours of measurement time following instrument deployment.
- To prioritise safety considerations for investigators and ships, in case of unexpected changes in walrus conditions, the ship will return to the port for standby.
- If remedial measures are implemented, an explanation will be included.

Receptor	Mitigation Measure	Monitoring Measure	Monitoring Location	Monitoring Frequency
Coastal and Marine Biodiversity – Avian	<u>Project design</u> <ul style="list-style-type: none"> <li>An interval of 500m will be maintained between each WTG.</li> </ul> <u>Coordination with surrounding wind farms</u> <ul style="list-style-type: none"> <li>The Greater Changhua wind farms (including the Project) will retain eight (8) flight corridors within the wind farms, each at least two (2) km in width.</li> <li>Between each wind farm, a buffer zone of six (6) times the rotor diameter will be maintained.</li> </ul>	Species, abundance, habitat and activities, flight paths, migration pattern (including coastal birds and shore birds)	Near Project area as well as coastal area around the cable landing point	Monthly between March to November and once between December to February for two (2) years (i.e., 10 surveys/year)
		Radar survey	Project area	Once every season for two (2) years (i.e., four (4) surveys/year), at least five (5) days during the surveys in summer, autumn and spring, and a day and night survey in winter.
		Tagging and satellite tracking	Changhua coastline	Once every season for a year (i.e., four (4) surveys/year)
Marine Biodiversity – Marine Ecology (Fishes, Microbenthos, Macrobenthos)	<u>Project design</u> <ul style="list-style-type: none"> <li>The subsea cables will take the shortest route feasible to shore.</li> <li>Project will adhere to the BOE-approved “Changhua Offshore Wind Power Marine Cable Common Corridor” adjustments promulgated on 2 August 2017.</li> </ul>	-	-	-
Marine Topography	<u>Project design</u> <ul style="list-style-type: none"> <li>Detailed geophysical and geotechnical surveys at each turbine foundation to provide a basis for the design of wind turbine foundation and its construction.</li> </ul>	-	-	-

Receptor	Mitigation Measure	Monitoring Measure	Monitoring Location	Monitoring Frequency
	<ul style="list-style-type: none"> <li>▪ Supplementary offshore geological surveys for the Project development sites. The work will at least include four (4) 80m boreholes and at least 15 20 - 80m Cone Penetration Test (CPT) tests. Static Cone Penetration Test (SCPT) will measure the in-situ soil's shear wave velocity to improve the construction site's response analysis.</li> <li>▪ Borehole testing or CPT at each turbine location to investigate any liquefaction potentials. The borehole or CPT depth will be greater than the scheduled pile foundation.</li> <li>▪ Liquefaction risk to be assessed at each of the turbine location.</li> <li>▪ Technical and academic co-operation in offshore piling foundation designs through the Industrial Cooperation Program (ICP) and confirming how these methods may be used within the local Taiwanese soil.</li> </ul>			
<ul style="list-style-type: none"> <li>▪ Economic Displacement</li> <li>▪ Fisheries Resources and Communities</li> </ul>	<p><u>Coordination with stakeholders</u></p> <ul style="list-style-type: none"> <li>▪ Discussion with the Changhua Fishery Association regarding compensation matters will be initiated upon obtaining the Establishment Permit.</li> <li>▪ Relevant information (e.g., construction schedule, area and vessels used) will be provided to the local port authority for dissemination to local communities.</li> </ul>	<p>Note: On-going Stakeholder Engagement activities and to be reported e.g., in the Stakeholder Engagement Plan (SEP) (refer Section 5.3.4 of this document)</p>	-	-
Traffic and Transportation	<p><u>Coordination with stakeholders</u></p> <ul style="list-style-type: none"> <li>▪ Prior to acquiring the Establishment Permit, relevant Project information to be submitted to the Coast Guard Administration.</li> </ul>	<p>Note: On-going Stakeholder Engagement activities and to be reported e.g., in the Stakeholder Engagement Plan</p>	-	-

Receptor	Mitigation Measure	Monitoring Measure	Monitoring Location	Monitoring Frequency
	<ul style="list-style-type: none"> <li>Design a construction channel from the site to the port.</li> <li>Approval from port authority and publicly disclose the information to notify the nearby vessels navigational route.</li> </ul>	(SEP) (refer Section 5.3.4 of this document)		
Cultural Heritage Resources –Land-based and Marine	<u>Survey</u> <ul style="list-style-type: none"> <li>Geological drilling will be conducted at each planned WTG location and the boreholes obtained will be assessed by certified archaeologists to determine the presence of culturally significant underwater cultural heritage material.</li> <li>Geological drilling will be conducted at least three (3) points within the onshore substation site.</li> </ul>	Borehole sampling for land-based cultural heritage resources	Project onshore substation and land cables	At least three (3) sampling points, with borehole results to be assessed by archaeologists
		Borehole sampling for underwater cultural heritage resources	Project area	At every WTG, with borehole results to be assessed by archaeologists
<b>Construction Phase</b>				
Air Quality and Greenhouse Gas (GHG) Emissions	<u>For construction sites</u> <ul style="list-style-type: none"> <li>The Project will follow the Control Method of Air Quality Deterioration. Should the local authority issue an air quality deterioration warning, the Project will conduct air pollution prevention measures and enhance water spraying. Should a secondary degree warning be issued, all construction work will stop immediately to prevent worsening of air quality.</li> <li>The Project will follow the Construction Air Pollution Prevention Equipment Management for pollution prevention during construction.</li> </ul>	Wind direction, wind speed, TSP, PM <sub>10</sub> , PM <sub>2.5</sub> , SO <sub>2</sub> , NO <sub>x</sub> , NO, NO <sub>2</sub> , O <sub>3</sub>	Two (2) locations: <ul style="list-style-type: none"> <li>Wuqi fishing port</li> <li>Project substation</li> </ul>	Once every season (i.e., four surveys/year)

Receptor	Mitigation Measure	Monitoring Measure	Monitoring Location	Monitoring Frequency
	<ul style="list-style-type: none"> <li>▪ The Project will follow the Air Pollution Control Fee Collection Regulations to pay pertinent fees prior to starting construction work.</li> <li>▪ Full barrier fence with minimum height of 2.4 m will be erected around the substation construction area except at street corners or 10m within street corners wherein half barrier fence will be built.</li> <li>▪ Dust suppression measures should be implemented at the substation construction site and along construction roads (e.g., watering bare surfaces, clearing accumulated dust and laying steel platforms/ concrete/ asphalt/ coarse grading on roads).</li> <li>▪ In accordance with the Management Regulations for Construction Project Air Pollution Control Facilities Article 5, signages will be installed at the construction area which states the Project air pollution control fee collection control serial number, the name and contact number of the person responsible for the construction site as well as the local environmental agency's contact number for reporting public nuisances.</li> </ul> <p><u>For construction vehicles/machinery</u></p> <ul style="list-style-type: none"> <li>▪ Soil-carrying vehicles must be covered (e.g., using anti-dust mesh) to avoid air pollution.</li> <li>▪ Route taken by transportation trucks should avoid densely populated areas where possible. Speed of vehicles should be</li> </ul>			

Receptor	Mitigation Measure	Monitoring Measure	Monitoring Location	Monitoring Frequency
	<p>reduced when passing through densely populated areas to avoid dust generation.</p> <ul style="list-style-type: none"> <li>▪ Construction vehicles must be cleaned before existing the construction site.</li> <li>▪ Construction vehicles will be required to comply with the latest emission standards.</li> <li>▪ Construction vehicles must use diesel containing less than 10 ppmw sulfur as required by law.</li> <li>▪ Land excavators should follow the Class 4 emission standards as per diesel trucks.</li> <li>▪ Oil products used by construction machinery will be subject to stringent requirements which meet regulatory standards.</li> <li>▪ Regular maintenance of construction vehicles and machinery will be conducted.</li> <li>▪ One (1) km roadway to the front and rear of the construction site will be swept and cleaned to mitigate fugitive dust fall. Other construction equipment and vehicles will also comply with Class 4 emission standards and hold the Grade A Self-Management Label.</li> </ul> <p><u>For offshore construction sites/ vessels/ machinery</u></p> <ul style="list-style-type: none"> <li>▪ All vessels shall use the least sulfur-containing oil available in Taiwan.</li> <li>▪ Exhaust air emission of vessel-carrying personnel should install smoke filters or activated carbon filters or other state-of-the-art commercially available technologies.</li> </ul>			

Receptor	Mitigation Measure	Monitoring Measure	Monitoring Location	Monitoring Frequency
	<ul style="list-style-type: none"> <li>All marine spread will use fuel with the minimum sulfur content (&lt;0.5%) available in Taiwan at the time.</li> </ul>			
Airborne Noise and Vibration	<ul style="list-style-type: none"> <li>Noise control standards need to be included within construction specifications of engineering contracts.</li> <li>Project shall follow the Noise Control Standards and its pertinent regulations.</li> <li>Use of construction equipment will be in accordance with noise control standards.</li> <li>Low-noise machinery will be utilised for construction works.</li> <li>During excavation works, trucks will be parked near excavators to minimise movement of excavators (which generate relatively more noise than trucks).</li> <li>Regular maintenance of construction vehicles and machinery will be conducted.</li> </ul>	Equivalent energy sound level (daytime, evening time and nighttime) and vibration level (daytime and nighttime)	Two (2) locations: <ul style="list-style-type: none"> <li>A sensitive receptor near construction site.</li> <li>The entry/exit point of the construction site.</li> </ul>	24-hours continuous monitoring once every season (i.e., four (4) surveys/year)
		For the construction noise, low frequency (Leq at 20Hz-200Hz) and all-frequency sound levels (Leq and Lmax at 20Hz-20kHz) will be monitored	Two (2) locations <ul style="list-style-type: none"> <li>At the boundary of the substation site.</li> <li>At the boundary of the cable construction site.</li> </ul>	Once every month (i.e., 12 surveys/year)
Underwater Noise	<ul style="list-style-type: none"> <li>Only one turbine piling will be conducted at each time (also refer to mitigation measures proposed under “Biodiversity – Cetaceans”).</li> <li>95% of the underwater noise measurement data to not exceed 190dB at 750m to the center of jacket where the underwater noise is carried out.</li> <li>157 dB SEL of single piling event, measured as 30 second average, is set as early warning level during the pile installation. As the noise monitoring shows that the early warning level is exceeded, proper responses (e.g., lower the hammer energy(kJ), decrease the frequency of piling) alongside enhanced</li> </ul>	Low frequency sound level, analysis of spectrogram, 1Hz band and 1/3 octave band	Four (4) locations at 750 m from each WTG piling site	For every WTG during piling
			Two (2) locations at the boundary of the wind farm	30 days each season for a year (i.e., four (4) surveys/year)

Receptor	Mitigation Measure	Monitoring Measure	Monitoring Location	Monitoring Frequency
	mitigation measures such as increase the air supply of bubble curtain, if necessary, will be taken to make sure the noise level is lower than the limit described in EIA commitment.			
Surface Water Quality	<ul style="list-style-type: none"> <li>▪ Sedimentation and grit equipment will be installed at the substation site to recycle wastewater or treat effluents to levels permissible for discharge.</li> <li>▪ Specifications of the wastewater treatment facility will be decided at the design stage based on actual site needs.</li> <li>▪ Construction materials will be stored in a designated covered area to reduce contact with rain.</li> <li>▪ Portable toilets would be rented, or water treatment would be set up for construction personnel to use. Qualified cleaning staff will be commissioned to maintain the cleanliness and dispose of the wastewater produced.</li> <li>▪ The approved pre-construction runoff wastewater pollution reduction plan will be implemented.</li> </ul>	-	-	-
Groundwater Quality	<ul style="list-style-type: none"> <li>▪ Concrete is used for grouting work during the excavation period.</li> <li>▪ Routine maintenance will be conducted on the construction vehicles to prevent oil leakages.</li> </ul>	-	-	-
Waste Management	<ul style="list-style-type: none"> <li>▪ Excavated soil will be backfilled where possible, while the remaining soil will be dealt with according to Changhua Coastal Industrial Zone regulations.</li> </ul>	Note: Waste Management Plan addresses the waste management during construction phase. This will be part of the HSE	-	-

Receptor	Mitigation Measure	Monitoring Measure	Monitoring Location	Monitoring Frequency
	<ul style="list-style-type: none"> <li>▪ To avoid overloading the amount of excavated earth and construction waste in transit, the waste will be covered to minimise impacts to the surrounding environment during transit.</li> <li>▪ Domestic waste produced by the construction workers will be collected and classified for recycling, and then removed by the local garbage and recycling trucks.</li> <li>▪ Construction waste should be properly collected and disposed according to general waste disposal regulations.</li> <li>▪ Waste such as waste parts, waste components, waste tires, waste batteries and waste solvents which are replaced by maintenance work shall be properly collected and disposed according to general waste disposal regulations to avoid arbitrary discard and environmental pollution in the construction area. For some recyclable wastes, they shall be recycled.</li> </ul>	<p>Management Plan, which is expected to be part of each contractor's scope and contractors are required to submit their plans and procedures to Ørsted</p>		
Seawater Quality	<ul style="list-style-type: none"> <li>▪ The offshore construction zone will be clearly delineated.</li> <li>▪ Warning devices will be set up around the offshore construction zone along with deployment of boats around the construction site to prevent non-Project vessels from entering.</li> <li>▪ Project shall follow the Marine Pollution Prevention Law. In case of sea accidents, the captain and vessel personnel should take measures to prevent, remove or mitigate</li> </ul>	<p>Water temperature, pH, BOD, salinity, DO, ammonia nitrogen, nutrient level, SS, chlorophyll A, <i>e. coli</i>.</p> <p>Suspended Solid</p>	<p>12 locations near the Project area</p> <p>Choose one (1) OSS and three (3) WTG s (i.e., one (1) WTG each</p>	<p>Once every season for a year (i.e., four (4) surveys/year)</p> <p>Once during construction of scour protection</p>

Receptor	Mitigation Measure	Monitoring Measure	Monitoring Location	Monitoring Frequency
	<p data-bbox="607 236 1099 336">pollution, and instantly notify local navigation authorities, harbour management authorities or local competent authorities.</p> <ul style="list-style-type: none"> <li data-bbox="562 347 1099 517">▪ Centralised disposal best management practices shall be adopted. Ship wastewater and sewage will be retained on board or disposed onshore except where specified to be permissible for discharge into the sea.</li> <li data-bbox="562 528 1099 628">▪ Wastewater generated by the crew on board vessels will be collected in wastewater tanks on the vessels and disposed onshore.</li> <li data-bbox="562 639 1099 699">▪ Regular maintenance of vessels and machinery will be conducted.</li> <li data-bbox="562 710 1099 769">▪ All marine spread to use fuel with sulfur content (&lt;0.5%).</li> <li data-bbox="562 780 1099 916">▪ Installation of scour protection will be carried out by fall-pipe vessel to alleviate the influence on seawater quality during construction.</li> <li data-bbox="562 927 1099 1310">▪ For turbines using SBJ, one turbine location will be selected from each row (east-west direction) where its underwater environment around the foundation will be observed by using a Remotely Operated Vehicle (ROV), which is capable of transmitting images to the installation vessel in real-time, during the installation of SBJ. This is meant to understand if there is disturbance to the seabed during SBJ installation and thus affect water quality in the surrounding area.</li> </ul>		<p data-bbox="1480 236 1675 371">row) and conduct monitoring 500 m upstream and downstream.</p>	

Receptor	Mitigation Measure	Monitoring Measure	Monitoring Location	Monitoring Frequency
Terrestrial Biodiversity – Flora	<ul style="list-style-type: none"> <li>Construction area will be clearly planned to prevent extensive vegetation removal.</li> <li>Dust suppression measures will be implemented to reduce the impact of dust on plant growth.</li> <li>Construction sites will be fenced off to contain pollution from construction activities.</li> <li>Washing facilities will be installed at construction site entrances to allow construction vehicles to wash their vehicles before entering the site to prevent introduction of alien seeds or plants</li> </ul>	Terrestrial plants	Onshore transmission system (i.e., substation, land cable)	Once every season for a year (i.e., four (4) surveys/year)
Terrestrial Biodiversity - Fauna	<ul style="list-style-type: none"> <li>Low-noise machinery will be used to minimise impact of noise to animals.</li> <li>Contractors will be instructed to educate construction workers on treating animals. Workers will be prohibited from capturing, poaching, or abusing wild animals.</li> <li>Progressive construction methods will be adopted to reduce the impact on local wildlife and provide sufficient time and space for terrestrial animals to move away from the construction area.</li> <li>Construction waste and wastewater will be managed appropriately to avoid polluting the terrestrial habitats.</li> </ul>	Terrestrial animals	Onshore transmission system (i.e., substation, land cable)	Once every season for a year (i.e., four (4) surveys/year)
Marine Biodiversity – Mammals	<p><u>Construction method and procedures</u></p> <ul style="list-style-type: none"> <li>Jacket type foundation will be used for the WTG.</li> <li>Acoustic deterrent devices (ADDs) will not be used.</li> </ul>	Cetacean Note: Marine reptiles will also be monitored.	Project area	20 vessel surveys within a year

Receptor	Mitigation Measure	Monitoring Measure	Monitoring Location	Monitoring Frequency
	<ul style="list-style-type: none"> <li>▪ State-of-the-art commercially available noise mitigation methods will be adopted to ensure that 160 dB SEL at 750 m from the piling location is maintained. Specific noise mitigation measures (e.g., bubble curtain) will be finalised before installation works.</li> <li>▪ Progressive pile driving (from low strength to high strength) will be employed.</li> <li>▪ Only one (1) turbine piling will be conducted at each time.</li> <li>▪ Stop work procedures would be in place if cetacean activity is detected within the warning area (750 m from piling location). Piling can only commence 30 minutes after the cetaceans have left the warning area.</li> <li>▪ If underwater acoustic devices record an exceedance in the noise level, countermeasures will be adopted immediately to lower the sound (e.g., lowering piling speed, decreasing intensity of pile energy, and adjusting noise mitigation equipment.</li> <li>▪ No new piling activity would be started between one (1) hour before sunset and sunrise.</li> <li>▪ Vessel speed will be kept below six (6) knots when travelling within 1500 m radius of the proposed major wildlife habitat of the Taiwanese Humpback Dolphin. Vessels will also avoid entering known Taiwanese humpback dolphins' hotspots during their</li> </ul>			

Receptor	Mitigation Measure	Monitoring Measure	Monitoring Location	Monitoring Frequency
	<p>time of peak activity, and other sensitive areas.</p> <p><u>Establishment of warning and monitoring areas</u></p> <ul style="list-style-type: none"> <li>▪ A warning area and monitoring area of 750 m and 1500 m respectively from the piling site would be established.</li> <li>▪ Before starting piling works, various methods will be used to ensure that there is no cetacean activity for 30 minutes before piling starts, namely the following:               <ul style="list-style-type: none"> <li>○ Four (4) underwater acoustic devices will be deployed 750m away from the piling location.</li> <li>○ Three (3) trained and certified marine mammal observers (MMO), of which at least one is a member of a local ecology group, will conduct visual searches in the warning and monitoring areas.</li> </ul> </li> <li>▪ During piling, underwater acoustic devices and MMOs will monitor the warning and monitoring areas for cetacean activities.</li> <li>▪ All pile driving activities (along with date and time of recording) will be recorded and stored for at least five years.</li> <li>▪ Ørsted will invite international cetacean experts to establish a professional and credible third-party cetacean monitoring team.</li> </ul>			
Coastal and Marine Biodiversity – Avian	<ul style="list-style-type: none"> <li>▪ Ship-based monitoring will be conducted.</li> </ul>	Species, abundance, habitat and activities, flight paths,	Near Project area as well as coastal area	Once per month from March to November and once between

Receptor	Mitigation Measure	Monitoring Measure	Monitoring Location	Monitoring Frequency
		migration pattern (including coastal birds and shore birds)	around the cable landing point	December and February. 10 survey trips annually.
Marine Biodiversity – Marine Ecology (Fishes, Microbenthos, Macrobenthos)	<ul style="list-style-type: none"> <li>If the construction area is close to oyster shelf areas, anti-turbidity curtains will be deployed.</li> <li>The intertidal area will not conduct excavation method and will use horizontal cable laying method.</li> <li>Intertidal construction works will avoid the migratory period of November to March.</li> <li>Protective seabed work stones designed to protect the wind turbine foundation may serve as an artificial reef.</li> <li>Underwater video recording at one (1) planned turbine location. After piling, conduct another underwater video recording.</li> <li>Conduct one (1) fishery survey every season (including turbine location).</li> </ul>	Intertidal zone	50m on both sides of the land cable	Once every season for a year (i.e., four (4) surveys/year)
		Plankton, fish eggs, fish larvae and benthic organisms	12 locations near the Project area	Once every season for a year (i.e., four (4) surveys/year)
		Fishery species	Three (3) measurement lines within the Project area	Once every season for a year (i.e., four (4) surveys/year)
		Fish aggregation at the WTG foundation	One (1) WTG and one (1) substation	Once before piling and once after piling
<ul style="list-style-type: none"> <li>Socioeconomics and Labour</li> <li>Economic Displacement</li> <li>Fisheries Resources and Communities</li> </ul>	<ul style="list-style-type: none"> <li>Similar mitigation measure during pre-construction and operation phase i.e., discussion with the Changhua Fishery Association regarding compensation matters will be initiated upon obtaining the Establishment Permit &amp; providing relevant information (e.g., construction schedule, area and vessels used) will be provided to the local port authority for dissemination to local communities.</li> </ul>	Note: On-going Stakeholder Engagement activities and to be reported e.g., in the Stakeholder Engagement Plan (SEP) (refer Section 5.3.4 of this document)	-	-

Receptor	Mitigation Measure	Monitoring Measure	Monitoring Location	Monitoring Frequency
Cultural Heritage Resources – Land based and Marine	<p><u>For land-based cultural resources</u></p> <ul style="list-style-type: none"> <li>▪ Archaeologists will be commissioned to monitor the excavation works for the onshore substation and land cables.</li> <li>▪ Should any cultural heritage relics be discovered during construction, they shall be handled in accordance with articles 33, 57, 77 and 88 of the Cultural Heritage Preservation Act (i.e., the discovery shall be reported to the competent authority and construction work shall be suspended until the conclusion of the review procedure).</li> </ul> <p><u>For underwater cultural resources</u></p> <ul style="list-style-type: none"> <li>▪ In accordance with article 13 of the Underwater Cultural Assets Preservation Act, if suspected underwater cultural assets are found during construction, activities would have to be stopped immediately (without compromising safety) and the competent authority would have to be notified immediately for further action.</li> <li>▪ Ørsted would have to adjust the WTG location if the suspected underwater cultural assets cannot be affirmatively verified.</li> </ul>	Land-based cultural heritage resources	Excavation areas	Archaeologist to monitor all excavation activities
Landscape/Visual and Tourism	<ul style="list-style-type: none"> <li>▪ Machinery and materials will be placed orderly within the construction site.</li> </ul>	Note: Monitoring on Landscape/Visual and Tourism will be included and reported e.g., in the Stakeholder Engagement Plan (SEP) and Grievance Mechanism (GM) log (refer	-	-

Receptor	Mitigation Measure	Monitoring Measure	Monitoring Location	Monitoring Frequency
		<b>Section 5.3.4</b> of this document)		
Public Infrastructure & Traffic and Transportation	<ul style="list-style-type: none"> <li>▪ Appropriate warning signages/ traffic signs/ safety notices will be installed around the work area and at important road sections/ junctions.</li> <li>▪ Traffic control personnel will be assigned to maintain traffic flow.</li> <li>▪ Ørsted will coordinate with local traffic and road authorities in ensure local traffic flow is controlled.</li> <li>▪ Construction vehicles or personal vehicles of construction personnel will not be parked at Xianbei 4th Road and the corner of Xiangong Road.</li> <li>▪ Approval permits from relevant authorities for any road excavation works.</li> </ul>	Monitoring on Public Infrastructure will be included and reported in the Stakeholder Engagement Plan (SEP) and Grievance Mechanism (GM) log (refer <b>Section 5.3.4</b> of this document)	-	-
	<ul style="list-style-type: none"> <li>▪ A navigation safety plan will be formulated.</li> <li>▪ Vessels will only navigate on approved navigation channels.</li> <li>▪ A safety buffer zone of 2nm to reduce vessel collision risk.</li> <li>▪ Guard boats will be deployed during construction.</li> <li>▪ Appropriate offshore warning devices shall be put up to warn other ships not to enter the Project area.</li> <li>▪ Vessels will be equipped with night lights and light number following the Regulations for Preventing Collisions at sea.</li> <li>▪ Project will implement a Marine and Helicopter Coordination Centre (MHCC) to</li> </ul>	Note: Navigational Safety Plan will be developed to address the management of Project vessels during construction phase	-	-

Receptor	Mitigation Measure	Monitoring Measure	Monitoring Location	Monitoring Frequency
	<p>control and manage vessels inside the wind farm. The MHCC will respond to situation and command relevant vessels and contact the Coast Guard Administration if necessary.</p> <ul style="list-style-type: none"> <li>▪ In case of sea accidents, local competent authorities will be notified immediately. Measures will be taken to prevent, remove or mitigate any accidental pollution.</li> <li>▪ Project will follow the Disaster Prevention and Protection Act.</li> <li>▪ Wastewater (and sewage) and waste oil from vessels should be handled in accordance with the provisions of relevant water pollution control laws.</li> <li>▪ Adopt Best Management Practices (BMP) shall be adopted to disposed wastewater generated by machinery and vessels during maintenances.</li> <li>▪ Vessels should conduct regular maintenance. All work vessels will be dispatched by professional teams and undergo sound vessel safety inspection.</li> <li>▪ Centralised disposal best management practices shall be adopted. Ship wastewater and sewage will be retained on board or disposed onshore except where specified to be permissible for discharge into the sea.</li> <li>▪ Ballast water treatment onboard prior discharging.</li> <li>▪ Wastewater generated by the crew on board vessels will be collected in wastewater tanks on the vessels and disposed onshore.</li> </ul>			

Receptor	Mitigation Measure	Monitoring Measure	Monitoring Location	Monitoring Frequency
	<ul style="list-style-type: none"> <li>▪ Regular maintenance of vessels and machinery will be conducted.</li> <li>▪ All marine spread to use fuel with sulfur content (&lt;0.5%) &amp; any oil-based products used shall be subjected to the applicable regulatory requirements.</li> <li>▪ Installation of scour protection will be carried out by fall-pipe vessel to alleviate the influence on seawater quality during construction.</li> <li>▪ HSE Management Plan during lifting operations.</li> <li>▪ Regular weather updates during construction phase.</li> <li>▪ Implementation of the O-139 IALA Recommendation on the Marking of Man-Made Offshore Structure. Each turbine should signages and AIS navigation marks.</li> </ul>			
<b>Operation Phase</b>				
Air Quality and Greenhouse Gas (GHG) Emissions	<p><u>For onshore sites</u></p> <ul style="list-style-type: none"> <li>▪ Operational personnel will be encouraged to take public transport and replace two-stroke locomotives. The Project operation and maintenance (O&amp;M) facility will eventually ban the use of replace two-stroke locomotives (in line with local regulations).</li> <li>▪ The Project O&amp;M facility will procure electric vehicles under its ownership and provide electric charging stations within the carpark compound.</li> <li>▪ To conduct air quality monitoring.</li> </ul>	Details of air quality monitoring and GHG emissions will be further determined during the operation phase	Details of air quality monitoring and GHG emissions will be further determined during the operation phase	Details of air quality monitoring and GHG emissions will be further determined during the operation phase

Receptor	Mitigation Measure	Monitoring Measure	Monitoring Location	Monitoring Frequency
	<p><u>For offshore sites</u></p> <ul style="list-style-type: none"> <li>All vessels shall use the least sulfur-containing oil available in Taiwan.</li> </ul>			
Airborne Noise and Vibration & Underwater Noise	<ul style="list-style-type: none"> <li>Project operations will comply with airborne noise &amp; vibration and underwater noise regulation standards.</li> </ul>	Low frequency sound level, analysis of spectrogram, 1Hz band and 1/3 octave band for the underwater noise	Two (2) locations at the boundary of the Project area	Four (4) surveys/year
Surface Water Quality	<ul style="list-style-type: none"> <li>Project will comply with the local authority requirement.</li> </ul>	-	-	-
Groundwater Quality	<ul style="list-style-type: none"> <li>During the operation phase, water will be supplied by Taiwan Water Supply Company without pumping the groundwater.</li> </ul>	-	-	-
Waste Management	<ul style="list-style-type: none"> <li>Project will comply with the local authority requirement.</li> <li>Domestic waste will be collected and disposed appropriately.</li> <li>This Project has committed not to bury turbine blades during the decommissioning. In the future, the Project will participate blade recycling-related initiatives to monitor all possible recycling methods and adopt them where possible to improve the sustainability of wind turbines. These initiatives include finding common solutions through cooperating with other companies and organisations or participating in research and innovation projects focused on recycling blade materials.</li> <li>If a suitable solution is not found during the decommissioning, the Project has also committed to legitimately store blades temporarily rather than landfill.</li> </ul>	Note: Waste Management Plan to address the waste management during operation phase. This will be part of the HSE Management Plan (and Decommissioning Plan towards the end of Project life), which is expected to be part of each contractor's scope and contractors are required to submit their plans and procedures to Ørsted	-	-

Receptor	Mitigation Measure	Monitoring Measure	Monitoring Location	Monitoring Frequency
	<ul style="list-style-type: none"> <li>This commitment will be communicated at least one (1) year before the official decommissioning and to be approved by the competent authority body.</li> </ul>			
Electromagnetic Field (EMF)	<ul style="list-style-type: none"> <li>Transmission tower will be operated by Taiwan Power Company (TPC) and will comply with the EMF regulation and standards.</li> </ul>	-	-	-
Terrestrial Biodiversity – Flora and Fauna	<ul style="list-style-type: none"> <li>Maintenance works at the onshore substation and land cables will avoid having to cut through surrounding vegetation to prevent disturbance to terrestrial habitats and animals.</li> <li>Habitat restoration (i.e., landscaping) will be carried out in area surrounding the onshore facilities.</li> </ul>	<p>-</p> <p>Note: Details of terrestrial biodiversity monitoring to be conducted during construction phase in accordance to the EIA commitment.</p>	-	-
Marine Biodiversity – Mammals	<ul style="list-style-type: none"> <li>Monitoring activities will be conducted. During underwater filming, the presence of marine reptiles will also be monitored.</li> </ul>	<p>Cetacean</p> <p>Note: Marine reptiles will also be monitored.</p>	Project area	20 vessel surveys within a year
Coastal and Marine Biodiversity – Avian	<ul style="list-style-type: none"> <li>The Project will install two (2) video recording devices for offshore monitoring of bird activity (which is intended to supplement actual surveys to be conducted).</li> </ul>	Species, abundance, habitat and activities, flight paths, migration pattern	Near the Project area as well as coastal area around the cable landing point	Monthly between March to November and once between December to February (i.e., 10 surveys/year)

Receptor	Mitigation Measure	Monitoring Measure	Monitoring Location	Monitoring Frequency
	<ul style="list-style-type: none"> <li>Project will set up a joint bird monitoring system in conjunction with neighbouring wind farms (i.e., the other Greater Changhua windfarms, Hailong Wind farm and Haiding wind farm). The monitoring system will comprise of thermal imagery, microphone, and high-performance radar.</li> <li>If large flocks of protected species or large sized birds are found to be passing through the wind farm, the operator shall be committed to conduct feasible speed reduction measures. It should be noted that the need and practicality for this requirement are under discussion with the EPA through the Spring Bird Survey review conducted with all developers. It is expected that the operational monitoring will inform this requirement.</li> <li>Project adjusted its layout to mitigate collision risk by providing bird corridors of two (2) km in alignment with the expected migratory path of key species.</li> </ul>	Joint bird monitoring system in conjunction with neighbouring wind farms (i.e., the other Greater Changhua windfarms, Hailong Wind farm and Haiding wind farm)	One (1) WTG within the Project area	Continuous monitoring
		Video recording devices	Two (2) WTGs within the Project area	Continuous monitoring
Marine Biodiversity – Marine Ecology (Fishes, Microbenthos, Macrobenthos)	<ul style="list-style-type: none"> <li>Monitoring activities will be conducted. During underwater filming, the presence of marine reptiles will also be monitored.</li> </ul>	Plankton, fish eggs, fish larvae and benthic organisms	12 locations near the Project area	Once every season for a year (i.e., four (4) surveys/year)
		Fishery species	Three (3) measurement lines within the Project area	Once every season for a year (i.e., four (4) surveys/year)
		Fish aggregation at the WTG foundation	Two (2) WTG	Once every season for a year (i.e., four (4) surveys/year)

Receptor	Mitigation Measure	Monitoring Measure	Monitoring Location	Monitoring Frequency
<ul style="list-style-type: none"> <li>Socioeconomics and Labour</li> <li>Economic Displacement</li> <li>Fisheries Resources and Communities</li> </ul>	<ul style="list-style-type: none"> <li>Ørsted will address compensation matters for the Changhua Fishery Association fishing rights areas that are affected by the Project.</li> <li>Ørsted will continue to communicate with local fishermen.</li> </ul>	Fishery data (e.g., fishery environment, facilities, production, population)	Changhua County data	Once every year
Landscape/Visual and Tourism  Public Infrastructure	<ul style="list-style-type: none"> <li>Project will install signages to provide information and knowledge on the Project.</li> </ul>	Note: Monitoring on Landscape/Visual and Tourism, Public Infrastructure will be included and reported e.g., in the Stakeholder Engagement Plan (SEP) and Grievance Mechanism (GM) log (refer <b>Section 5.3.4</b> of this document)	-	-
Traffic and Transportation	<ul style="list-style-type: none"> <li>Rapid notification procedures will be established with the coast guard, port authorities and disaster prevention units.</li> <li>Emergency procedures will be in place to ensure timely action is taken to respond to emergency situations.</li> <li>Project will use the vessel Traffic Management System (VTMS) to control ship traffic within the wind farm. The VTMS system will integrate different systems including radar, vessel automatic identification system (AIS) and CCTV.</li> </ul>	Note: Navigational Safety Plan will be developed to address the management of Project vessels during operation phase	-	-

Source: EIA, 2018; EIA Amendment, 2022

(\*) Note:

- This plan will require the underwater acoustic survey team to deploy at the beginning of each season as a principle, continuously monitor for 30 days, and proceed with instrument recovery at sea as soon as the sea conditions permit.
- In the event of missing survey equipment during the recovery process, proof of the project's sea operations for monitoring purposes will be provided to facilitate subsequent explanations.

- *Subsequent underwater acoustic surveys will be scheduled as soon as the sea conditions permit. To ensure the recovery of survey data, the survey vessel will recover the instruments at each point after 24 hours of measurement time following instrument deployment.*
- *To prioritise safety considerations for investigators and ships, in case of unexpected changes in walrus conditions, the ship will return to the port for standby.*
- *If remedial measures are implemented, an explanation will be included.*

Appendix G Additional Project Mitigation and Monitoring measures (CIA, CCRA, CHA, FSIA & HRIA)<sup>1</sup>

Receptor	Proposed Mitigation Measures	Action Plans	Status
<b>Cumulative Impact Assessment (CIA)</b>			
Marine flora and fauna	<u>Pre-Construction phase</u> <ul style="list-style-type: none"> <li>The submarine cable will be buried one (1) to two (2) m (within the nearshore area) to reduce electromagnetic field (EMF) effects.</li> </ul>	Proposed mitigation measures have been communicated for implementation	Closed
	<u>Construction phase</u> <ul style="list-style-type: none"> <li>Remind workers not to use any Acoustic Deterrent Device or other sound-emitting device at any time.</li> <li>Construction of the submarine cable will be conducted in sections.</li> </ul>		
	<u>Operation phase</u> <ul style="list-style-type: none"> <li>Warning lights to be installed on the blades of the WTG i.e., horizontal direction intervals not exceeding 900m and be implemented on the corners or most outer row.</li> </ul>		
Community livelihood: fisheries resources and zones	<u>Construction phase</u> <ul style="list-style-type: none"> <li>Data published by the Fisheries Agency, to identify reference species for monitoring to compare the impacts.</li> <li>Cooperation with fishermen’s association to develop a Fishery Resources Conservation Zone, through reinstatement of affected marine habitats with the foundation of WTGs and connection with artificial reefs.</li> </ul>	Proposed mitigation measures have been communicated	Closed
	<u>Operation phase</u> <ul style="list-style-type: none"> <li>Annual analysis of the Taiwan Fisheries Yearbook from Fisheries Agency to organise related fishery livelihood and economics information.</li> </ul>		

<sup>1</sup> Proposed recommendations of mitigation and monitoring measures that are already included in Appendix F are excluded in this table i.e., either part of local EIA commitments or part of existing project design.

Receptor	Proposed Mitigation Measures	Action Plans	Status
		implemented during operation phase	
Migratory birds (including seabirds)	<u>Operation phase</u> <ul style="list-style-type: none"> <li>Project to follow Article 17 of the Aviation obstacle sign and obstacle light setting standard.</li> </ul>	Proposed mitigation measures have been communicated	Closed
<b>Climate Change Risk Assessment (CCRA)<sup>1</sup></b>			
Climate Change on WTG	<ul style="list-style-type: none"> <li>Sustained heatwave conditions may require more regular checking of equipment performance and more regular maintenance.</li> </ul>	Proposed mitigation measures have been communicated and to be implemented during operation phase	Partially closed
Climate Change on Offshore substation & export cable	<ul style="list-style-type: none"> <li>Exacerbated temperature extremes and/or sustained high temperatures may inhibit power infrastructure performance and export.</li> <li>Ponding of water on any flat substation structure areas must be monitored to avoid inundation of equipment or risk to safety of workers.</li> <li>Ongoing monitoring required regarding materiality of losses if any.</li> </ul>		
Climate Change on Onshore substation & grid connection	<ul style="list-style-type: none"> <li>Elevation, placement, and location of critical infrastructure.</li> <li>Development of flood mitigation planning.</li> <li>HSE plan to manage climatic extremes like heat. Heat exhaustion is a residual risk if workers need to tend to an emergency.</li> <li>Maintenance guide must specify regular monitoring including erosion or apparent risk of erosion and potential wave and flood damage, wear, and tear.</li> <li>Communication with Taiwan officials must be ongoing.</li> </ul>		
Climate Change on	<ul style="list-style-type: none"> <li>HSE plans to manage climatic extremes like extreme or 'loaded' typhoon events and associated wind, wave</li> </ul>		

<sup>1</sup> only medium-rated impact/risk

Receptor	Proposed Mitigation Measures	Action Plans	Status
Construction, operation & maintenance activities	activity, precipitation, and flood. Danger to life is a residual risk if workers need to tend to an emergency in stormy, windy or flood conditions.		
<b>Critical Habitat Assessment</b>			
Marine fauna and flora	<ul style="list-style-type: none"> <li>On-site restoration - Habitats affected temporarily by construction should be restored to their status before the Project.</li> </ul>	Proposed mitigation measures have been communicated for implementation	Closed
Migratory birds (including seabirds at sea)	<ul style="list-style-type: none"> <li>Offsetting and other forms of compensation - Biodiversity offset will be required to ensure overall net gain of Critical Habitat and no net loss for Natural Habitat (refer project-specific Biodiversity Action Plan (BAP))</li> </ul>	Proposed mitigation measures have been communicated for implementation, and any gaps to be communicated	Open (Note: Planned offset actions have been detailed in the BAP. However, as the BAP is a live document, it may be subjected to periodic updates as the Project progresses)
Terrestrial fauna and flora			
<b>Focused Social Impact Assessment (FSIA)</b>			
Employment generation	Managing Project employment and labour related in: <ul style="list-style-type: none"> <li>Labour Management Plan (LMP)</li> <li>Code of Conduct (CoC) for business Partners</li> <li>Stakeholder Engagement Plan (SEP) and Grievance Mechanism (GM)</li> <li>Measures presented within Human Rights Impact Assessment (HRIA) and Livelihood Restoration Plan (LRP)</li> </ul>	Proposed mitigation measures have been communicated for implementation	Closed
Economic displacement and livelihoods	Managing Project economic displacement and livelihoods related in: <ul style="list-style-type: none"> <li>Livelihood Restoration Plan (LRP) and compensation scheme</li> <li>Stakeholder Engagement Plan (SEP) and Grievance Mechanism (GM)</li> </ul>	Proposed mitigation measures have been communicated for implementation	Closed

Receptor	Proposed Mitigation Measures	Action Plans	Status
Human Rights	Managing Project human rights related in: <ul style="list-style-type: none"> <li>▪ QHSE Management Plan</li> <li>▪ Labour Management Plan (LMP)</li> <li>▪ Environmental and Social Management System (ESMS)</li> <li>▪ Supplier QHSE assessment</li> <li>▪ Livelihood Restoration Plan (LRP)</li> <li>▪ Stakeholder Engagement Plan (SEP) and Grievance Mechanism (GM)</li> <li>▪ Supply chain mapping</li> </ul>	Proposed mitigation measures have been communicated for implementation	Closed
<b>Human Rights Impact Assessment (HRIA)</b>			
Labour Rights and Working Conditions	<u>Construction Phase</u> <ul style="list-style-type: none"> <li>▪ Widespread disclosure of Whistle Blower Hotline.</li> <li>▪ Subcontractors to increase visibility of worker grievance mechanisms.</li> <li>▪ Develop and implement Labour Management Plan (LMP) to include heightened oversight and quarterly labour audits of Project workforce.</li> <li>▪ Develop and disseminate GBVH policy to contractors and include a short introduction to gender issues and GBVH in induction training for Project workers.</li> </ul>	Proposed mitigation measures have been communicated for implementation	Closed
	<u>Operation Phase</u> <ul style="list-style-type: none"> <li>▪ Update of Labour Management Plan (LMP) for operation phase</li> </ul>	To be implemented prior to operation phase	Open

Receptor	Proposed Mitigation Measures	Action Plans	Status
Community Health and Safety	<u>Operation Phase</u> <ul style="list-style-type: none"> <li>Update of relevant management plans for operations</li> </ul>	To be implemented prior to operation phase	Open
Access to Remedy	<u>Construction Phase</u> <ul style="list-style-type: none"> <li>Community liaison officer to develop a relationship between the Project and one or more human rights NGOs.</li> <li>Revision of Project grievance mechanism to incorporate consideration of where grievances amount to human rights impacts (either direct or by association) and seek support from human rights NGOs.</li> </ul>	Proposed mitigation measures have been communicated for implementation	Closed
Participation	<u>Construction Phase</u> <ul style="list-style-type: none"> <li>Undertake a review of previous information disclosure and develop plans to increase the scope and outreach.</li> <li>Update the SEP and carry out further disclosure.</li> <li>Carry out a series of stakeholder meetings with the Changhua County Government, Taichung and Kaohsiung City Government, the CFA, fishers, local Township office and the media. Update the SEP to reflect these plans.</li> </ul>	Proposed mitigation measures have been communicated for implementation	Closed
	<u>Operation Phase</u> <ul style="list-style-type: none"> <li>In advance of operations, carry out awareness campaign to brief fishers and mariners on what they can and cannot do in the vicinity of the operational wind farm and to remind them of safety measures in place. Update the SEP in this regard.</li> </ul>	Proposed mitigation measures have been communicated for implementation	Closed
Security	<u>Construction Phase</u> <ul style="list-style-type: none"> <li>Develop and implement: <ul style="list-style-type: none"> <li>Security policy.</li> </ul> </li> </ul>	Proposed mitigation measures have been communicated for implementation	Closed

Receptor	Proposed Mitigation Measures	Action Plans	Status
	<ul style="list-style-type: none"> <li>○ Project specific security management plan based on a security risk assessment.</li> <li>○ Security workers' code of conduct.</li> </ul>		
	<u>Operation Phase</u> <ul style="list-style-type: none"> <li>▪ Update of security risk assessment and management plan for operations</li> </ul>	To be implemented prior to operation phase	Open
Supply Chain	<u>Construction Phase</u> <ul style="list-style-type: none"> <li>▪ Supply chain mapping to improve transparency.</li> <li>▪ Human rights risk identification at mine level through responsible sourcing of minerals and metals.</li> </ul>	Proposed mitigation measures have been communicated for implementation	Closed
Opportunity – Improve workers understanding on gender and Gender-based Violence and Harassment (GBVH)	<u>Construction phase</u> Develop and disseminate GBVH policy to contractors and include a short introduction to gender issues and GBVH in induction training for Project workers	Proposed mitigation measures have been communicated for implementation	Closed

Source: CIA, 2023; CCRA, 2023; CHA, 2023, FSIA, 2024; HRIA, 2024

Appendix H Action Plans for Lenders E&S Monitoring Report

Item	Action Plans	Project Team	Reporting Frequency	Note
<b>Biodiversity Action Plan (BAP)</b>				
1	Collaborate with other Taiwanese offshore windfarm developers, researchers, NGOs regulators and cross sector partners to monitor and evaluate cumulative biodiversity impacts on marine fauna, especially Taiwanese Humpback Dolphin and Taiwan picnic seabream to identify if additional management measures are required	TW Environment & Permitting  TW regulatory & public affairs  Global Sustainability Team	OWEEP meetings and monthly meetings with Professor Su: Semi-annual report throughout the Project's construction duration	
2	Establish, implement, and support educational activities and stakeholder engagement related to conservation of marine habitat and species in the wider area of the Project	TW Regulatory & Public Affairs  Global Sustainability Team	Annual report throughout project lifecycle	
3	Support potential research on critical habitat trigger species	TW Environment & Permitting  Global Sustainability Team	Spatial distribution and population study: One report to be provided by Q3 2025	
4	Collaborate with other Taiwanese offshore windfarm developers, researchers, NGOs regulators and cross sector partners to monitor and evaluate cumulative biodiversity impacts on migratory seabirds and bird species with significant collision risks to identify if additional management measures are required	TW Environment & Permitting  TW regulatory & public affairs	OWEEP meeting: Annual report throughout the Project's lifecycle.  Monthly meetings with Professor Sun: Semi-annual report throughout the Project's construction duration.	

Item	Action Plans	Project Team	Reporting Frequency	Note
		Global Sustainability Team	Collection of data for the Chinese crested tern: One report to be submitted by Q3 2025	
5	Restoration and enhancement of wading bird habitat for the critical habitat bird species and non-critical habitat trigger species with significant collision risks	TW Environment & Permitting  Global Sustainability Team	Restoration and enhancement of habitat: Semi-annual report on progress throughout the project lifecycle  Spatial distribution and population study for the Black-faced spoonbill, Kentish plover and Oriental stork: One report to be provided by Q3 2025	
6	Restoration and enhancement of seabird habitats for the critical habitat bird species and non-critical habitat species with significant collision risks	TW Environment & Permitting  Global Sustainability Team	Semi-annual report throughout the project lifecycle  Spatial distribution and population study for the Saunders's gull: One report to be provided by Q3 2025	
7	Periodic BAP update	Project Management	Semi-annual basis	
<b>Labour Management Plan (LMP)</b>				
8	Code of Conduct for Business Partners Review and Monitoring Plan	Responsible Business Partners Programme, Global Sustainability	Quarterly during construction phase	
9	QHSE Audit and Evaluation of Contractors and Suppliers Plan	QHSE	Quarterly during construction phase	
10	Contractors and Suppliers Workforce status including number of workforces, type of accommodation	Responsible Business Partners Programme, Global Sustainability	Quarterly during construction phase	
11	Update on the LMP	Project Management	Annually	

Item	Action Plans	Project Team	Reporting Frequency	Note
<b>Stakeholder Engagement Plan (SEP)</b>				
12	List of Project stakeholder engagement activities	TW Regulatory & Public Affairs	Quarterly during construction phase	
13	List of Project grievances and status	TW Regulatory & Public Affairs	Quarterly during construction phase	
14	Update on the SEP	Project Management	Annually	
<b>QHSE Management Plans</b>				
15	HSE Statistics Record including Incident Report, Training and Drill Schedule	QHSE	Quarterly during construction phase	
<b>Livelihood Restoration Plan (LRP)</b>				
16	Progress on the livelihood restoration and enhancement programmes	TW Regulatory & Public Affairs	Quarterly during construction phase	
17	Update on the LRP	Project Management	Annually	