Hai Long Offshore Wind Farm

Social Impact Assessment

01 August 2023

Project No.: 0599176

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Document details	
Document title	Hai Long Offshore Wind Farm
Document subtitle	Social Impact Assessment
Project No.	0599176
Date	01 August 2023
Version	5.0
Author	Sabrina Genter, Isabelle Robert
Client Name	Hai Long II Wind Power Co., Ltd. and Hai Long III Wind Power Co., Ltd.

Document history

				ERM approval to issue		
Version	Revision	Author	Reviewed by	Name	Date	Comments
Final	01	I. Robert S. Genter	S. Genter	T. Fong	28.06.2023	Final for Client
Final	02	I. Robert S. Genter	S. Genter	T. Fong	30.06.2023	Final for Client
Final	03	I. Robert S. Genter	S. Genter	T. Fong	12.07.2023	Final for Client
Final	04	I. Robert S. Genter	S. Genter	T. Fong	27.07.2023	Final for Client
Final	05	I. Robert S. Genter	S. Genter	T. Fong	01.08.2023	Final for Client

Signature Page

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Hai Long Offshore Wind Farm

Social Impact Assessment

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Acronyms and Abbreviations

AoI	Area of Influence
BoE	Bureau of Energy
CFA	Changhua Fishery Association
CIA	Cumulative Impact Assessment
COD	Commercial Operation Date
CPI	Corruption Perceptions Index
CTV	Crew Transfer Vessel
DBBC	Double Big Bubble Curtain
DNV	Det Norske Veritas
EBRD	European Bank for Reconstruction and Development
ECA	Economic Cooperation Agreement
ECFA	Economic Cooperation Framework Agreement
EFR	Exclusive Fishing Right
EHS	Environmental, Health, and Safety
EHS	Environmental, Health and Safety
EIA	Environment Impact Assessment
EIA	Environmental Impact Assessment
EP4	Equator Principles 4
EP4	Equator Principles 4
EPA	Environmental Protection Administration
EPA	Environmental Protection Administration
ERM	ERM Taiwan Co., Ltd
ERP	Emergency Response Plan
ESMS	Environmental and Social Management System
EXC	Submarine Export Cables
FA	Fishery Association
FA-COA	Fisheries Agency, Council of Agriculture, Executive Yuan
FOU	Foundation
FPIC	Free, Prior and Informed Consent
GDP	Gross Domestic Product
GIIP	Good International Industry Practice
GW	Gigawatt
ha	Hectare
HDD	Horizontal Directional Drilling
HDI	Human Development Index
HL	Hai Long

HL2	Hai Long 2A and Hai Long 2B
HL2A	Hai Long 2A
HL2B	Hai Long 2B
HL3	Hai Long 3
HLOW	Hai Long Offshore Wind Farm
HR	Human Resources
HRIS	Human Rights Impact Screening
HS	Health and Safety
HSE	Health, Safety and Environment
Hz	Hertz
IAC	Inter Arrays Cable
IALA	International Association of Marine Aids to Navigation and Lighthouse Authority
IDB	Industrial Development Bureau
IFC	International Finance Corporation
ILO	International Labour Organization
km	Kilometres
kV	Kilovolts
LAT	Lowest Astronomical Tide
LRP	Livelihood Restoration Plan
m	Meters
Mitsui	Mitsui & Co.
MoEA	Ministry of Economic Affairs
MPB	Maritime Port Bureau
MW	Megawatts
NPI	Northland Power Inc.
OESA	Owners Environmental and Social Advisor
OSS	Offshore Substation
OWF	Offshore Wind Farm
PAP	Project Affected Person
PFA	Penghu Fisheries Association
PM	Particulate Matter
PPE	Personal Protective Equipment
PS	Performance Standards
SEP	Stakeholder Engagement Plan
SIA	Social Impact Assessment
SOV	Service Operation Vessel
STI	Sexually Transmitted Infections

the Client	Hai Long II Wind Power Co., Ltd. And Hai Long III Wind Power Co., Ltd.
The Consortium	Northland Power Inc., Yushan Energy Pte. Ltd. And Mitsui & Co.
the Project	Hai Long Offshore Wind Farm Project
the Sites	Site 18 and Site 19
TOWIA	Taiwan Offshore Wind Industry Association
TSP	Total Suspended Particulate
US	United States
WTGs	Wind Turbine Generators
YEPL	Yushan Energy Pte. Ltd.

1 INTRODUCTION

ERM Taiwan Co., Ltd (hereafter referred to as "ERM") has been engaged by Hai Long II Wind Power Co., Ltd. And Hai Long III Wind Power Co., Ltd. (hereafter referred to as "the Client" or "HL") to act as the Owner's Environmental and Social Advisor (OESA), as a part of the Hai Long Offshore Wind Farm Project, located in Taiwan ("the Project").

The Project will be developed in three stages – Hai Long 2A (HL2A) at Site 19, Hai Long 2B (HL2B) (collectively referred to as HL2) at Site 19, and Hai Long 3 (HL3) at Site 18 (refer to **Table 1-1**). In total 37 wind turbine generators (WTGs) will be installed at HL2A and HL2B and 36 WTGs will be installed at HL3, each with a capacity of 14 megawatts (MW). The Project is expected to commence in 2026.

Table 1-1 Hai Long Offshore Wind Farm Projects

Owners/Sponsors	Project Stage	Capacity
■ Northland Power Inc. ■ Yushan Energy Pte. Ltd. ■ Mitsui & Co.	Hai Long 2A Offshore Wind Project (HL2A)	300 MW
	Hai Long 2B Offshore Wind Project (HL2B)	232 MW
	Hai Long 3 Offshore Wind Project (HL3)	512 MW

The Project will be funded by a consortium of sponsors comprising Northland Power Inc. (NPI), Yushan Energy Pte. Ltd. (YEPL) and Mitsui & Co. (Mitsui), referred to collectively as "the Consortium".

1.1 Scope and Purpose

As the Clients' OESA, ERM has prepared the following documents on the behalf of the Client:

- Cumulative Impact Assessment;
- Critical Habitat Assessment;
- Biodiversity Action Plan;
- Livelihood Restoration Framework;
- Stakeholder Engagement Plan (SEP);
- Climate Change Risk Assessment;
- Human Rights Impact Screening;
- Environmental and Social Management System Framework;
- Biodiversity Offset Management Plan;
- Livelihood Restoration Plan; and
- A Non-Technical Summary.

In addition to the above documents, ERM has been commissioned to prepare a Social Impact Assessment (SIA). This document presents the outcomes of the assessment of potential social impacts, with a focus on characterisation and assessment of potential positive and negative direct, indirect, and cumulative impacts.

The assessment of potential social impacts is being undertaken in line with relevant international standards, specifically the standards captured in **Table 1-2**.

Table 1-2 Relevant International Standards

Standard	Description
International Finance Corporation (IFC) Performance Standards (2012)	The IFC Performance Standards are designed to help avoid, mitigate, and manage environmental and social risks and impacts as a way of doing business in a sustainable way. The guidance is made up of eight (8) standards and is recognised internationally as best practice guidance for sustainable development in a variety of projects. Together, the eight Performance Standards establish standards that Projects are to meet throughout the life of a Project.
IFC General Environmental, Health, and Safety (EHS) Guidelines (2007)	The EHS Guidelines are technical reference documents with general and industry-specific examples of Good International Industry Practice (GIIP). The EHS Guidelines contain the performance levels and measures that are generally considered to be achievable in new facilities by existing technology at reasonable costs.
World Bank Industry Sector Guidelines: Environmental, Health, and Safety Guidelines for Wind Energy (2015)	The Wind Energy EHS Guideline is designed to be used together with the General EHS Guidelines document. The EHS Guidelines for wind energy include information relevant to environmental, health, and safety aspects of onshore and offshore wind energy facilities.
World Bank Industry Sector Guidelines: Environmental, Health, and Safety Guidelines for Electric Power Transmission and Distribution (2007)	The Electric Power Transmission and Distribution EHS Guideline Is designed to be used together with the General EHS Guidelines document. The EHS Guidelines for Electric Power Transmission and Distribution include information relevant to power transmission between a generation facility and a substation located within an electricity grid, including identification of impacts and their management and monitoring.
World Bank Industry Sector Guidelines: EHS Guidelines for Ports, Harbors, And Terminals (2017)	The Ports, Harbors, And Terminals EHS Guidelines is designed to be used together with the General EHS Guidelines document. The EHS Guidelines for Ports, Harbors, and Terminals are applicable to marine and freshwater ports, harbours, and terminals for cargo and passengers. It includes information on EHS issues primarily associated with port and terminal construction and operations, along with recommendations for their management as part of a comprehensive environmental and social management system.
Equator Principles 4 (EP4) (2020)	The EP4 is a financial industry benchmark that is intended to serve as a common baseline and framework for determining, assessing, and managing environmental and social risk in projects. EP4 is a framework to ensure that Projects are developed in a manner that is socially responsible and reflects sound environmental management practices.
European Bank for Reconstruction and Development (EBRD) and IFC's guidance note on Workers' Accommodation: Processes and Standards (2009)	The guidance note on Workers' Accommodation, developed jointly by IFC and the EBRD, looks at the provision of housing or accommodation for workers by employers and the issues that arise from the planning, construction, and management of such facilities.

While this assessment is seeking to align with international standards, the Project is also subject to a range of local regulatory requirements (refer to **Box 1-1**), which have informed the assessment of impacts and the selection of appropriate management measures.

Box 1-1 Overview of Regulatory Framework

The Project is subject to a number of environmental and social regulations in Taiwan, collectively viewed as the regulatory framework. Regulations of particular importance to the Project comprise:

- Environmental Impact Assessment (EIA) Act (2003);
- Labor Standards Act (2020);
- Wetland Conservation Act (2013);
- Wildlife Conservation Act of Taiwan (2013);
- Fisheries Act (2018); and
- Underwater Cultural Heritage Preservation Act (2015)

Each of these regulations require the Client to obtain permits and/or approvals from the Bureau of Energy (BoE), Environmental Protection Administration (EPA), Ministry of Economic Affairs (MoEA), and Taiwan Power Company (state-owned power utility), amongst others.

One of the primary approvals sought under the regulatory framework is environmental approval (under the EIA Act 2003). This involves the preparation of a Phase I EIA, which is submitted to the BoE, and subsequently submitted to the EPA, for approval (termed a Phase I EIA Review). If the EPA deems a project to have no material impact on the environment, a Phase II Review (i.e. in-depth assessment of "significant impacts") will not be required.

Permitting and opinion letters have been obtained by the Project from the Government. These documents serve as official authorisations demonstrating that the Project has followed the appropriate legal and regulatory processes and exhibit's the Client's commitment to adhering to the relevant guidelines and ensuring that its activities are conducted in a responsible and compliant manner.

1.2 Document Structure

This Social Impact Assessment document is structured in the following manner:

- **Section 2: Project Description –** outlines the Project components and workforce arrangements, along with identifying nearby operations. This detail is used to inform the baseline snapshot (refer to **Section 4**) and the impact assessment (refer to **Section 5**).
- **Section 3: Methodology/Approach** – provides an overview of the SIA methodology/approach.
- **Section 4: Social Baseline Snapshot** – provides an overview of the Area of Influence (AoI) and describes the existing baseline conditions relevant to the Project AoI.
- **Section 5: Assessment of Impacts** – identifies the receptors that may be impacted by the Project and provides an assessment of the social impacts generated by the Project that may be experienced by the receptors located within the Project's AoI, including consideration of mitigation measures.
- Appendix A: Nearby Projects – provides further detail as to nearby projects (and potential cumulative impacts).
- Appendix B: Scoping Matrix – which captures the outcomes of the scoping exercise.
- Appendix C: Supplier Evaluation – captures further detail relating to the evaluation of the Project's suppliers.

2 PROJECT DESCRIPTION

The Project is located in the Taiwan Strait between mainland China and Taiwan, in two (2) licensed areas awarded by the Taiwanese BoE – Site 18 and Site 19, as identified in **Figure 2-1** (together referred to as "the Sites").

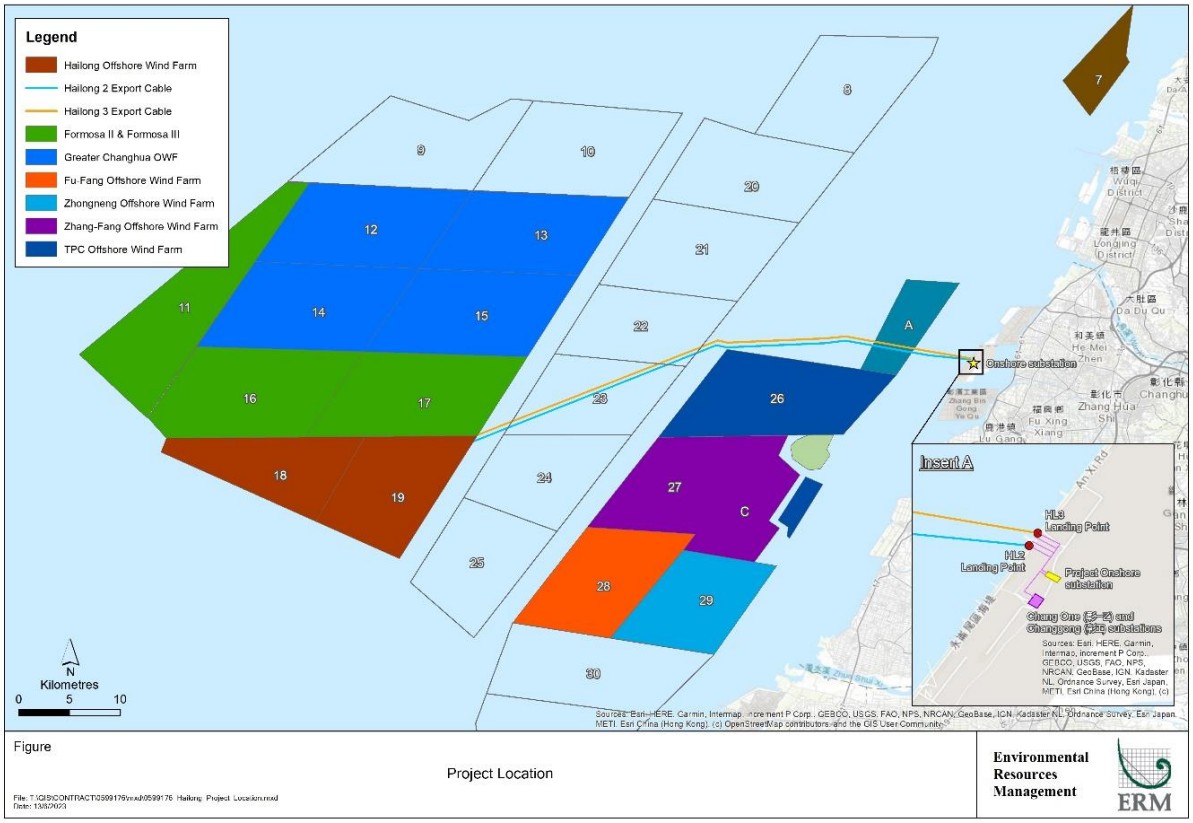


Figure 2-1 Project Location[1]

The Sites are situated approximately 50 kilometres (km) and 40 km from the western shore of Taiwan, directly adjacent to one another. The water depth at the Project location ranges from 30 meters (m) to 55 m Lowest Astronomical Tide (LAT). Site 18 and Site 19 are approximately 85.2 km^2 and 59.2 km^2 in size, respectively. The WTG components will be held at an existing facility until deployment to site. A separate construction compound is not being proposed as part of the Project.

A substation will be built within the Changhua Binhai Industrial Zone, an area that is situated on reclaimed land, in the Lukang Township, Changhua County, and is inclusive of areas that may form part of a typical construction compound (i.e. a separate onshore construction compound is not proposed). The industrial zone hosts a range of industries, including food production, chemical industries, metal processing, and furniture industries.

A terrestrial ecology survey was conducted in 2016 as part of the Project's environmental approval process (and captured in the EIA), during which it was noted that the proposed Project locations were barren with no buildings present. The EIA further notes that the entirety of the industrial zone, including the Project Site, consists of coastal soil with high salinity and rapid water loss which makes the land unfavourable for plant growth. Based on a review of previous site imagery, the same conclusion was drawn, in that there is no indication that the land parcel allocated to the Project within the Changhua Binhai Industrial Zone is or has been used as an informal settlement or for other uses, such as

[1] Source: HLOW (2021)

subsistence farming activities. Additionally, there are no structures in the vicinity of the allocated land parcel that could be considered personal housing.

The operational dates, also referred to as Commercial Operation Dates (CODs), for HL2 and HL3 Offshore Wind Farms (OWFs) are planned for December 2025 and December 2026 respectively. The Project will have an operating life of 25 years, after which it is scheduled to be fully decommissioned.

2.1 Project Components

The Project contains a range of offshore and onshore components, an overview of which is provided in **Table 2-1**. The elements covered by this impact assessment, are as follows:

- Offshore components:
  - 73 WTGs of at least 25 m in height, installed on a 3-legged jacket, with a total installed capacity of 1 gigawatt (GW):
    - Site 19: 37 WTGs at HL2A (capacity of 300 MW) and HL2B (capacity of 232 MW);
    - Site 18: 36 WTGs at HL3 (capacity of 512 MW);
  - Two offshore substations (OSS)–- one for HL2 (Site 19) and one for HL3 (Site 18); and
  - Submarine export cables (EXC) of 220 kilovolts (kV), involving 2 EXCs for HL2 with a total length of 114 km (57 km each) and 2 EXCs for HL3 with a total length of 151.6 km (75.8 km each).
- Onshore components:
  - Temporary storage of building materials on site in the Changhua Binhai Industrial Zone;
  - Substation, which is located in the Changhua Binhai Industrial Zone, in the Lunwei area;
    - The Changhua Binhai Industrial Zone is located on reclaimed land, which has been developed in stages since the early 1980's for mixed-use industries.
  - Cables connecting from the Project substation to the existing Taiwan Power Company Substations, located in the Changhua Binhai Industrial Zone; and
  - Existing access roads, specifically Qing'an South 1st Road, Provincial Highway 17, Changbing Road, South Binhai Road, Xibin Expressway, and Provincial Highway 61.
    - These access roads are designated for the transportation of construction materials. The Project construction material transportation vehicles will not pass through community access roads.

The WTGs used by the Project are Siemens Gamesa's SG 14-222 DD offshore wind turbines. Each WTG will be connected via subsea 66~72.5 kV inter-array cables to the OSS. HL2A, HL2B and HL3 will share one OSS, which will raise the voltage from 66~72.5 kV to 220~245 kV. The electric current will then be transmitted to the substation via a subsea export cable, where the voltage will be stepped-down to 161 kV and connected to the 60 hertz (Hz) local distribution electric power network via the Chang One (彰一乙) and Changgong (彰工) substations, owned and operated by the Taiwan Power Company. The Chang One (彰一乙) and Changgong (彰工) substations are located within the Changhua Binhai Industrial Zone and located approximately 600 m from the HL onshore substation.

Table 2-1 Project Components

	HL2 (Site 19)		HL3 (Site 18)
Location			
Windfarm Location	Off the coast of Changhua County and Penghu County, Taiwan		
Windfarm Area	59.2 km^2		85.2 km^2
Distance to Shore	40 km		50 km
Water Depth	36-56 m		
Capacity and Components			
Capacity	HL2A: 300 MW	HL2B: 232 MW	HL3: 512 MW
Number of WTGs and Capacity	37 units of 14 MW WTGs		36 units of 14 MW WTGs
Substations	HL2 and HL3 will each have one offshore substation.		
Cables	Subsea Cables: 66~72.5 kV inter-array subsea cables and 220-245 kV subsea export cables connecting the WTGs to shore. Onshore Cables: 161 kV underground cables connected to the 60 Hz local distribution network, located approximately 600 m from HL onshore substation		
Expected Schedules			
Construction Commencement	Construction Permit obtained on 31 March 2023		
COD[2]	HL2A: December 2025	HL2B: December 2026	HL3: December 2026

During the construction phase of the Project, 25 working vessels are estimated to be required. Two working vessels are estimated to be required during the operation phase. Vessel details are provided in **Table 2-2.**

Table 2-2 Project Vessels

Activities	Vessel Purpose	Quantity
Construction Phase		
OSS	OSS Transport Barge	3
	OSS Transportation Tug	3
Export Cable	Cable Preparation	1
	Cable Installation (Laying) Vessel CLV (EXC/IAC)	1
	Guard Vessel	1
	Fishing Guard Vessel	2
	Trenching Support Vessel TSV (EXC/ inter arrays cable (IAC))	1
	Installation Support Vessel ISV (EXC/IAC)	1

[2] COD refers to the date the first turbine to be connected to the grid and is reflective of the dates in the contract.

Activities	Vessel Purpose	Quantity
Inter Array Cable	Cable Installation Vessel	1
	Crew Transfer Vessel	1
Foundation (FOU)	FOU Installation Vessel	1
	Pin Pile Transport	1
	Jacket Transport	1
	Pin Pile Noise Mitigation Vessel (Double Big Bubble Curtain Vessel (DBBC))/Jacket Grouting Vessel	1
	Pin Pile Noise Monitoring Vessel	1
	Jacket Secondary Works Vessel	1
WTG	Crew Transfer Vessel	2
	WTG Installation Vessel	1
	WTG Walk to Work Commissioning Vessel	1
Sub-total		*25*
Operation Phase		
General	Crew Transfer Vessel (CTV)	1
	Service Operation Vessel (SOV)	1
Sub-total		*2*

The navigation routes of the working vessels will primarily involve:

- Travel from Kaohsiung Port and An Ping Port (southern Taiwan) to Taichung Port (western Taiwan);
- Travel from Taichung Port to the Project Sites; and
- Navigating from point-to-point within the Sites.

The planned route from Kaohsiung Port to Taichung Port covers a total distance of approximately 245 km, while the route from Taichung Port to the Sites spans a total distance of approximately 69 km.

For safety purposes, the Project will comply with the 'Navigation Safety Regulations for Working Vessels During OWF Construction and Operation' and 'Sailing Direction for the Changhua Wind Farm Channel', as well as the navigation guidelines issued by the Maritime Port Bureau (MPB) for check-in, departure, and navigation channel safety. It should be noted that during the construction phase, other vessels will be restricted from entering a 500 m radius of the Project. HL will deploy guard vessels around the construction area to patrol and avoid any incidents. In addition, the 500 m distance is negotiated and agreed by fisheries associations (FAs) in the fishery compensation agreements. HL and/or its contractors will prepare the relevant mobilisation information to issue the 'Notice to Mariners' to MPB, and for FAs to assist with publishing such notice to fishers.

Works onshore during the construction phase will involve a total of nine (9) truck movements (one-way trips) per hour. Truck movements will include a total of four (4) trucks in the onshore cable laying area, three (3) trucks transporting soil and gravel materials to the onshore substation location, and two (2) trucks used for the transport of other construction materials.

Additionally, it is estimated that the Project will generate 30 one-way trips per hour for light vehicles (i.e. cars and motorcycle) during construction due to the movement of personnel.

Details on vessel and traffic movements during the operation phase were not available at the time of writing this report (with the exception of the CTV requirements identified in **Table 2-2**).

2.1.1 Project Phases

In summary, the project involves two phases: the construction phase and operation phase:

- Construction phase activities including, but are not limited to:
  - Onshore land clearing, ground-breaking, site enabling works, site access, and mobilisation of workforce;
  - Vehicle and vessel movements, including the type and volume of traffic generated onshore and offshore, and likely transportation routes; and
  - Workforce requirements, including the sourcing of workers and the proposed accommodation arrangements.
- Operation phase activities, including occasional maintenance of offshore turbine and onshore substation.

2.2 Workforce

The size of the Project's workforce will vary over the life of the Project. During the construction phase it is expected that the workforce will fluctuate based on the nature of the activities carried out at the Sites. It is estimated that the peak construction workforce will be approximately 216 people, assuming current construction timeframes are met.

During the operation phase, the workforce is expected to remain stable at approximately 120 people. During decommissioning, there is expected to be a reduction in the number of total personnel. At this stage of the Project, no information is available regarding the job type, gender, and/or nationality of the workforce, however this data will be collected and monitored upon Project commencement.

Table 2-3 provides an overview of the expected workforce size, broken down by direct and indirect employee and Project phase.

Table 2-3 Estimated Workforce Employment during Project Lifecycle

Phase	Timeframe	Direct Employee	Contractors and Subcontractors	Total
Construction	Q1 2024	6	166	172
	Q2 2024	6	175	181
	Q3 2024	6	187	193
	Q4 2024	6	187	193
	Q1 2025	6	210	216
	Q2 2025	6	210	216
	Q3 2025	6	210	216
	Q4 2025	6	210	216
	Q1 2026	6	200	206
	Q2 2026	6	193	199
	Q3 2026	6	190	196
	Q4 2026	6	180	186
Operation	Q1-Q4 of 2027-2047	30	90	120

Phase	Timeframe	Direct Employee	Contractors and Subcontractors	Total
Decommissioning	Q1-Q4 of 2048-2051	9	30	39

Onshore, most workers will be hired locally, with a relatively small number of workers employed from outside of Taiwan. Contractors and subcontractors will rent accommodation for those workers hired from outside of the local area. At the time of preparation of the SIA, the extent of onshore rental accommodation required to be secured for non-local workers is still to be determined.

Offshore, workers will be housed on offshore vessels. Accommodation arrangements on these vessels will comply with Det Norske Veritas (DNV)[3] minimum Comfort Class 3 or equivalent class notation. Further detail as to the minimum requirements for offshore worker accommodation is delineated in HL's TSA-V.E.09 Minimum Requirements for Accommodation document. while the HL Human Resources (HR) Policy states, *"the Accommodation provided by [Hai Long Offshore Wind Farm] HLOW will comply with accommodation standards as set out by IFC/EBRD Worker" Accommodation: Processes and Standards".* A comparison of these documents is provided in **Table 2-4**. As shown, the accommodation requirements are reflective of the type of accommodation. In particular, the differences between the requirements relate to lighting and size of cabin/room.

Table 2-4 Accommodation Requirements Comparison

HL's TSA-V.E.09 Minimum Requirements for Accommodation	EBRD and IFC's guidance note on Workers' Accommodation: Processes and Standards (2009) [4]
Cabins shall be lit, either by (i) daylight and provided with a window or a porthole fitted with curtains or equivalent coverage, or (ii) with sufficient lux in case there is no window.	Both natural and artificial lighting are provided and maintained in living facilities.
The total cabin floor area for each cabin shall not be less than: 4.5 m^2 for single cabins (preferably 5.5 m^2 if possible) 7.5 m^2 for shared cabins.	Density standards are expressed either in terms of minimal volume per resident or of minimal floor space. Usual standards range from 10 to 12.5 cubic metres (volume) or 4 to 5.5 square metres (surface).
The following welfare facilities shall as a minimum be available and accessible to personnel: ■ Reception / boarding area; ■ Fitness room; ■ An additional shower facilities must be available for SGRE personnel when accommodated in shared cabins; ■ Recreational area such as TV lounge, cinema and gaming facilities; and ■ Reasonable access to internet as available on board.	Basic collective social/rest spaces are provided to workers. Standards range from providing workers multipurpose halls to providing designated areas for radio, TV, cinema.
Personnel must have access to mess rooms of adequate size and sufficient comfort. The catering must be nutritional, internationally varied and reasonably well-prepared.	Food provided to workers contains an appropriate level of nutritional value and takes into account religious/cultural backgrounds; different choices of food are served if workers have different cultural/ religious backgrounds.

2.3 Nearby Operations

Excluding the Project, there are 20 OWF projects that are proceeding through the Taiwan EIA process;. Of these 20 projects, 14 have been selected to proceed to the next stage of the EIA process. As shown

[3] Formerly Det Norske Veritas Germanischer Lloyd (DNV GL)

[4] European Bank for Reconstruction and Development (EBRD) and IFC's guidance note on Workers' Accommodation: Processes and Standards (2009)

in **Figure 2-2**, of the 14 OWFs, seven (7) companies are planning OWF projects in the vicinity of the HL licensed area[5] (See Appendix A for further details). The majority of these projects are either in the early stages of development or have recently commenced construction. Accordingly, the extent of the publicly available information is limited.

It is understood however, that Ørsted is in the process of constructing the 900 MW Greater Changhua project and will commence construction on another 920 MW OWF project in the same area in 2025. In addition, Total Energies and Corio have announced that they are seeking to develop Formosa III, a 600 MW OWF project.

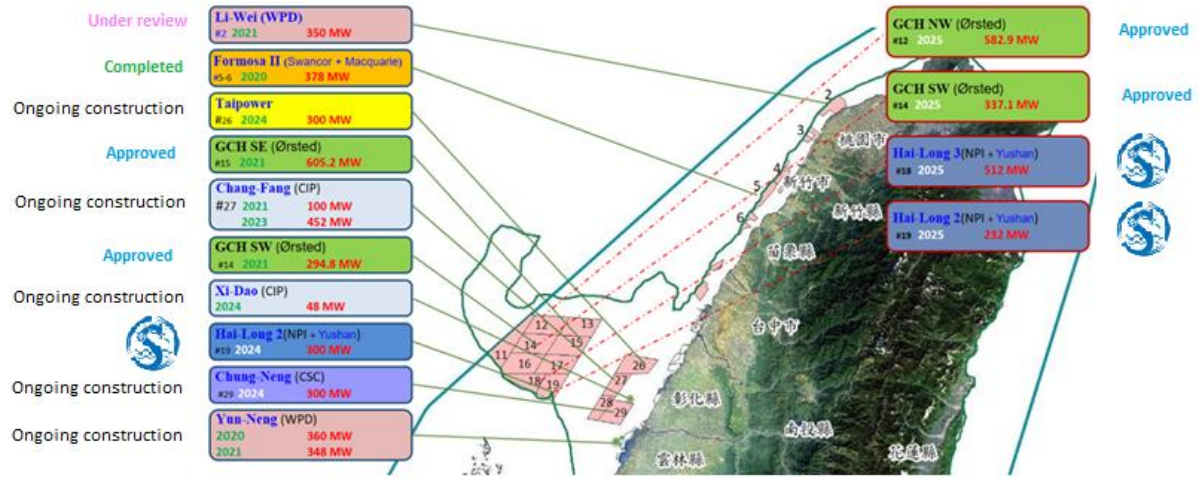


Figure 2-2 Locations of the Planned Offshore Wind Farms[2]

Seven (7) OWF projects will require individual onshore substations within the Changhua Binhai Industrial Zone. Information pertaining to the onshore substations (e.g. employment numbers, management plans, schedule) has not been made publicly available.

Based on the limited information regarding onshore and offshore project components of the seven OWF projects, the cumulative impacts likely to be experienced by receptors as a result of these OWF projects, cannot be fully understood at the time of writing. However, it should be noted that the proponents of the 14 proceeding projects meet monthly via the Taiwan Offshore Wind Industry Association (TOWIA) Platform[6] to discuss project status/progress, issues that have arisen over the previous month, and how to better collaborate with respect to various construction/management matters. This provides a forum to identify and mitigate potential impacts and risks early.

[5] Source: Ministry of Economic Affairs MOEA
[6] Taiwan Offshore Wind Industry Association

3 METHODOLOGY/APPROACH

A SIA involves identifying and assessing the potential social impacts associated with a project and its activities. The aim is to provide an understanding of the nature of potential positive and negative social impacts and determine appropriate management measures (where necessary).

The methodology/approach applied for the purposes of this SIA is depicted in **Figure 3-1**, and described in further detail below. This process aligns with good international practice, relevant international standards (including those outlined in **Table 1-2**), and takes account of the local regulatory requirements in Taiwan (refer to **Box 1-1**).

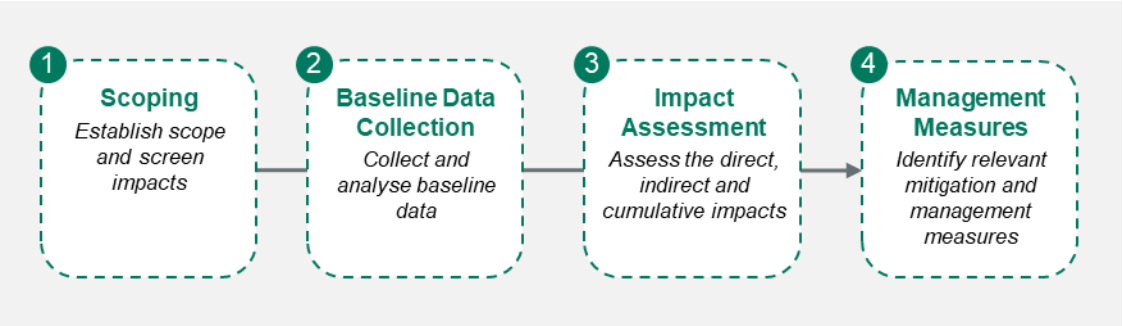


Figure 3-1 SIA Methodology/Approach

3.1 Scoping

The scoping of potential impacts for an SIA involves:

- Establishing an understanding of the Project and its activities (as described in **Section 2**);
- Defining the Project AoI (refer to Section 3.1.1);
- Identifying the receptors located within the Project AoI that may be impacted by the Project (refer to **Section 3.1.2**); and
- Determining the potential interactions that may occur between the Project and the receptors in the Project AoI (refer to **Section 3.1.3**).

3.1.1 Defining the Area of Influence

According to IFC Performance Standard 1[7] the AoI for a project should encompass the following:

- The area likely to be affected by:
  - i. the project and the client's activities and facilities that are directly owned, operated or managed (including by contractors) and that are a component of the Project;
  - ii. impacts from unplanned but predictable developments caused by the Project that may occur later or at a different location; or
  - iii. indirect project impacts on biodiversity or on ecosystem services upon which Affected Communities' livelihoods are dependent.
- Associated facilities, which are facilities that are not funded as part of the Project and that would not have been constructed or expanded if the Project did not exist and without which the Project would not be viable.

[7] IFC PS1 Identification of Risks and Impacts section, paragraph 8

- Cumulative impacts that result from the incremental impact, on areas or resources used or directly impacted by the Project, from other existing, planned or reasonably defined developments at the time the risks and impacts identification process is conducted.
- In defining the Project AoI, the IFC's definition was applied, with a particular focus on the following Project components, aspects and activities:
- WTG detail, including height and locations within the marine environment;
- Location of key infrastructure, including underground cables and substations (offshore and onshore);
- Construction phase activities (refer to **Section 2.1.1**); and
- Operation phase activities (refer to **Section 2.1.1**).

When considering these aspects, it was determined that the Project AoI should include the area within the Sites (including the WTGs and associated infrastructure), the offshore and onshore cabling and vessel transportation routes, the area of the onshore substation in the Changhua Binhai Industrial Zone, and surrounding area, including local communities and townships, where direct, indirect, and cumulative positive and negative impacts may occur. The Project AoI is further defined in **Section 4.1**.

3.1.2 Identification of Receptors and Vulnerable Groups

The IFC stakeholder engagement handbook[8] defines stakeholders as,

> *"…persons or groups who are directly or indirectly affected by a project, as well as those who may have interests in a project and/or the ability to influence its outcome, either positively or negatively."*

Stakeholders may include locally affected communities or individuals and their formal and informal representatives, national or local government authorities, politicians or other leaders, civil society organisations and groups with special interests, or other businesses. Not all stakeholders will experience potential social impacts from a project; those who are affected are referred to as receptors.

Some receptors may also be categorised as being part of a vulnerable group. The IFC Performance Standard 1[9] defines vulnerability as follows,

> *"[The] vulnerable status may stem from an individual's or group's race, colour, sex, language, religion, political or other opinion, national or social origin, property, birth, or other status. The client should also consider factors such as gender, age, ethnicity, culture, literacy, sickness, physical or mental disability, poverty or economic disadvantage, and dependence on unique natural resources."*

The receptors and any vulnerable groups identified as relevant to the Project, and located within the Project AoI, are defined in **Section 5.1**. To maintain consistency, the stakeholder groups described in the SEP for the Project have been used to describe the identified receptors.

3.1.3 Scoping of Potential Impacts

Scoping focused on understanding where there may be interactions between the Project (and its activities), and the receptors identified as being located within the Project AoI. Where these interactions exist, impacts have the potential to occur.

Consideration was given to potential positive and negative direct, indirect and cumulative social impacts that may occur during construction, operation and decommissioning of the Project. In doing so, the following approach was applied to better understand the magnitude of the potential social impacts:

[8] Source: IFC Stakeholder Engagement Handbook (2007)
[9] Source: IFC Performance Standards (2012)

- **Scoped out:** The impact is not expected to eventuate, so has been scoped out. Meaning it will not be further evaluated as part of the SIA;
- **Minor:** There is a perceptible difference or change from the baseline conditions. The impact is local (i.e. affects local communities and local businesses), occurs over a short period of time, and is rare.
- **Moderate:** The difference or change from the baseline conditions is clearly evident. The impact is experienced by the receptors in the Project AoI over a long period of time.
- **Major:** There is a large change from the baseline conditions. The impact is experienced throughout the Project AoI and is persistent.

The scoping process drew on a suite of Project related documentation, including the SEP (ERM 2021), EIA (2018), Environmental first Deviation Report (2021), Environmental second Deviation Report (2022), and Human Rights Screening Exercise (ERM 2021).

The outcomes of the scoping exercise are captured in Appendix B.

3.2 Baseline Data Collection

A social baseline describes the local socio-economic context of the Project AoI. It documents the existing social environment, including conditions and trends, relevant to the impacts identified as potentially occurring. Essentially, the social baseline is the benchmark against which social impacts can be predicted and analysed.

A social baseline also seeks to capture information pertaining to community values, and how people and the things they value may be impacted by the Project. This includes consideration of:

- The key features of the Project AoI and/or the broader landscape that people value;
- How these features influence people's way of life, health or wellbeing;
- How the Project might affect these features;
- How the Project could be modified to enhance these features and how they affect people's wellbeing; and
- How the Project might be designed to avoid and minimise any adverse impacts.

A snapshot of the social baseline, captured in **Section 4**, has been prepared based on a review of the secondary data readily available within the public domain, as well as primary data collected through a fisheries survey (refer to **Box 3-1**).

The key secondary information sources included: data available from governmental agencies such as the Ministry of the Interior, Ministry of Health and Welfare, National Statistics Agency, Changhua County and Penghu County Government Department of Accounting and Statistics [10], and the CIA World Factbook[11].

[10] Source: Changhua County and Penghu County Government Department of Accounting and Statistics, accessed in May 2023

[11] Source: CIA World Factbook, accessed in May 2023

Box 3-1 Fisheries Baseline Survey

- The Fisheries Baseline Survey was conducted to better understand the fishing activities that occur within the Project AoI, with a focus on the Penghu and Changhua counties. In total, 257 households were surveyed, which equates to 750 people associated with the Fisheries Associations in Changhua and Penghu Counties. Out of the 750 interviewees that participated in the Fisheries Baseline Survey, 403 were male (53.7%) and 347 were female (46.3%). The survey included both vessel owners, their relatives, and their workers.
- The survey included questions relating to general socio-economic status of the area, and fishing practices that are undertaken (e.g. fishing methods employed, seasonality, income generated through fishing, level of dependence on fishing). The data obtained through the survey is captured in **Section 4.9**.

3.3 Impact Assessment and Management Measures

Following completion of the baseline, the next step is to evaluate the potential social impacts identified through the scoping exercise. The focus is on determining the significance of potential positive and negative, direct, indirect and cumulative impacts.

ERM's social impact assessment methodology, which has been refined through hundreds projects, has been applied for the purpose of this SIA. This methodology is aligned with good international practice, such as the IFC Performance Standards.

The social impact assessment methodology involves determining the significance of the potential social impacts through an evaluation of the likelihood of the impact occurring (as defined in **Table 3-1**), and the magnitude of the impact, should it occur (as defined in **Table 3-2** and **Table 3-3**).

Table 3-1 Definition of Likelihood

Likelihood Level	Meaning
Low	The event is unlikely but may occur at some time during normal operating conditions.
Medium	The event is likely to occur at some time during normal operating conditions.
High	The event will occur during normal operating conditions (i.e., it is essentially inevitable).

Table 3-2 Definition of Magnitude

Magnitude Level	Extent	Duration	Scale	Frequency
	The geographic 'reach' of the impact	*The timeframe over which the impact will be experienced*	*The degree of change experienced as a result of the impact*	*The constancy or periodicity of the impact*
Negligible	Household	Temporary	Negligible change	Rare
Minor	Township level	Short-term	Perceptible change	Occasional
Moderate	County level	Long-term	Clearly-evident change	Often
Major	Taiwan	Permanent	Large or stepwise change	Constant

Table 3-3 Magnitude Levels

Magnitude Level	Meaning
Negligible	The change that occurs remains within the range commonly experienced by receptors.
Minor	There is a perceptible difference or change from the baseline conditions. The impact is local – i.e. affects local communities and local businesses. It occurs over a short period of time and it is rare.
Moderate	The difference or change from the baseline conditions is clearly evident. The impact is experienced by the receptors in the Project AoI over a long period of time.
Major	There is a large change from the baseline conditions. The impact is experienced throughout the Project AoI. It is persistent.

A significance rating of Low, Medium, High, Very High is assigned by combining the magnitude rating and likelihood rating using the matrix in **Table 3-4**.

Table 3-4 Social Impact Significance Matrix

		Likelihood		
		Low	**Medium**	**High**
Magnitude	**Negligible**	Low	Low	Medium
	Minor	Low	Medium	High
	Moderate	Medium	High	Very High
	Major	High	Very High	Very High
	Positive	Positive		

Significance ratings are first provided on a pre-mitigation basis, that is, assuming no implementation of the stated mitigation measures. It is important to note that impact prediction and evaluation considers any embedded controls (i.e. physical or procedural controls that are already planned as part of the Project design, regardless of the results of the impact assessment process). An example of an embedded control is a standard acoustic enclosure installed around a piece of major equipment. This avoids assigning a magnitude based on a hypothetical version of the Project that disregards the embedded controls.

Only adverse impacts are assigned a significance rating, as positive impacts are designated as 'positive'.

Once the impacts have been assessed, mitigation measures are identified. The aim is to avoid and/or minimise negative impacts in accordance with the principles of the mitigation hierarchy. For negative impacts, where avoidance or minimisation is not possible, management strategies have been identified. Where an impact is predicted to be positive, measures to enhance positive impacts were identified to ensure the maximum benefit to receptors.

The factors that were considered when developing mitigation measures, include:

- A clear connection between the mitigation measure and the negative social impact being mitigated;
- Whether there is an applicable standard that defines what is an acceptable level of negative social impact;
- Whether the Project is the sole or primary cause of the negative social impact, and the scale of its relative contribution to the overall or cumulative social impact;
- Whether the mitigation measure requires partnership with a third party;

- Whether the mitigation measure is likely to cause secondary social impacts;
- Whether the mitigation measure is reasonable or practicable;
- Whether and in what ways the mitigation measure is acceptable to receptors; and
- Whether the mitigation measure will address all reasonably foreseeable scenarios.

3.4 Limitations

As in all studies, this assessment of the potential social impacts associated with the Project was subject to certain constraints and limitations, the most significant being availability of secondary data, or a lack of response from public agencies that hold such data. In cases where ERM was unable to obtain data that it deemed necessary for the assessment, it relied instead on either alternative sources of information, or provided a recommendation for the Project to carry out supplementary studies.

It is also noted that in preparing this document previous stakeholder engagement activities were leveraged to inform the analysis presented in this document. This included engagement with government agencies, offshore wind producers and local stakeholders (as part of the 2023 Fisheries Baseline Survey). The outcomes of these engagement activities have been captured in the assessment of potential impacts.

Where this document relies on publicly available information, it is noted that the most up to date information has been used. To this end, the most recent publicly accessible data from official sources dates from 2021, and in most instances, particularly at a local level (i.e. township level) the most recent data dates from 2015.

4 SOCIAL BASELINE SNAPSHOT

This section presents a snapshot of the social baseline for the Project AoI, and the receptors located within the Project AoI. The social baseline snapshot serves to inform the assessment of social impacts outlined in **Section 4.10.2**.

4.1 Area of Influence

The Project AoI, defined for the purposes of the SIA is comprised of the following three (3) components:

- **The area within the Sites and immediate surrounds** – the Project is located in the Taiwanese Strait within two (2) licensed areas awarded by the BoE – Site 18 and Site 19, located in the marine jurisdiction of Changhua County and Penghu County. The Sites have a combined area of 144.4 km^2, wherein key Project infrastructure will be located, including the WTGs and the OSS.
- **The offshore and onshore cabling and vessel transportation routes and exclusion zone** – the Project requires the installation of a 126 km EXC running between the OSS and the onshore facilities, with the Northern Cable Landing Area dissecting the Exclusive Fishing Right (EFR)[12] area of the Changhua Fishery Association (CFA). In addition, construction vessels will be required to transport materials and personnel to/from the offshore Sites. During the period of construction, a 500 m radial exclusion zone will be enacted around the offshore areas of the Project.
- **The area of the onshore substation and surrounding community and township areas** – the onshore substation is located in the Changhua Binhai Industrial Zone, within the Lukang Township. Construction of the onshore substation and associated infrastructure will necessitate the movement of vehicles to/from the industrial zone. In addition, the surrounding communities and townships in Changhua and Penghu Counties may provide goods and services to support the construction and operation phases of the Project. The administrative areas captured in the Project AoI are listed in **Table 4-1**.

The Project AoI, incorporating the three (3) components identified above, is as depicted in **Figure 4-1**.

Table 4-1 Counties and Townships Located within the Project AoI

County	Township
Changhua	Xianxi
	Lukang
	Fuxing
	Fangyuan
	Shengang
Penghu	Baisha

[12] It is noted that the EFR is still used in practice. The EFR is further discussed in **Section 4.9**.

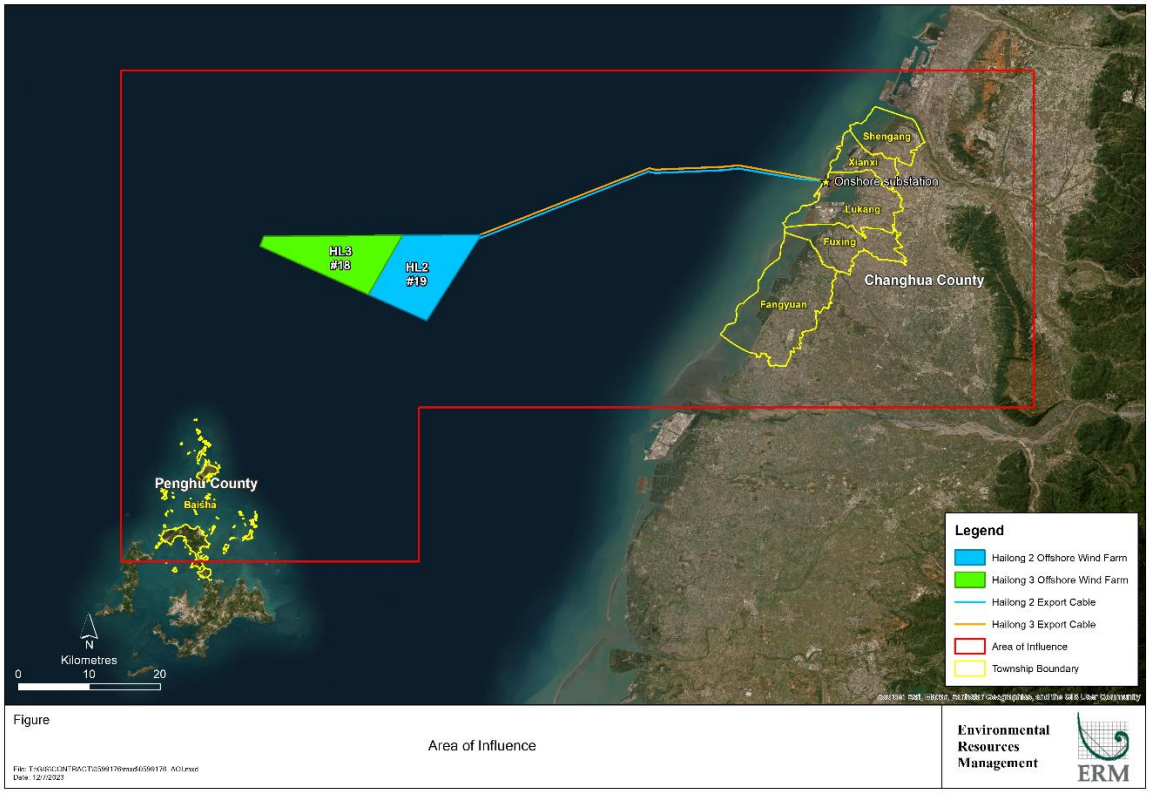


Figure 4-1 Area of Influence[13]

4.2 Location Context

Taiwan is divided into 13 counties, which are subdivided into smaller townships. The Project is located in Changhua County, with the onshore components situated in the Lukang Township in the Changhua Binhai Industrial Zone. The offshore Sites are located approximately 50 km off the coast of Changhua County and around 40 km north of Penghu County (refer to **Figure 4-1**).

4.2.1 Changhua County

Changhua County is located in the central-western part of Taiwan and comprises an area of approximately 1,074 km^2. To the north, Changhua is bordered by the Dajia River which separates it from Taichung City. To the east, the county is adjacent to the Bagua Plateau and Nantou County; and to the south it is bordered by the Zhuoshui River and Yunlin County. Changhua is known for its fertile land and abundant natural resources and is often labelled the “Granary of Taiwan” or the “Agricultural County”.

On the west coast of Changhua County is the Changhua Binhai Industrial Zone. The Changhua Binhai Industrial Zone is a section of reclaimed land that spans a 12 km route from Shengang Township to Lukang Township. The industrial zone was first set aside for industrial structural transformation in 1977 by the Industrial Development Bureau (IDB) of the Ministry of Economic Affairs. Development of the industrial zone began in 1979, however progress slowed in 1981 due to the impact of the global economic downturn caused by the second energy crisis. Development recommenced in 1988.

The Changhua Binhai Industrial Zone is divided into three districts from north to south: the Xianxi District, Lunwei District, and Lukang District, which are separated by natural waterways. The industrial zone is separated into different sub-zones, with a total of 2,078 hectares (ha) of industrial land provided for

[13] Source: HLOW (2021)

large-scale domestic industries, and 1,202 ha designated for public facilities and environmental protection (inclusive of service centres, parks, green spaces, and sewage treatment plants).

Additionally Changhua offers a range of tourism and recreational activities along its coastline. Key activities or infrastructure include: Brand's Health Museum and Taiwan Glass Gallery, Lukang Old Street, Fubao Wetlands, Hanbao Wetlands, Wanggong Fishing Port, Fangyuan Putian Temple, and Dacheng Wetlands.

4.2.2 Penghu County

Since ancient times, the Penghu Islands (County) have been an important hub for shipping in East Asia. The Penghu Islands are approximately 60 km long and 40 km wide. According to a report commissioned by the Penghu County Government in December 2005, the archipelago is composed of 90 islands of various sizes, with only 19 of the islands (with a total area of 128 km^2) having human inhabitants. The largest islands in the archipelago are Magong Island, Xiyu Island, Baisha Island, Qimei Island, and Wang'an Island. Baisha beach is a popular tourist destination.

4.3 Population and Demographics

According to the Ministry of the Interior, as of 2021 the estimated population of Taiwan was 23,375,314 people, with the majority living on the island of Taiwan and approximately 0.4% living on offshore islands (such as Penghu, Lanyu, Green, Kinmen, and Matsu). Overall, the population of Taiwan has seen a negligible decrease (0.5%) since 2015.

The population of the Changhua County in 2015 was 1,289,072, decreasing by 2.7% in 2021 to a population of 1,255,330. Despite this decrease, Changhua County is the fifth most populated county in Taiwan. On the other hand, the population of the Penghu County has seen an increase of 3.8%, with an additional 4,036 people residing in the county between 2015 and 2021.

The decrease in population can be attributed to a declining birthrate, outflow of the younger population and an increasingly aging population. Additionally, an article[14] published in February 2023 states that most of the townships along the coastline are experiencing decrease in population since fishing/fisheries are the primary source of job and the younger population are steering away from manual labour jobs.

A breakdown of the population statistics relevant to the Project AoI is provided in **Table 4-2**. It should be noted that the population of the Project AoI townships represent approximately 5.8% of the total population of Taiwan.

Table 4-2 Population Breakdown[15]

Location	2015	2021	% change
	No.	*No.*	
Project AoI Townships			
Lukang (Changhua)	86,407	85,837	-0.66
Xianxi (Changhua)	17,040	16,486	-3.36
Fuxing (Changhua)	47,618	45,956	-3.62
Fangyuan (Changhua)	34,352	32,110	-6.98
Shengang (Changhua)	36,464	37,838	3.63

[14] Liberty Times Net Changhua County Article, 2023

[15] Source: Changhua County Government Department of Accounting and Statistics and Penghu County Department of Accounting and Statistics

Location	2015	2021	% change
	No.	*No.*	
Sub-Total	*226,881*	*218,227*	*-3.97*
Counties			
Changhua County	1,289,072	1,255,330	-2.69
Penghu County	102,304	106,340	3.80
Sub-Total	*1,391,376*	*1,361,670*	-2.18

The population of the Changhua County and Penghu County is generally evenly split between females (49%) and males (51%). When considering the five (5) townships included in the Project AoI the average gender division observed is on par with Changhua County's average, which was 50:50 in 2021. A population pyramid depicting the age and gender distribution of Taiwan as a whole is provided in **Figure 4-2** for context.

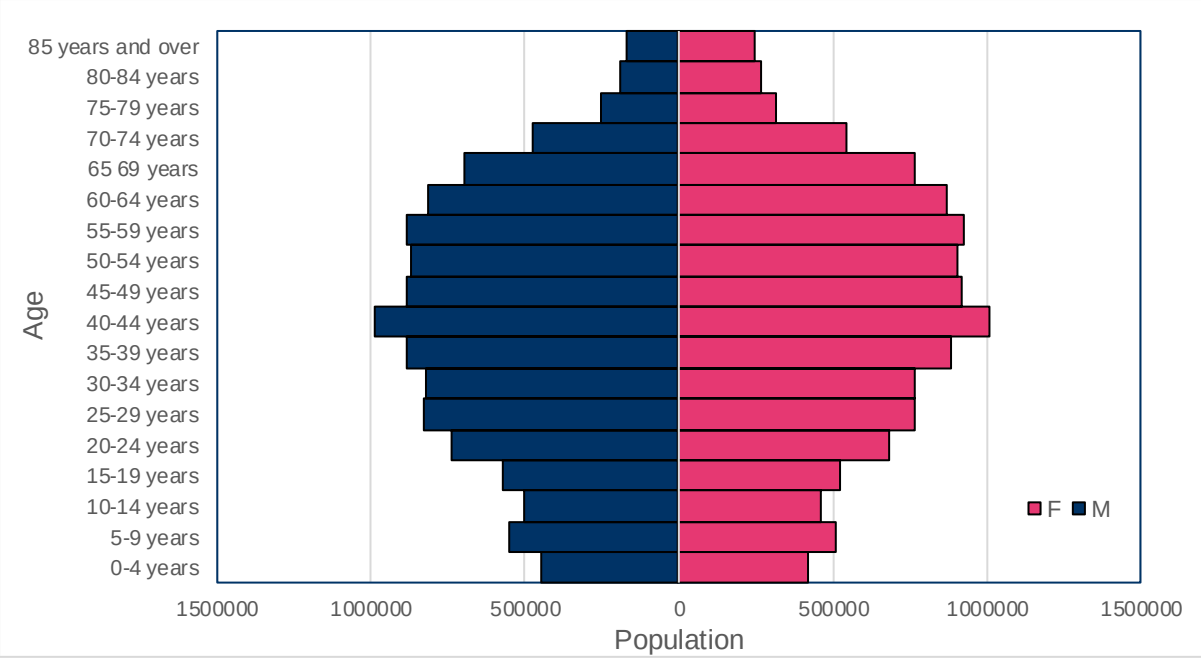


Figure 4-2 Population Pyramid for Taiwan

Figure 4-3 provides a breakdown of the population by age and gender in the Lukang and Xianxi Townships – the townships that are closest to the onshore activities carried out by the Project. The breakdown provided identifies that approximately 69.8% (70.8% for the male population and 68.8% for the female population) of the population in the Lukang Township, and 71.9% (72.6% for the male population and 71.1% of the female population) of the Xianxi Township, is aged between 15 and 64.

Comparing **Figure 4-2** and **Figure 4-3**, the data at the township level (Lukang and Xianxi Townships) follow the same trend of gender and age breakdown of Taiwan.

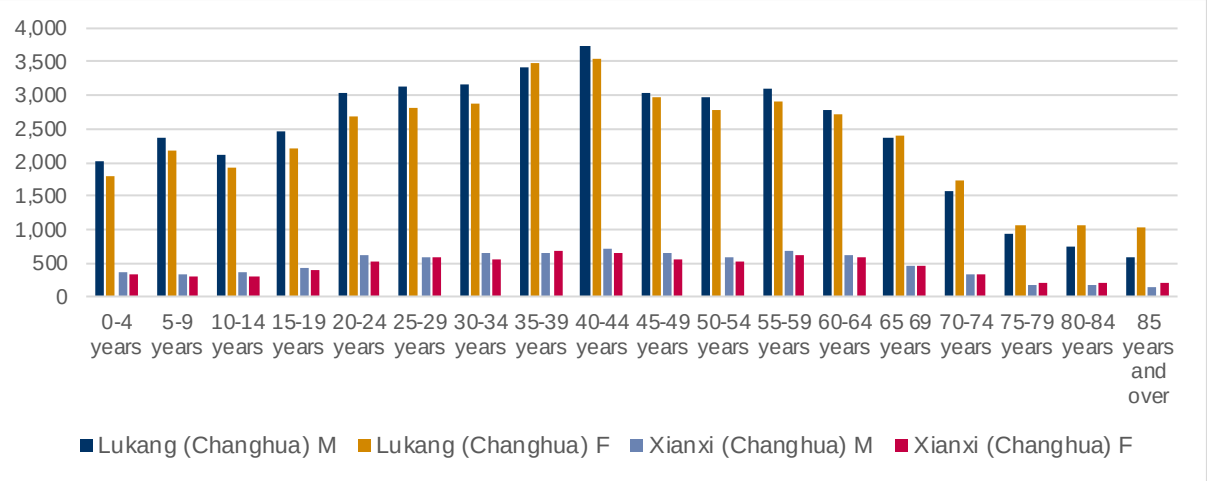


Figure 4-3 Population (Age and Gender) Breakdown for Lukang and Xianxi Townships

4.3.1 Indigenous Peoples

Taiwanese indigenous peoples represent approximately 2.5% of the total population (580,758 people in 2021), however this is the percentage of indigenous groups officially recognised by the Government. Historically indigenous people have lived along the alluvial plains of the Central Mountain Range mostly on the east side of the island. Migration to the mountains commenced when the Han Chinese started to settle in the lowlands. In more recent times, Taiwanese indigenous peoples have resided in the mountain range as well as in urban areas.

According to the Department of Household Registration[16], as of 2021, there are 6,145 indigenous peoples in the Changhua County and 659 in the Penghu County. This represents approximately 0.5% and 0.6% of the Changhua County and Penghu County populations, respectively. A further breakdown by indigenous peoples' representation within the townships in the Project AoI is provided in **Table 4-3**. The increase in the population of indigenous peoples is mainly due to a higher birthrate and relocation of indigenous peoples to larger towns for better life/ job opportunities.[17]

Table 4-3 Indigenous Peoples Population

Location	2015	2021	% change	% of Total Population
	No.	*No.*		
Project AoI Townships				
Lukang (Changhua)	458	479	4.38	0.56
Xianxi (Changhua)	53	54	1.85	0.33
Fuxing (Changhua)	200	218	8.26	0.47
Fangyuan (Changhua)	253	249	-1.61	0.78
Shengang (Changhua)	144	191	24.61	0.50
Sub-Total	*1,108*	*1,191*	*6.97*	*0.55*
Counties				
Changhua County	5421	6145	11.78	0.49

[16] https://www.ris.gov.tw/app/portal/346
[17] Changhua County Population Change and Estimation Research Report published in 2010.

Location	2015	2021	% change	% of Total Population
	No.	*No.*		
Penghu County	464	659	29.59	0.62
Sub-Total	*5,885*	*6,804*	*13.51*	*0.50*

4.4 Economy and Development

As of 2021, Taiwan had 11,918,000 people in the workforce, representing 49.8% of the total population of Taiwan. The gross domestic product (GDP) per capita of Taiwan has increased by 43% between 2010 and 2023.

The Taiwanese GDP is generated by three sectors[18]:

- **Service Industry (62.1%):** This includes wholesale and retail trade; transportation and warehousing; accommodation and food; publishing, video or audio production, communication and Information and Communications Technology service industries; finance and insurance; real estate; professional, scientific and technical services; support services; education; human health and social work services; arts, entertainment and recreation services; and other services.
- **Manufacturing (36%):** This includes electronics; communications and information technology products; petroleum refining; chemicals; textiles; iron and steel; machinery; cement; food processing; vehicles; consumer products; and pharmaceuticals.
- **Agriculture (1.8%):** This includes agriculture products, primarily rice, vegetables, pork, cabbages, poultry, sugar cane, milk, eggs, pineapples, and tropical fruit.
  - Taiwan's increase in GDP over the past 10 years is attributed to a multitude of factors, including the shift from labour-intensive industries to technology-intensive industries, and Taiwan entering into multiple trade agreements, such as the Economic Cooperation Framework Agreement (ECFA) signed in 2010 that reduce tariffs and commercial barriers between mainland China and Taiwan.
  - The Service Industry is the main sector of employment in Taiwan with 59.2% of the working population employed in service sector related businesses. The Manufacturing Sector is the second largest industry of employment, with 35.9% of the working population employed in manufacturing, followed by the agriculture sector with approximately 4.9% of the working population employed in the sector.
  - As of 2021, 96% of the working age population of Taiwan was employed, which represented 11,447,000 people, while 471,000 people were unemployed. The term 'employed' is defined as persons aged 15 and over who engage in compensated work (regardless of hours) or unpaid family work performing at least 15 hours of uncompensated work per week employment. A further breakdown by county shows that 96.1% of the Changhua County and 95.7% of the Penghu County population are employed, which is on par with the remainder of Taiwan.
  - Taiwan uses a relative poverty line as a proxy for poverty, those whose income is less than 60% of the median disposable income per capita are considered to be in poverty. In 2019, the number of nationally recognised low-income households represented approximately 1.6% of the total number of households and 1.3% (300,000 people) of the total population in Taiwan[19].

[18] Source: The World Factbook - CIA (2017)
[19] Source: Legal Aid Foundation (2022)

4.5 Health

Taiwan has a government administered insurance-based national healthcare system. It is categorised by accessibility, comprehensive coverage, low cost, and a national health insurance databank. In 2002, Taiwan had nearly 1.6 physicians and 5.9 hospital beds per 1,000 population[20]. The 2021 annual national medical practitioner status published by the Taiwan Ministry of Health identified that there were 7.5 physicians and 73.0 hospital beds per 10,000 population (equating to 0.75 physicians and 7.3 hospital beds per 1,000 population).[21]

There are over 10 hospitals in the Changhua County, the closest to the location of the Project's onshore components is the Chang Bing Show Chwan Memorial Hospital. Chang Bing Show Chwan Memorial Hospital is a private hospital with 1,000 beds, transportation services and various integrated healthcare services.

Based on 2021 data from the Ministry of Health and Welfare, the major health issues faced by the local population are Malignant Neoplasms/Cancerous Tumours, which represents 28% of total deaths. The second most common cause of death is heart disease (11.7%), followed by pneumonia (7.3%). This data is similar within the Project AoI, with the major cause of death being cancer, accounting for 28% and 27% of deaths in Changhua County and Penghu County, respectively. Overall in 2021, there were 10,834 total deaths in Changhua County and 987 deaths in Penghu County.

Under Taiwanese law, any work related illness, injury, disability, or death of workers must be reported to the Ministry of Labor. In 2011, there were 23,728 public institutions, covering all industries, reporting occupational accidents; with an average monthly employment of 4,514,819 workers, a total of 1,096,577,074 working days and 8,893,785,653 working hours. 13,324 cases of disabling injuries, including 87 deaths, 15 permanent total disabilities, 267 permanent partial disabilities, and 12,955 temporary disabilities were reported; this accounted for a total of 753,006 lost days[22].

4.6 Land Use

The main island of Taiwan is characterised by five mountain ranges that cover most of the island (i.e. Central Mountain Range, Yushan Range, Xueshan Range, Alishan Range, Hai'an Range), which are all located on the eastern part of the island. The western part of the island is characterised by flat rolling plains and accommodates the majority of the population.

As defined in the **Section 4.1**, the Project AoI is located in the western part of the island; with the onshore components situated within the Changhua Binhai Industrial Zone. The Changhua Binhai Industrial Zone is reclaimed land demarcated for industrial development (refer to **Section 4.2**).

The land within the Changhua Binhai Industrial Zone is owned and managed by the Government for the specific purpose of industrial development. The area is reclaimed land, with construction completed in the 1980s. The industrial zone hosts a range of industrial uses, including food production, chemical industries, metal processing, and furniture production. The Site will be secured; persons without appropriate approval will not be able to enter the Project Site.

A terrestrial ecology survey was conducted in 2016 as part of the Project's environmental approval process (and captured in the EIA), during which it was noted that the proposed Project locations were barren with no buildings present. The EIA further notes that the entirety of the industrial zone, including the Project Site, consists of coastal soil with high salinity and rapid water loss which makes the land unfavourable for plant growth. Based on a review of previous site imagery, the same conclusion was drawn, in that there is no indication that the land parcel allocated to the Project within the Changhua Binhai Industrial Zone is or has been used as an informal settlement or for other uses, such as

[20] Source: Library of Congress: Country Profile- Taiwan

[21] Source: Taiwan Ministry of Health and Welfare: Annual National Medical Practitioner Status Report, 2022

[22] Occupational Safety and Health Administration (OSHA), Ministry of Labor statistics

subsistence farming activities. Additionally, there are no structures in the vicinity of the allocated land parcel that could be considered personal housing.

4.7 Religion

Prior to the 17th Century, Taiwan was inhabited by Taiwanese indigenous populations, who practiced animist and nature-based religious beliefs. As settlers from Europe arrived, they introduced Christianity through Protestant and Roman Catholic missionaries. During the second half of the 17th Century there was also a large influx of Han Chinese who brought with them Buddhist, Taoist and Confucian belief systems. During the Qing Dynasty in mainland China, the latter three religions became popular, which in turn, saw a visible increase of religious temples, monuments, and facilities built in Taiwan.

As of 2021, the two (2) main religions in Taiwan are Taoism (813,006 followers) and Buddhism (111,290 followers). At the County level there are 70,065 Taoists and 5,024 Buddhists in Changhua County. Penghu County has a similar distribution between the two (2) religions, with 6,243 Taoists and 674 Buddhists.

4.8 Cultural Heritage

Taiwan's history has led to a rich cultural heritage, which has been influenced by different ethnic groups including indigenous peoples, the Dutch and the Spanish, the Japanese, and the Han Chinese.

Existing tangible cultural heritage in Taiwan is primarily linked to religion. According to the Ministry of the Interior (2005) there are approximately 4,006 Buddhist temples and 18,274 Taoist temples located throughout the island.

Given that Taiwan is an island, there is considerable of underwater cultural heritage. The Taiwanese Bureau of Cultural Heritage states that,

> *"…a total of 90 objects were discovered, of which 20 were identified as shipwrecks, including six Chinese ships from the Qing Dynasty, four British ships from the 19th century, three Western-style sailing ships, one American ship, and six Japanese ships. Animal fossils from the late Pleistocene era were also identified* [in the waters surrounding Taiwan]*."*

Despite the rich cultural history of Taiwan, there are no cultural heritage sites located within the Project AoI. A field survey of the onshore construction area did not identify any archaeological artefacts or areas/sites of historic heritage. A sonar survey was also conducted in the offshore areas to identify any underwater cultural resources. One (1) sonar contact was detected, which was noted as likely being gravel or marine debris. In the end, no underwater cultural resources were deemed to have been detected via the sonar survey.

4.9 Ecosystem Services

There are fishers present in the Project AoI who engage in offshore and coastal fishing[23]. Within the context of Taiwan, it is noted that that 'coastal fishing' extends up to 12 km from the shore, while 'offshore fishing' is located between 12km and 200km from the shore. **Table 4-5** presents the number of fishers engaged in offshore and coastal fishing in 2021 (by county). Penghu County has a larger population of costal and offshore fishers compared to that of Changhua County.

According to the Taiwan Fisheries Agency, an EFR area of 324.9 km^2 was granted to the CFA from 2009 to 2019, this area is depicted in **Figure 4-4**. All fishers operating in an EFR are required to be registered with a FA in order to utilise the area, in this instance fishers need to be registered with the CFA to be able to use the EFR off the coast of Changhua County.

While the EFR expired in 2019, in practice, fishers who are part of the CFA still do not allow fishers from other counties to undertake fishing activities in the EFR off the coast of Changhua County. Based on

[23] The Taiwan Fisheries Agency defines coastal fisheries refer to fishing activities within 12km from the shore, and offshore fisheries are between 12km and 200km from the shore.

the Statistics of Infringements and Sanctions from the Fisheries Agency, it appears that EFRs are actively monitored and enforced. In 2023, the Fisheries Agency Council of Agriculture (FA-COA), Executive Yuan[24] showed that out of 36 sanctions issued to date, 12 were given for entering the port without proper authorisation.

Out of the 257 households surveyed during the Fisheries Baseline Survey, 233 households stated that fishing is their only source of employment, with the total fishing related income amongst the households surveyed comprising 70.9% of their total income, as reflected in **Table 4-4**.

Table 4-4 Income Amongst Households Surveyed

Income	Amount (NTD ten thousand)	Percent (%)
Fishery/Recreational fishing	24,460	70.9
Other	10,061.4	29.1
Total	34,521.4	100

[24] Source: Fisheries Agency, Council of Agriculture, Executive Yuan, The Statistics of Infringements and Sanctions(2023), retrieved June 19th 2023

Table 4-5 Number of Offshore and Coastal Fishers in Changhua County and Penghu County[25]

Region	Coastal Fishing				Offshore Fishing			
	Households		Population		Households		Population	
	No.	Proportion	No.	Proportion	No.	Proportion	No.	Proportion
Changhua County	**1,767**	**100%**	**5,991**	**100%**	**17**	**100%**	**60**	**100%**
Fenyuan Township	446	25%	1,775	30%	-	-	-	-
Lugang Township	341	19%	1,063	18%	-	-	-	-
Siansi Township	862	49%	2,670	45%	7	41%	20	33%
Dacheng Township	30	2%	60	1%	10	59%	20	33%
Penghu County	**6,091**	**100%**	**15,491**	**100%**	**2,967**	**100%**	**7,617**	**100%**
Magong City	2,799	46%	6,804	44%	1,123	38%	2,730	36%
Husi Township	1,039	17%	2,599	17%	340	11%	852	11%
Baisha Township	993	16%	2,760	18%	446	15%	1,240	16%

[25] Source: Department of Statistics, Changhua County Government; Department of Statistics, Penghu County Government.

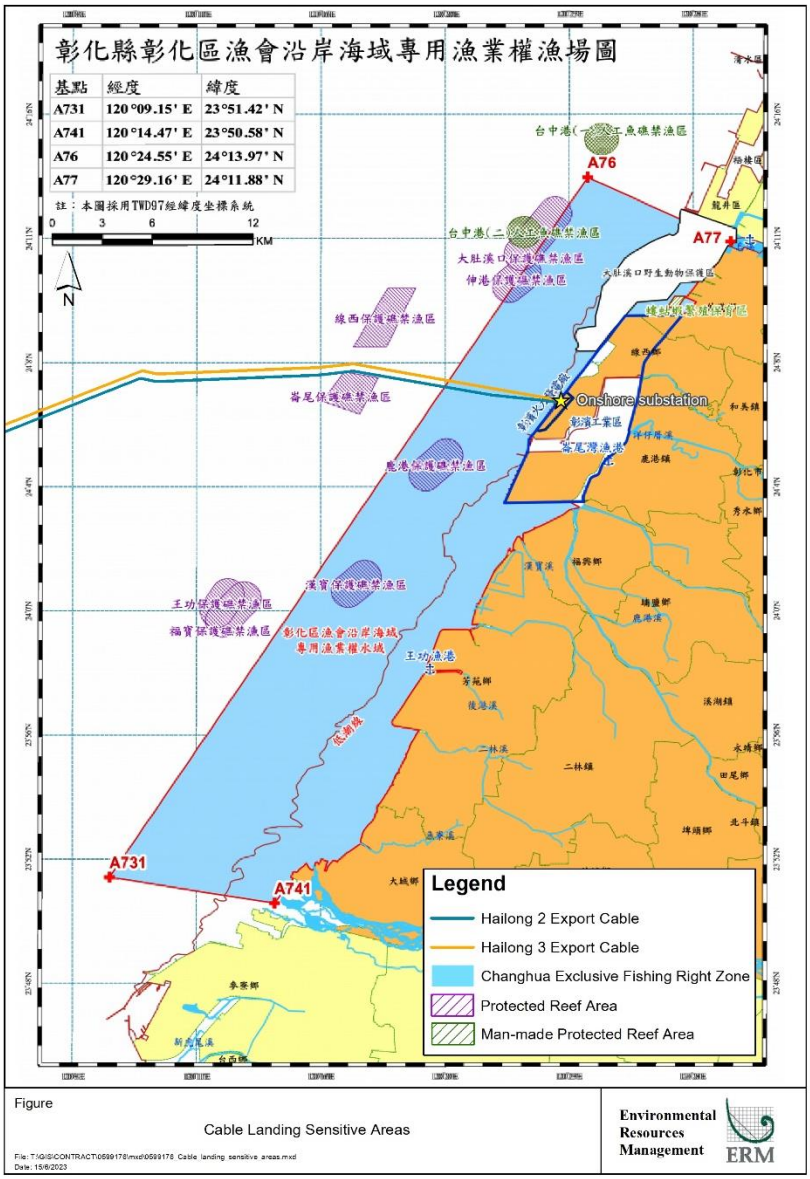


Figure 4-4 Exclusive Fishing Right Area (as of 2019) and Cable Routing

Through the survey, a number of households indicated that they hire laborers as part of their fishing operation – as identified in **Table 4-6**. In Changhua County 15 households indicated that they hired workers, of which five (5) hired non-Taiwanese workers; while in Penghu County 83 households indicated that they hired workers, of which 50 hired non-Taiwanese workers. This means approximately 38% of households hire labour, approximately 21% of laborers come from outside of Taiwan.

The Fisheries Baseline Survey also revealed that the hiring of migrant workers is to be conducted through the immigration authority, as circumventing this process is punishable by sanctions. It appears that this issue is actively monitored and enforced, as the Statistics of Infringements and Sanctions from the FA-COA (for 2023) showed that out of 36 sanctions issued to date across the whole of Taiwan, two (2) were given out due to a violation of foreign worker's rights.

This is compared to the statistics from the Fisheries Statistical Yearbook Taiwan (for the Kinmen and Matsu Area) for 2021, which indicates that the number of foreign crew members employed in offshore and coastal fisheries is 9,653 in total for 20,601 offshore fisher households and 60,439 coastal fisher households. This equates to approximately 12% of households hiring foreign workers, meaning that there is a high rate of hiring workers, including foreign workers, within the Project AoI.

Table 4-6 Household Labour Force

	Changhua County	Penghu County
No. of household who are family operated	155	4
No. of household who hired laborers	15	83
■ No. of Taiwanese hires	20 for 5 households	120 for 27 households
■ No. of non-Taiwanese hires	15 for 10 households	205 for 56 households

The Fisheries Baseline Survey identified that the main species of fish caught annually are Threadfin, Kob, and Black Sea Bream. Annual catch numbers are provided in **Table 4-7**.

Table 4-7 Top Species Caught

Species	Number	Percent (%)
Threadfin (午仔魚)	70	35.5
Kob (三牙魚)	69	35.0
Black Sea Bream (黑格)	58	29.5
Total	197	100

The main fishing method utilised is gill netting (including surface gill netting, submerged gill netting and bottom gill netting), as mentioned in the EIA and confirmed through the Fisheries Baseline Survey (refer to **Table 4-8**). Other fishing methods identified in the EIA include the use of seasonal angling gear from November to February, including standing nets, bag nets, and snake and crab cages.

Table 4-8 Major Fishing Methods

Major Fishing Methods	Number of Households	Percent (%)
Trawl	16	5.9
Precious coral fisheries	15	5.6
Stich-held dip-net	7	2.6
Gill net	166	61.7
Angling gear	54	20.1
Long line	10	3.7
Recreational fishing	1	0.4
Total	**269**	**100**

Fishers sell most of their catch directly to traders or local restaurants at respective fishing ports, with a small proportion ending up in fish markets. According to the FA-COA, there are two (2) second-category fishing ports in the Project AoI – Lunweiwan Fishing Port (崙尾灣漁港) and Wanggong Fishing Port (王功漁港), however, based on the Food and Agriculture Organization's category definition[26] neither port has a fish market.

[26] Source: Food and Agriculture Association Regulations on the Implementation of Fishing Ports Act

As presented in **Table 4-9** most of the fishing vessels owned are Power Fishing Rafts, which are only used for coastal fishing (i.e. up to 12 km from shore). This is followed by Vessel CT 0, which are suitable for coastal and offshore fishing, and Vessel CT 3, which are suitable for fishing offshore.

The coastal fishing vessels, including Vessel CT 0, represent 185 vessels of the surveyed population, which is equivalent to 70.6% of the fishers. This means that the bulk of fishing occurs within 12 km of the shore line, which means that most fishers will not interact with the Project's WTGs.

Table 4-9 Types of Fishing Vessels (CT)

CT	Number of Vessels	Percent (%)
R (Power Fishing Raft, Coastal fishery)	124	47.3
S (Power Sampan, Coastal fishery)	25	9.5
0 (Vessel with tonnage less than 5 tons, Coastal and offshore fishery)	36	13.8
1 (Vessel with tonnage between 5 tons and 10 tons, Coastal and offshore fishery)	6	2.3
2 (Vessel with tonnage between 10 tons and 20 tons, Coastal and offshore fishery)	22	8.4
3 (Vessel with tonnage between 20 tons and 50 tons, Coastal and offshore fishery, Far Sea fishery)	31	11.8
4 (Vessel with tonnage between 50 tons and 100 tons, Far Sea fishery)	11	4.2
5 (Vessel with tonnage between 100 tons and 200 tons, Far Sea fishery)	1	0.4
6 (Vessel with tonnage between 200 tons and 500 tons, Far Sea fishery)	4	1.5
N/A	2	0.8
Total	**262**	**100**

It is noted that there are a number of vulnerable groups present within the fishing industry. The Fisheries Baseline Survey confirmed that migrant workers are employed by fishers who operate in the Project AoI. It is also anticipated that some degree of informal fishing may exist, but the number of fishers is estimated to be very low based on feedback from local experts. There are also reports of illegal fishing, which involves non-local fishers (e.g. from other neighbouring countries) entering the offshore areas; the degree to which this occurs is challenging to quantify. It is anticipated that if illegal the fishers operate in Project AoI that they will find other areas to fish once the Project commences.

There are also oyster farms located along the Taiwan coastline, with the closest farms located near the Wanggong Fishing Port in Fangyuan Township, about 13.5 km southwest from the onshore components of the Project and 48 km southeast from the OWF. According to the Changhua County Government, the oyster farming area in the County is about 269 ha in size, with an annual output value of up to NT$280 million. It is noted that there are no oyster farmers located within or adjacent to the Project AoI (refer to **Figure 4-5**). Given there are no oyster farmers located in or adjacent to the Project AoI, no potential impacts are envisioned, and impacts to oyster farmers have not been considered in **Section 5** of this SIA.

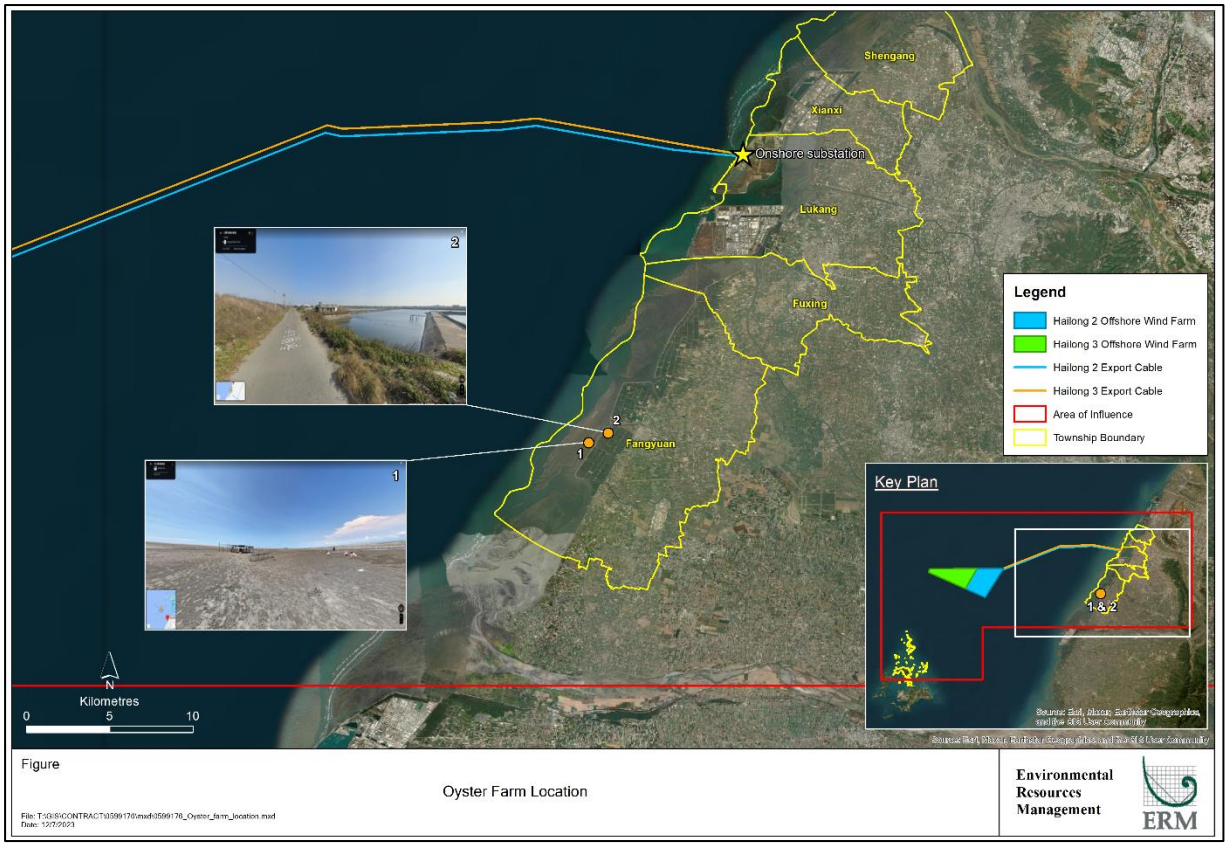


Figure 4-5 Oyster Farming in Changhua County

In addition to the fishing, a range of tourism and recreational activities that occur along the coastline of Changhua County. These are depicted in **Figure 4-6**, and include:

- Brand's Health Museum & Taiwan Glass Gallery;
- Lukang Old Street;
- Fubao Wetlands;
- Hanbao Wetlands;
- Wanggong Fishing Port;
- Fangyuan Putian Temple; and
- Dacheng Wetlands.

These activities fall outside the Project AoI and should not be impacted by the Project. As an added measure, the Environmental and Social Management System (ESMS) also requires Project traffic to avoid densely populated areas and travel during peak hours so as to ensure there are no indirect impacts on nearby tourism and recreational activities.

Figure 4-6 Changhua District Representative Recreational Spots[27]

4.10 Human Rights

Globally recognised indices can be used to assess the state of a country's governance and human rights risks. These indices provide an indication of the human rights situation within Taiwan, and are summarised as follows:

- Across the four categories of the Human Development Index (HDI), Taiwan is regarded as having "very high human development" and ranked 22nd out of the almost 200 countries included in the measure (as at 2023). The HDI is a summary measure of average achievement in key dimensions of human development, which are all key human rights.
- In 2022, Taiwan was ranked 25th of 180 countries assessed by Transparency International's Corruption Perceptions Index (CPI)[28], scoring 68 on a scale of 0 (highly corrupt) to 100 (highly clean). The CPI is based on how corrupt a country's public sector is perceived to be by experts and business executives. Taiwan's score can be interpreted as corruption is perceived as an issue for the country, but improvement has been made to combat the issue.
- A non-government organisation, Freedom House has assessed the political rights and civil liberties in 210 countries and territories. Taiwan scored 94 out of 100 (100 represents the top score) in 2020 and is classified as "Free".

[27] Source: EIA HL2 & HL3 (2018).

[28] Corruption Perceptions Index is an indicator showing the relative degree of corruption when compared with other countries or regions in the world, with 0 as highly corrupted and 100 means very clean. It is developed from an NGO, Transparency International to monitor the extent of corruption of a place.

The United States (US) State Department's 2022 Trafficking in Person Report placed Taiwan in "Tier 1"[29] for its 13th consecutive year. This means Taiwan fully meets the US Trafficking Victims Protection Act of 2000 minimum standards for the elimination of trafficking. This was due to the demonstration of serious and sustained efforts during the reporting period including increased inspections and investigatory referrals of potential forced labour cases on fishing vessels.

In Taiwan, the types of work that a foreign worker may be employed in is defined by the Employment Service Act. Migrant workers are mostly engaged in two categories of work:

- **Productive Industries** – fishing, manufacturing, construction, abattoirs, and agriculture; and
- **Social welfare** – household assistant, caregivers, and nursing work.

Forced labour appears to occur primarily in sectors reliant on migrant workers, including domestic services, fishing, manufacturing, meat processing and construction. The Ministry of Labor maintains a 24-hour "1955" toll-free hotline for foreign workers. The Taipei Times noted in 2021[30] that, *"Among the 186,014 calls in 2019, the hotline helped 5,322 foreign workers to reclaim a total of NT$179 million [approximately US$6.27 million] in salary payments."* However, foreign workers were often reluctant to report employer abuses for fear that the employer would terminate their contract, subjecting them to possible deportation and leaving them unable to pay off their debt to recruiters (US State Department 2022)[31].

Taiwan has a regulatory framework that prevents child labour. The Labor Standard Act defines a worker over 15 years old, but less than 16 years old, as a child worker. Moreover, no employer is allowed to employ any person under the age of 15; and no child worker and/or worker less than 18 years old shall be permitted to do work that is potentially dangerous or hazardous in nature[32]. There are few reports that explore the extent to which child labour may exist in Taiwan, however the US Bureau of International Labor Affairs publishes yearly Child and Forced Labor Reports, including the 'List of Goods Produced by Child Labor or Forced Labor'.[33] Review of these reports did not identify Taiwan amongst the countries using child labour. Importantly, the Project is committed to not engage child labour (within this context this refers to persons under the age of 18 years old).

Taiwan has enacted the Act of Gender Equality in Employment[34] in 2002, that aims to protect gender equality in right-to-work, eliminate gender discrimination, and promote the spirit of gender equality; and the Sexual Harassment Prevention Act[35] in 2005, to prevent sexual harassment and protect the rights of victims. Both Acts protect workers against discrimination, harassment or hostility based on their gender or sexual orientation and provides victims a pathway to take legal actions against employers.

4.10.1 Supply Chain

In addition to the general human rights situation in Taiwan, consideration is also required to be given to the human rights issues that may be apparent within the supply chain for the Project.

Primarily, OWF projects have the potential to pose a risk to human rights through:

- **Mineral supply chains (i.e. sourcing of raw materials)** – the minerals (e.g. iron ore, copper, manganese, nickel, zinc, etc.) used in various products/components may be associated with decreased access to water for local communities, increased instances of mining-related

[29] Countries whose governments fully meet the US Trafficking Victims Protection Act of 2000 minimum standards for the elimination of trafficking.

[30] Taiwan exploits foreigners: US report. By Lin Chia-nan / Staff reporter. April 1st, 2021, Taipei Times.

[31] US State Department, 2020. 2020 Taiwan Human Rights Report. Country Reports on Human Rights Practices for 2018. United States Department of State. Bureau of Democracy, Human Rights and Labor.

[32] Taiwan Ministry of Labor: Labor Standards Act

[33] US Department of Labor- Bureau of International Labor Affairs: List of Goods Produced by Child Labor or Forced Labor

[34] Ministry of Labor: Act of Gender Equality in Employment

[35] Ministry of Health and Welfare: Sexual Harassment Prevention Act

illnesses, lack of meaningful free, prior and informed consent (FPIC), and environmental pollution.

- **Production and manufacturing processes** – products/components may be produced in countries that have a high instance and/or risk of child labour, abuses of indigenous peoples' rights, and corruption. Further, the manufacturing sector typically has a higher risk of human rights violations, particularly as it pertains to worker rights and freedoms.
- **Construction/installation activities** – activities may adversely impact worker and/or community health and safety, can contribute to the spread of communicable diseases via use of non-localised labour, and may contribute to environmental pollution through improper construction/installation practices. In addition, with the usage of migrant labour for construction, there is an increased risk of impact to worker rights and freedoms.

The suppliers for the Project are outlined in **Table 4-10**, with their associated areas of potential human rights risk identified.

Table 4-10 Project Suppliers and Potential Human Rights Risks

Supplier	Supplier Overview	Potential Human Rights Risks
Siemens Gamesa Renewable Energy S.A.	■ Supplier of 73 WTGs.	■ Mineral Supply Chains ■ Wind Turbine Production Process
EEW Group	■ Supplier of 156 pine piles	■ Mineral Supply Chains ■ Manufacturing Process
CDWE-DEME Wind Engineering – DEME Group	■ Transportation and installation of WTGs	■ Construction Activities ■ Migrant Labor
CDWE-DEME Wind Engineering–- CSBC Corporation, Taiwan	■ Supplier of 63 pin piles	■ Mineral Supply Chains ■ Manufacturing Process
Semco Maritime	■ Joint supplier of two (2) offshore substations	■ Mineral Supply Chains ■ Construction/Installation Activities
PTSC Mechanical & Construction	■ Joint supplier of two (2) offshore substations	■ Mineral Supply Chains ■ Construction/Installation Activities
Hellenic Cables	■ Supplier of the inter-array cable	■ Mineral Supply Chains ■ Manufacturing Process
LS Cable & System Ltd.	■ Supplier of the export cable	■ Mineral Supply Chains ■ Manufacturing Process
Century Wind Power Co., Ltd.	■ Supplier of 21 wind turbine jackets (foundations)	■ Mineral Supply Chains ■ Manufacturing Process
Seaway7	■ Horizontal directional drilling ■ Cable transportation and installation	■ Mineral Supply Chains ■ Construction/Installation Activities
IQIP	■ Supplier of Jacket Pile Grippers	■ Mineral Supply Chains ■ Manufacturing Process
SK Oceanplant Co Ltd	■ Supplier of 52 wind turbine jackets (foundations)	■ Mineral Supply Chains ■ Manufacturing Process
TECO Electric & Machinery Company Limited	■ Supplier and construction of the onshore substation	■ Mineral Supply Chains ■ Construction/Installation Activities

The suppliers for the Project (identified in **Table 4-10**) have been assessed via a Supplier Evaluation, inclusive of a Supplier Screening Process (as described in **Section 5.11**). The Supplier Evaluation considered the potential human rights risks evident for each supplier, the areas of previous issue/concern, the management policies and/or strategies implemented, and the results ascertained

via the Supplier Screening Process (i.e. use of the independent supplier screening tools of EcoVardis, Dow Jones RiskCenter, and D&B Finance Analytics).

In addition to the Suppliers and Contractors Screening, the awarded contractors and suppliers shall also fulfil the various obligations stated in their contracts, signed Declaration Letter and respective management plans.

The outcomes of this Supplier Evaluation are provided in Appendix C.

4.10.2 Human Rights Impact Screening

Additional information around the Human Rights context in Taiwan can be found in the Project's Human Rights Impact Screening (HRIS) Report (ERM, 2021). The HRIS focuses on the potential human rights risks and impacts relevant to this Project, which are:

- Labor and working condition;
- Health and Safety;
- Livelihood;
- Security;
- Participation and access to remedy; and
- Supply chain.

The HRIS followed a five-step process which was informed by guidance set out in the United Nations Guiding Principles and the recommendations set out in the Guidance Note on Implementation of Human Rights Assessment 2020 developed by the Equator Principles Association (EP, 2020) and assesses the Project's alignment with international best practice guidance.

Table 4-11 presents the key outcomes of the HRIS, including the management and mitigation measures currently in place, and those required to be implemented for the Project.

Table 4-11 Proposed Human Rights Strategy for the Project

Topic	Risk	Project's Existing Management Plans and Measures	Additional Mitigation/ Management Measures
Labour and Working Conditions	Potential risk of violating migrant workers' rights due to their vulnerability in the construction sector	■ NPI and Mitsui's Human Rights Policy and Commitment ■ Code of Business Conduct and Ethics ■ Diversity Policy	■ Develop a Human Rights Policy flows through to contractors and sub-contractors as well as the supply chain. ■ Develop a Labour Management Plan to guide the Project's contractors which outlines: o Standards and expectations for labour and working conditions; o Accommodation conditions and usage; o Staffing and systems for monitoring and reporting on labour rights; o Use of recruitment agents with specific safeguards on recruitment fees for migrant workers; o Assessment of indicators of forced labour; and o Guidelines for identifying non-compliances and corrective actions. ■ Compliance with the plan should be confirmed through an audit program. When the program identifies non-conformances, appropriate actions should be taken.
Health and Safety	Potential risks of violating workers and community's health and safety, as a result of Project construction activities	■ Project's Health, Safety and Environment (HSE) Plan, Requirements for Contractors and Subcontractors ■ EIA Chapter 8 Environmental Protection Measures and Alternatives ■ Project's ESMS	■ No additional mitigation measures required. ■ Ensure compliance monitoring, evaluation and reporting as proposed in existing documents.
Livelihoods	Potential impacts on fishers' livelihoods (economic displacement) during Project construction and operation	■ Livelihood Restoration Plan ■ SEP ■ Other measures recommended in the EIA	■ No additional management measures required. ■ Ensure compliance monitoring, evaluation and reporting as proposed in existing documents. ■ Project's impacts on livelihoods should be re-assessed upon the Livelihood Restoration Plan (LRP) completion to ensure the objectives of the LRP are met.
Security	Potential risk of violating the human rights of local communities through	■ Project's HSE Management Plan, Requirements for Contractors and Subcontractors	■ Include a requirement for the Contractor to develop Security Workers' Code of Conduct in the Employer's HSE Requirements for Contractors. This may also include:

Topic	Risk	Project's Existing Management Plans and Measures	Additional Mitigation/ Management Measures
	the use of contracting security personnel		○ Requirements for contractors to provide training and on boarding for security personnel in line with the requirements of the Voluntary Principles on Security and Human Rights; ○ Implementation of a process for investigating allegations of misconduct by security personnel; and ○ Ensure compliance with the Code of Conduct, take appropriate disciplinary actions in the event of misconduct.
Participation and Access to Remedy	Potential gaps in workers' rights awareness raising and engagement, as well as workers' grievance management	■ SEP ■ Other measures recommended in the EIA	■ Develop a workers engagement strategy to raise awareness of policies, responsibilities of workers (including contractors), workers' rights, and the Grievance Mechanism. The strategy should consider: ○ A human rights overview in the employee induction pack; ○ A schedule for engagement activities to seek feedback from workers (including contractors); ○ Methods used to engage with stakeholders are accessible to vulnerable groups such as the illiterate and migrant workers; and ○ How engagement activities with internal workforce are captured and reported on. ■ The implementation and effectiveness of the Grievance Mechanism for external rights holders proposed in the SEP should be monitored and evaluated according to the M&E framework outlined in SEP. ■ Develop a Grievance Mechanism for workers (including contractors and suppliers). The objective of this system is to ensure there is a robust and transparent process available for addressing worker's complaints, which should: ○ Provide a timeframe for review/resolution, the process involved, and assurance of confidentiality; and ○ Be advertised and explained widely to rights holders either workers directly with the Project.
Supply Chain	Potential human rights impacts in the supply chain affecting workers and communities	■ Siemens Gamesa's human rights policy, business conduct guidelines and a supplier Code of Conduct /supplier relationship policy ■ Siemens Gamesa's range of measures including supply chain due diligence	■ Develop a Supplier Code of Conduct that applies to all suppliers on the Project, which provides principles for the selection and retention of qualified suppliers, regarding: ○ Forced labour; ○ Child labour; ○ Worker's remuneration and working hours; ○ Worker's restrictions; ○ Discrimination and rights; ○ Industrial relations; ○ Environmental responsibility; ○ Health and safety; and ○ Bribery and corruption.

Topic	Risk	Project's Existing Management Plans and Measures	Additional Mitigation/ Management Measures
			■ Suppliers are required to provide evidence to demonstrate compliance with the Code of Conduct requirements, with a focus on Tier 1 suppliers (main suppliers) initially but eventually expand this focus into Tier 2. ■ Compliance with the Project's Supplier Code of Conduct should be confirmed through a monitoring, evaluation and reporting program. When the program identifies non-conformances, appropriate actions should be taken.

5 ASSESSMENT OF IMPACTS

The following section presents the outcomes of the assessment of potential social impacts. For each identified potential impact, relevant background to the impact is provided, along with mitigation and management measures, and a determination of the impact's significance.

5.1 Receptors

The term 'stakeholder' is used to define individuals or groups who may be affected by, or have an interest in, the Project. Not all stakeholders will experience social impacts from the Project. Those stakeholders who are affected by the Project are termed 'receptors'.

Table 5-1 provides an overview of the receptors identified as being located within the Project AoI, including potentially vulnerable groups. **Table 5-2** provides further details on the identified vulnerable groups considered as part of the assessment. The identification of receptors and vulnerable groups is based on the methodology set out in **Section 3.1.2.**

The local communities identified as being located within the Project AoI have been selected based on their potential to:

- Interact with workers, who may reside in local, onshore accommodation;
- Utilise or live near the transport routes that will be utilised by the Project;
- Seek employment or business opportunities (construction and operation phases) with the Project;
- Be displaced from their fishing grounds/activities – this includes the local communities of Lukang Township and Baisha Township wherein it is anticipated that the fishers who operate within the Project AoI reside; and/or
- Be impacted by the Project due its physical presence (onshore and offshore).

Table 5-1 Social Receptors

Receptors	Description
Local Communities (Direct)	The Townships located closest to the onshore footprint, specifically: ■ Lukang Township in Changhua County ■ Baisha Township in Penghu County
Local Communities (Indirect)	The Townships adjacent to the local communities where the work takes place, including: ■ Xianxi Township in Changhua County ■ Fuxing Township in Changhua County ■ Fangyuan Township in Changhua County ■ Shengang Township in Changhua County
Public Service Providers	Operators of hospitals, clinics, health centres, schools etc.
Local Business and Local Services	These receptors may be impacted by the influx of workers, but also may benefit by providing goods and services to the Project.
Project Workforce	This includes workers hired directly by the Project or through a contractor. It also takes into consideration the supply chain workforce.
Local Workers	Workers from existing nearby industries, specifically those located within the Changhua Binhai Industrial Zone.

Table 5-2 Vulnerable Groups within the Project AoI

Vulnerable Group	Description of Group	Vulnerability Analysis
Indigenous Peoples	Taiwanese indigenous peoples (including those officially and not officially recognised by the Government).	Social groups with identities that are distinct from mainstream groups in national societies can we considered vulnerable. This includes Indigenous Peoples. The baseline indicates that Indigenous Peoples represent 0.5% of the total population of Changhua Country and Penghu County combined.
Migrant workers	Workers who have travelled either from one region to another within a country or those who have travelled from a different country. Migrant workers may form part of the Project workforce and/or supply chain workforce.	Migrant workers may be unknowingly engaged in forced labour which includes debt bondage or may expose them to abuse by their employer. Given that forced labour is known to occur in the fisheries sector, migrant workers have been identified as a vulnerable group.
Women in affected fisher households	This group may include, for example, fishers' wives who are often employed in the sales of the fish caught at sea.	The majority of fishers' rights and interests in Taiwan are safeguarded by the regional FAs, stipulated under the Taiwanese Fishermen Association Act. However, women in affected fisher households involved in sales and other related activities do not necessarily have their interests represented by FAs.
Any fishers excluded from FAs, including migrant workers and informal fishers	This group includes people undertaking fishery activities but are not involved in FAs, such as migrant workers and informal fishers.	The majority of fishers' rights and interests in Taiwan are safeguarded by the regional FAs, stipulated under the Taiwanese Fishermen Association Act. However, fishers retain the right to not join regional and national FAs. This can potentially lead to uneven representation within the FAs, especially when it comes to the negotiation of compensation. Migrant workers hired to work in the fishing industry of Taiwan may also be under-represented by the FAs. Informal fishers is the term that has been used for those who live and fish locally but are not part of FAs.

5.2 Social Impact Assessment Results

Based on the Project and its activities (as described in **Section 2**), and the existing socio-economic conditions of the Project AoI (as described in **Section 4**), the impacts identified during the scoping processed were evaluated using the approach set out in **Section 3**.

The social impact assessment results are presented in the following sub-sections and are summarised in **Section 5.13**. The identified impacts assessed in this document comprise:

- Air Quality (refer to Section 5.3);
- Noise Emissions (refer to Section 5.4);
- Infrastructure and Services (refer to Section 5.5);
- Cultural Heritage (refer to Section 5.6);
- Community Safety (refer to Section 5.7);
- Community Health (refer to Section 5.8);
- Fisheries Livelihoods (refer to Section 5.9);
- Employment (refer to Section 5.10);

- Labor and Working Conditions (refer to Section 5.11); and
- Visual Amenity (refer to Section 5.12).

The assessment of impacts has taken into account the existing management measures, which are captured in the **Environmental and Social Management System (ESMS)**. The ESMS is the overarching management plan that will be implemented during construction and operation of the Project. While the focus is largely on construction and operation, further planning will be undertaken closer to the time of decommissioning to ensure that the potential impacts associated with decommissioning are appropriately managed through the ESMS.

The ESMS follows the established 'plan, do, check, and act' process. It captures a wide range of measures to mitigate the predicted negative impacts and maximise the potential positive impacts. It includes pre-construction, construction and operation phase monitoring programs to ensure that the management measures are effectively mitigating the predicted impacts. It is noted in the ESMS that where measures are not effective, corrective actions will be taken. The ESMS also captures reporting requirements to ensure that the outcomes of the monitoring program are appropriately shared with relevant stakeholders. Where required, the ESMS will be updated to reflect the additional commitments captured in this document.

It is also noted that in assessing potential impacts, consideration has been given to other key Project documentation. This includes the visual impact assessment (refer to **Section 5.12**), Community Health and Safety Risk Assessment, and EIA (refer to **Section 5.3** and **Section 5.4**).

It should be noted that in assessing the potential impacts of the Project on community health, consideration has also given to the Community Health and Safety Risk Assessment (May 2023) that was prepared to identify, assess, and mitigate potential community health and safety risks associated with the Project. The Community Health and Safety Risk Assessment used a risk-based approach, which took into account severity and likelihood of the potential risk, while the SIA looks at the magnitude (rating based on extent, duration, scale and frequency) and likelihood of an impact. Given that the Project onshore facilities are located within industrial zone with no presence of community within a 10 km radius, and the offshore facilities are located further offshore away from the common fishing ground, the assessment had determined negligible to low air quality and noise emission impacts to the onshore and offshore communities.

5.3 Air Quality

Dust is often generated from construction related activities (e.g. earthworks). The dust produced can create a nuisance and/or cause health impacts. There is potential for dust to exacerbate existing respiratory illnesses (such as upper respiratory infections or asthma).

5.3.1 Background

Dust has the potential to be generated by a range of activities, which can adversely affect the amenity of the Project AoI and/or the health and well-being of receptors located in the Project AoI. These activities include:

- **Construction activities:** This includes construction activities associated the cable lying from the offshore substation to the onshore substation, the installation of the connection from the onshore substation to the Taiwan Power Corporation substation, and construction of the onshore substation.
- **Vehicle traffic:** Traffic associated with the transport of goods, materials, and workers, can generate dust, particularly when driving along unsealed roads.

Dust simulations were undertaken as part of the EIA (2018)[36]. The results are presented in **Figure 5-1**, and shows the location of receptors (in red) and sampling locations (in yellow). The results of the

[36] HL2 EIA and latest amendment, HL3 EIA and latest amendment

simulations indicate that the Particulate Matter (PM) 2.5 background value at the Xianxi Service Centre (receptor) is 58 µg/m³, which exceeds the Taiwanese air quality standard. This means that accounting for the background concentrations of dust, the air quality standard is exceeded, and requires mitigation.

Accordingly, a range of mitigation measures have been introduced by the Project. Further modelling of dust was undertaken, accounting for the proposed mitigation measures, (as captured in the EIA (2018)). The modelling indicates the following:

- **Construction of onshore substation:** Total Suspended Particulate (TSP) concentration = 7.72 x 10^-5 g/m^2/s (initial); 3.86 x 10^-5 g/m^2/s (with mitigation); and
- **Onshore cable laying:** TSP concentration = 9.88 x 10^-5 g/m^2/s (initial); 4.94 x 10^-5 g/m^2/s (with mitigation).

The modelling indicates that with appropriate mitigation measures in place, air quality can align with the Taiwanese air quality standard. Despite being within the national limits, the dust generated can still create a nuisance.

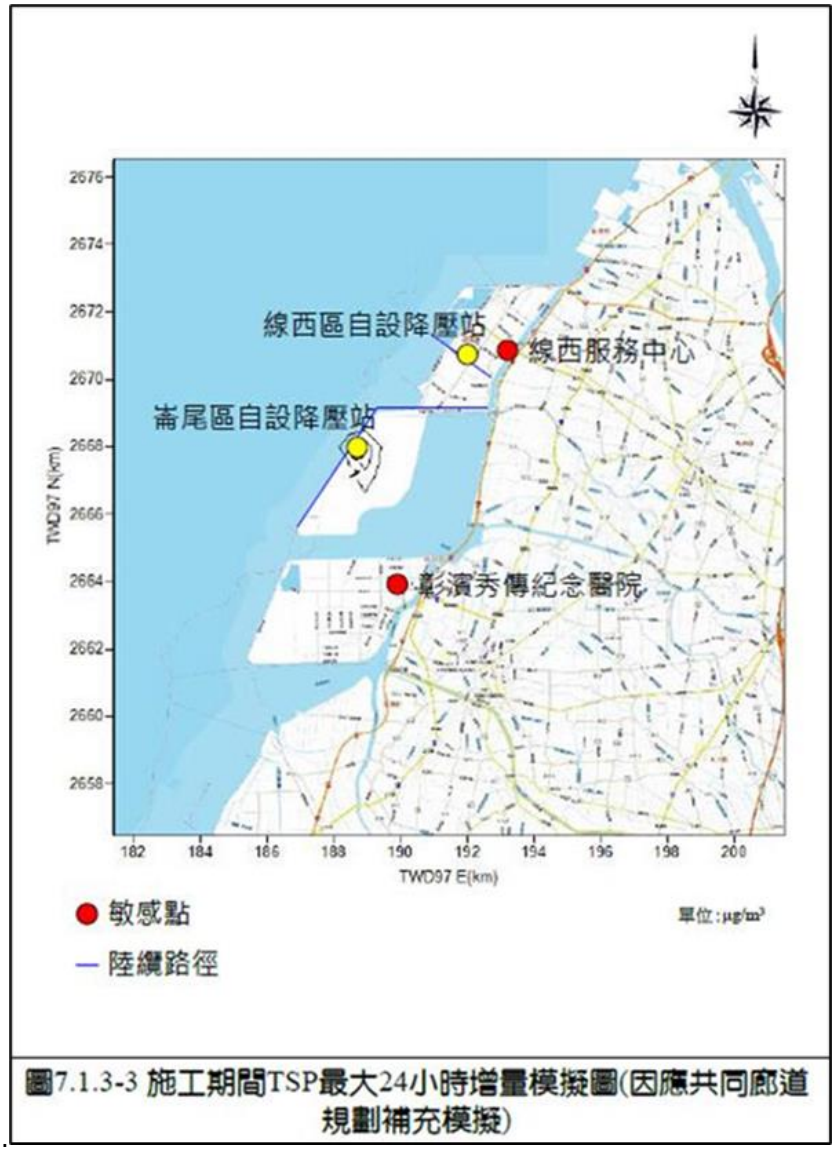


圖7.1.3-3 施工期間TSP最大24小時增量模擬圖(因應共同廊道規劃補充模擬)

Figure 5-1 TSP Modelling (24-hr max) at the Sensitive Points (Red Dot) for Estimation during Construction Period

5.3.2 Mitigation Measures

A range of management and monitoring plans have been developed to manage and mitigate impacts to air quality.

The **ESMS** is the primary management plan that will be implemented during the construction and operation phases of the Project. Specifically, the ESMS establishes the following suite of mitigation measures to manage air quality impacts during the construction phase:

- During the construction phase, the air pollution prevention measures shall be implemented accordingly when an air quality deterioration warning is issued by the local competent authority. If there is a mild or severe air quality deterioration warning, watering at the construction site shall be strengthened. If there is a moderate or severe air quality deterioration warning, construction operations shall be immediately suspended to avoid further deterioration due to the construction activities; and
- During the construction phase, the sections of road before and after the construction site (1,000 m in total), shall be cleaned and swept (except on rainy days) to reduce the dust generated by construction and transportation vehicles.

The ESMS also requires that for construction vehicles/machinery the following mitigation measures be implemented:

- To minimise pollutants in the exhaust, all machinery, tools, transport vehicles and vessels used for construction must be serviced and maintained regularly, with proper service records maintained;
- Vehicles must be properly covered when transporting soil;
- The transportation route should avoid passing through highly populated areas. If it is impossible to avoid highly populated areas, appropriate driving rules are to be enforced and vehicle speeds are to be reduced to prevent the spread of dust;
- Construction vehicles must be cleaned when entering/existing the work site;
- Fuels used are to comply with pollution control standards for all machinery and tools. Machinery and tools shall also be subjected to regular servicing to minimise the emission of pollutants;
- Vehicles used are to conform to the latest emission standards for minimal environmental impact.

In addition, the **Air Quality Management Plan** within the **Construction Phase Environmental Monitoring Plan** for the Project (included as part of the ESMS) requires that once a season 24-hour continuous monitoring of wind direction, wind speed, and particulate matter pollution (TSP, PM10, PM2.5) is to be conducted in the area surrounding the substation.

Additional mitigation measures to be implemented to manage air quality impacts include:

- **HSE Management Plan:** This plan outlines that appropriate Personal Protective Equipment (PPE) required to be in place for all employees and contractors working on the Project site. This includes the requirement to ensure that suitable eye protection is used, when working on activities with a risk of dust generation. Moreover, in work areas where damages to health may occur due to irritant, corrosive or toxic dusts, vapours, fumes or gases, respiratory protection must be worn. In addition, the HSE Management Plan requires appropriate risk assessments be undertaken to inform the PPE required for each activity undertaken.
- **SEP:** Implementation of the SEP will help in identifying any potential air quality (dust) related issues early through proactive engagement.
- **Grievance Mechanism:** The Grievance Mechanism has been rolled out and is accessible by stakeholders and workers involved in the Project. If a stakeholder or worker has concerns relating to air quality emissions (i.e. dust), the mechanism will help to identify these issues in a timely manner and allow for a resolution to be achieved. The Grievance Mechanism will be

managed by the HL Community Relations Manager with support from other managers and team members.

5.3.3 Significance of the Impact

It is not expected that local townships within the Project AoI will be impacted by dust, largely due to the distance between the Project and the nearest social receptor. In addition, as the Project does not involve the use of hazardous chemicals in significant amounts, it is anticipated there will not be any increased health risk to the local community.

However, workers at the Project, and working at the adjacent industries may experience impacts, linked to the nuisance that can be created when dust is generated. Approximately 30% of the workforce from contractors are migrant workers, special attention will be given to ensure they are not facing additional risks by implementing the HSE Management Plan.

Due to the duration of the dust generating activities (which are limited to the construction phase, and the extent of the potential impact (i.e. highly localised), as well as the mitigation measures in place, the significance of this impact is expected to be **low.** A summary of the impact assessment is captured in **Table 5-3**.

There is potential for this impact to be compounded by other proposed OWF projects, should their schedules overlap with the Project's timeline. However, it is not clear where the other wind projects will place their onshore infrastructure or when construction on these projects will commence. The Project will continue to engage with the TOWIA Platform to discuss project status/progress, and how to best collaborate. As information is made available on construction timeframes for other OWF projects, the potential air quality impacts will need to be reviewed and updated appropriately.

Table 5-3 Social Impact Significance: Air Quality

Impact	**Air Quality**				
Extent	Household	Township	County	Taiwan	
	Dust modelling was carried out at different locations within the Project AoI, direct and measurable impacts of air quality will likely occur at a local level.				
Duration	Temporary	Short term	Long term	Permanent	
	The impact will be limited to the construction phase.				
Scale	Negligible	Perceptible	Clearly evident	Large	
	Based on the simulation results, the 24-hour background concentration of PM2.5 at the sensitive receptor (Xianxi Service Centre) was found to be exceeded national air quality standard (35ug/m^3/24hr), making the impact clearly evident. However, modelling with mitigation measures decreases the air pollution to an acceptable range making the scale of this impact perceptible.				
Frequency	Rare	Occasional	Often	Constant	
	The impact will occur daily during construction phase, as the frequency of trucks is nine (9) one-way trucks per hour, making the frequency of a potential impact occasional.				
Magnitude	Negligible	Minor	Moderate	Major	Positive
	Based on the previous four (4) categories the magnitude is ranked as minor.				
Likelihood	Low	Medium	High		
	The Project is located some distance from the nearest communities, while workers will have in place appropriate PPE, hence the low likelihood of the impact occurring.				
Significance	**Low**	**Medium**	**High**	**Very High**	**Positive**

Impact	Air Quality
	Given the minor magnitude and the low likelihood of the impact occurring, the significance is determined to be low.

5.4 Noise Emissions

Projects generate noise as a result of the various activities undertaken. Noise, particularly from construction related activities, can cause a nuisance and/or health related impacts, such as sleep deprivation and mental health impacts.

5.4.1 Background

A range of construction activities associated with the Project will generate noise. Works undertaken during the construction phase are required to adhere to regulatory noise criteria. Whilst construction will take place both onshore and offshore, at the location of the Sites and the WTGs, the primary area of social impact related to noise emissions, if any, will occur onshore.

As part of the Project's EIA (2018) and Project's EIA 2nd Amendment Report (2022), both continuous frequency (20 Hz to 20 Hz) and low frequency (25 Hz to 200 Hz) noise were assessed to not affect the receptors (which are located, at nearest, 50 km away) and were deemed to be compliant with national standards.

As depicted in **Figure 5-2**, noise modelling undertaken indicates that the nearest social receptors are unlikely to be affected by noise generated by the Project.

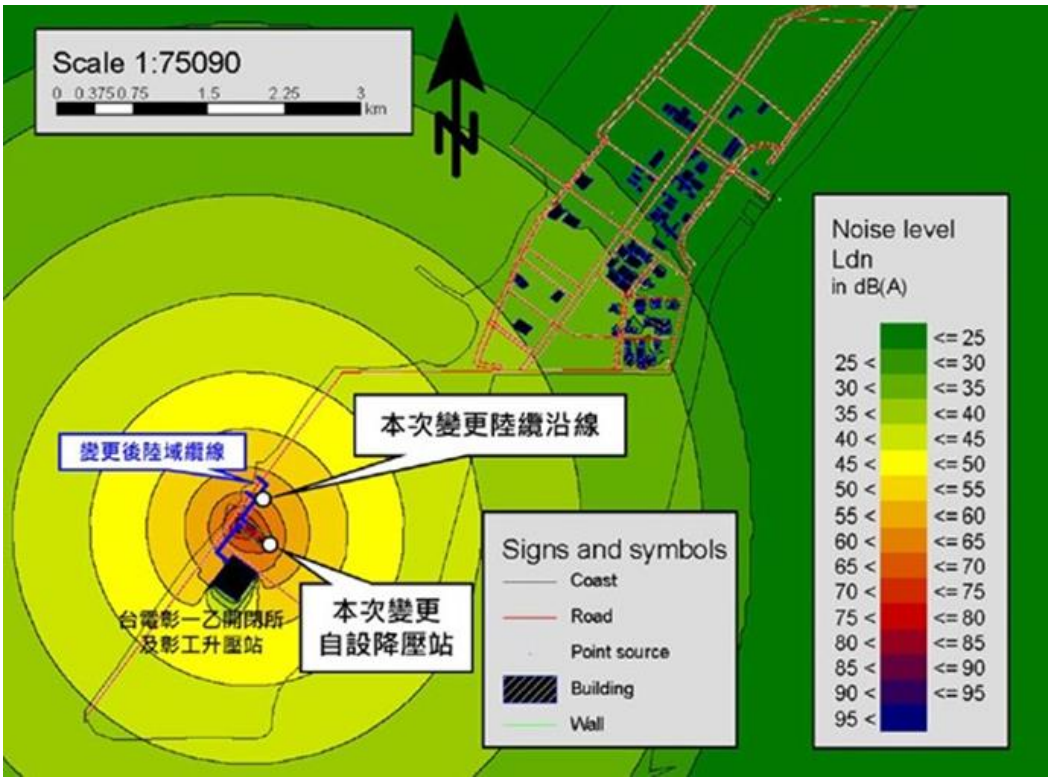


Figure 5-2 Onshore Noise Modelling Results

5.4.2 Mitigation Measures

A range of management and monitoring plans have been developed to manage and mitigate noise emission impacts.

The **ESMS** is the primary management plan that will be implemented during the construction and operation phases of the Project. Specifically, the ESMS establishes the following suite of mitigation measures to manage noise impacts during the construction phase:

- Application of speed and load limits for construction vehicles. Construction vehicles must not exhibit sudden acceleration, braking or use of horns when traveling near sensitive areas;
- Sources of noise and vibration will be positioned away from sensitive receptors. For directional mechanical noise, the machinery will be positioned so that sound travels in the opposite direction of sensitive receptors;
- All machinery, tools and transport vehicles used by contractors must be serviced regularly to prevent noise and vibration caused by loosened mechanical parts;
- Construction noise monitoring and environmental noise monitoring during the construction period shall be performed to understand the impact of noise during construction;
- Construction timeframes shall be properly planned to prevent generating high noise volume at night or early in the morning, will construction managed more stringently during these periods; and
- During land excavation for installation of land cables, transmission lines, and pipelines, trucks shall be parked near the excavator for soil transfer to avoid unnecessary noise when the excavator moves back and forth to the truck.

In addition, the **Airborne Noise and Vibration Management Plan** within the **Construction Phase Environmental Monitoring Plan** for the Project (included as part of the ESMS) requires that:

- Once per month, two (2) minutes of continuous recording of low frequency noise level (20Hz~200Hz Leq) and general frequency noise level (20Hz~200Hz Lmax) at the surroundings of substations within 1 m radius will be undertaken; and
- Once per season, 24-hour continuous monitoring of background environment will occur. This monitoring will include: equivalent continuous sound level and day-night vibration level at each time period (daytime, evening, and nighttime) at the coastal line and the surroundings of the substations.

Additional mitigation measures to be implemented to manage noise impacts include:

- **HSE Management Plan:** This plan outlines that appropriate PPE is required to be in place for all employees and contractors operating at the Project. Specific PPE to be provided includes hearing protection (e.g. earmuffs, earplugs, and ear moulds) for workers at the onshore terminal, offshore wind farm and CTV. In areas where work is to be undertaken over an extended period of time at more than 85 dB(A), or persistent noise pollution of 80 dB(A) is experienced, suitable hearing protection is required to be worn. In addition the HSE Management Plan requires appropriate risk assessments be undertaken to inform the PPE required for part particular activities.
- **SEP:** Implementation of the SEP will help in identifying any potential noise related issues early through proactive engagement.
- **Grievance Mechanism:** The Grievance Mechanism has been rolled out and is accessible by stakeholders and workers involved in the Project. If a stakeholder or worker has concerns relating to noise emissions, the mechanism will help to identify issues in a timely manner and allow for a resolution to be achieved. The Grievance Mechanism will be managed by the HL Community Relations Manager with support from other managers and team members.

5.4.3 Significance of the Impact

Based on the modelling undertaken, it is not expected that the local townships within the Project AoI will be impacted by the noise emissions generated by the Project. Workers at the Project Sites, however, and those employed at adjacent industries, may experience noise related impacts.

Due to the duration of the noise generating activities (which are limited to the construction phase), and the extent of the potential impact (i.e. highly localised), and the mitigation measures in place the significance of this impact is expected to be **low.** A summary of the impact assessment is captured in **Table 5-4**.

Approximately 30% of the workforce from contractors are migrant workers (those who have travelled either from one region to another within Taiwan, or those from outside Taiwan), special attention will be given to ensure they are not facing additional risks by implementing the HSE Management Plan.

There is potential for this impact to be compounded by other proposed OWF projects, should their schedules overlap with the Project's timeline. However, it is not clear where the other wind projects will place their onshore infrastructure, when construction on these projects will commence, and/or how far along their construction period has progressed. The Project will continue to engage with the TOWIA Platform to discuss project status/progress, and how to best collaborate with other proponents. As information is made available on construction timeframes for other OWF projects, potential noise impacts will need to be reviewed and the social impact significance updated appropriately.

Table 5-4 Social Impact Significance: Noise Emissions

Impact	**Noise and Vibration**				
Extent	Household	Township	County	Taiwan	
	The impacts associated with changes in noise levels be highly localised, specifically within the Changhua Binhai Industrial Zone.				
Duration	Temporary	Short term	Long term	Permanent	
	The impact will be limited to the construction phase.				
Scale	Negligible	Perceptible	Clearly evident	Large	
	Continuous frequency (20 Hz to 20 Hz) and low frequency (25 Hz to 200 Hz) noise were assessed to not affect the receptors, and were deemed to be compliant with national standards, making the scale negligible.				
Frequency	Rare	Occasional	Often	Constant	
	The frequency of the impact is expected to rare given the location of the work.				
Magnitude	Negligible	Minor	Moderate	Major	Positive
	Based on the previous four (4) categories the magnitude is ranked as negligible.				
Likelihood	Low	Medium	High		
	The Project is located approximately 30 km to 60 km from the nearest sensitive receptors, hence the low likelihood of occurring.				
Significance	**Low**	**Medium**	**High**	**Very High**	**Positive**
	The magnitude being negligible and the low likelihood of this impact occurring, the significance is marked as low.				

5.5 Infrastructure and Services

Large-scale projects have the potential to place pressure on existing community infrastructure (e.g. roads, recreation facilities), services (e.g. health care) and accommodation.

5.5.1 Background

There are a range of ways that the Project could impact on services and infrastructure within the Project AoI, including:

- **Through an influx of workers:** The Project will employ a range of workers, while most of the workers will be sourced from the Project AoI, some will still be brought in from outside the AoI. This means that workers sourced from outside the Project AoI will require accommodation and will likely utilise local services to meet their needs (e.g. supermarkets, restaurants, cafés, recreational facilities). The Project has committed to prioritising the employment of workers from the local region, where possible, approximately 67% of the workforce will be hired from the Project AoI. Localised recruitment will help to reduce the likelihood of impacting existing infrastructure and services (including rental accommodation), particularly when in relation to influx related impacts.
- **Emergency situations, such as vessel collisions or health and safety accidents:** While there will be first aid trained individuals provided by the Project, for more serious situations, local medical support will be required. Use of local medical clinics and/or hospitals can place pressure on the services currently used by local communities, in particular emergency responders and health care providers.
- **Management of waste:** This aspect will be of particular importance during decommissioning of the Project as there will be a large volume of waste which can place pressure on local waste facilities.

All of the above can reduce the ability of the existing services and infrastructure in the Project AoI to not meet the needs/demand of the local communities.

Given the above, it is expected that the greatest likelihood of an impact occurring is at peak construction (due to influx), in emergency situations (should one arise), and at decommissioning (specifically in relation to waste).

5.5.2 Mitigation Measures

A range of management and monitoring plans have been developed to manage and mitigate impacts to community infrastructure and services (including rental accommodation).

The **ESMS** is the primary management plan that will be implemented during the construction and operation phases of the Project. Specifically, the ESMS establishes the following mitigation measures to manage impacts to infrastructure/service:

- Development and implementation of a **Waste Management Plan**, which covers management of waste streams during construction and operation.

In addition, the Project is committed to the development of a **Decommissioning Plan** five (5) years prior to commencement of the decommissioning phase. At present, the impacts associated with waste disposal will be revisited as part of the Decommissioning Plan, and existing mitigation measures will be updated, as appropriate.

Additional mitigation measures to be implemented to manage impacts to community infrastructure and services (including rental accommodation) include:

- **Emergency Response Plan (ERP):** The ERP commits to having vessels equipped with first-aid rooms for emergency cases. Moreover, the ERP identifies hospitals in the Project vicinity to which workers will be transported, if required. The Project is committed to working with local health care providers to manage any potential impact that may be created. Consultation will be undertaken with the health care facilities identified to ensure that there is a level awareness of

the potential Project needs. External stakeholders will be involved in training and/or drills, as appropriate, as part of the ERP's implementation.

- **SEP:** Implementation of the SEP will help in identifying any potential issues associated with impacts to community infrastructure and services (including rental accommodation) early through proactive engagement.
- **Grievance Mechanism:** The Grievance Mechanism has been rolled out and is accessible by stakeholders and workers involved in the Project. If a stakeholder or worker has concerns relating to community infrastructure and services (including rental accommodation), the mechanism will help to identify these issues in a timely manner and allow for a resolution to be achieved. The Grievance Mechanism will be managed by the HL Community Relations Manager with support from other managers and team members, as required.

5.5.3 Significance of the Impact

Construction at its peak will create an influx of around 216 workers for a 12 month period, of which 145 people will come from within the Project AoI. Accordingly, approximately 71 workers will be sourced from outside the Project AoI where the onshore components are located. An influx of 71 workers, if accommodated in Lukang Township, representing 0.08% of the total population of the township.

Due to low number of workers (216 at its peak), with only 71 originating from outside the Project AoI, the impacts that are typically attributed to an influx in workers are expected to be limited. Given this, and the mitigation measures that are already in place, the impact is expected to be **low.** This includes mitigation measures designed to reduce the likelihood of an emergency situation arising. A summary of the impact assessment is captured in **Table 5-5**.

It is noted that potential impacts associated with the disposal of waste at decommissioning will be further assessed as part of the Decommissioning Plan, which will be developed five (5) years prior to decommissioning to better understand the likely extent of impact. At which time, the existing management measures may need to be updated.

There is potential for this impact to be compounded by other proposed OWF projects, should their schedules overlap with the Project's timeline. However, it is not clear where the other wind projects will place their onshore infrastructure, when construction on these projects will commence, and/or how far along their construction period has progressed. There are currently six (6) nearby projects (refer to Appendix A) under construction totalling 4,829.50 MW (highest value possible), while the Project will produce 1,044 MW. Assuming these projects require the same composition of workforce and that the power to be generated is 4.6 times of the Project's then it is possible to expect an influx of 328 workers, which would result in an influx of 0.38% of the total population of the County. This influx should have minimal impact on infrastructure and services (including rental accommodation) in the Project AoI.

The Project will continue to engage with the TOWIA Platform to discuss project status/progress, and how to best collaborate. As information is made available on construction timeframes for other OWF projects, the potential impacts to infrastructure and services (including rental accommodation) will need to be reviewed and updated appropriately.

Table 5-5 Social Impact Significance: Infrastructure and Services

Impact	Infrastructures and Services			
Extent	Household	Township	County	Taiwan
	The impact is experienced at the township level.			
Duration	Temporary	Short term	Long term	Permanent
	The impact is largely linked to the construction phase, which means the impact will be short term.			

Impact	**Infrastructures and Services**				
Scale	Negligible	Perceptible	Clearly evident	Large	
	Given that only 71 workers are expected to come from outside the Project AoI and the Decommissioning Plan will be implemented, the scale is considered to be negligible.				
Frequency	Rare	Occasional	Often	Constant	
	The frequency of the impact would be rare given the limited influx of workers, as well as the other mitigation measures in place.				
Magnitude	Negligible	Minor	Moderate	Major	Positive
	Based on the previous four (4) categories the magnitude is ranked as negligible.				
Likelihood	Low	Medium	High		
	The likelihood of occurrence is low.				
Significance	**Low**	**Medium**	**High**	**Very High**	**Positive**
	With the magnitude being negligible and the low likelihood of this impact occurring, the significance is considered to be low.				

5.6 Cultural Heritage

Projects have the potential, particularly where there are ground disturbing activities, to impact and/or interfere with cultural heritage resources and cultural practices. Impacts to cultural heritage can occur in both the onshore/offshore environment.

5.6.1 Background

The Project will involve a range of activities, such as land clearing and cable trenching, that could disturb cultural heritage resources. Other activities, such as noise and/or dust, could interfere with cultural practices.

Cultural heritage surveys undertaken by the Project have found that there have been no buildings, archaeological sites, or relics with cultural or historical value found within or surrounding the Project AoI. Based on the sonar survey conducted for the Project, no underwater cultural resources were detected within the Project AoI.

The Taiwan Bureau of Cultural Heritage maintains a database of both tangible and intangible cultural heritage[37], and underwater cultural heritage[38]. The Project footprint, both onshore and offshore, does not overlap with any of the data presented in the databases. This has been determined in the EIA and approved by the local authority. Given the Project is located on reclaimed land (refer to **Section 4.6**) that was developed in the 1980s there is a low chance that the Project would impact intangible cultural heritage, if any was recognised prior to the construction of the reclaimed land in the 1960s.

In addition, there are no cultural practices have been identified within the Project AoI that could be impacted or disturbed as a result of the Project.

5.6.2 Mitigation Measures

A range of management and monitoring plans have been developed to manage and mitigate cultural heritage impacts.

[37] Taiwan Bureau of Cultural Heritage Database
[38] Taiwan Bureau of Cultural Heritage Underwater Cultural Heritage

The **ESMS** is the primary management plan that will be implemented during the construction and operation phases of the Project. Specifically, the ESMS establishes the following suite of mitigation measures to manage impacts to cultural heritage:

- For land-based cultural resources:
  - Archaeologists will be commissioned to assess and monitor the excavation works for the onshore substation and land cables;
  - 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); and
  - The application form and plan for archaeological excavation shall be submitted to the Cultural Affairs Bureau of the Changhua County Government for review, and interpretation will be carried out after the approval is obtained. The final version of the said document will be submitted to the Bureau of Cultural Heritage, Ministry of Culture for reference.
- For underwater heritage:
  - In accordance with the Underwater Cultural Assets Preservation Act (Article 13), if underwater cultural heritage is discovered, any activity that has an influence on such heritage shall be terminated, and the site will be promptly reported; and
  - For every offshore WTG, archaeological specialists shall assess the site location prior to commencing works.

The **Pre-Construction Phase Environmental Monitoring Plan** for the Project (included as part of the ESMS) requires that:

- Archaeological specialists assess the onshore substation site, with three (3) sites drilled to collect samples for cultural heritage analysis prior to construction; and
- Archaeological specialists assess every offshore WTG location prior to commencement of construction.

The **Archaeology and Cultural Heritage Chance Finds Management Plan** within the **Construction Phase Environmental Monitoring Plan** for the Project (included as part of the ESMS) requires that archaeological excavation sites are monitored each day for the duration of the period in which works occur.

Additional mitigation measures to be implemented to manage potential impacts to cultural heritage include:

- **SEP:** Implementation of the SEP will help in identifying any potential cultural heritage issues early through proactive engagement.
- **Grievance Mechanism:** The Grievance Mechanism has been rolled out and is accessible by stakeholders. If a stakeholder has concerns relating to cultural heritage, the mechanism will help to identify issues in a timely manner and allow for a resolution to be achieved. The Grievance Mechanism will be managed by the HL Community Relations Manager with support from other managers and team members.

5.6.3 Significance of the Impact

While the onshore components are on reclaimed land, there is the potential that objects may have been disassociated from their depositional context through land reclamation activities or excavations as part of built infrastructure. In other words, artefacts or other objects may have been disturbed and redeposited as aggregate in-fill elsewhere in the site.

The likelihood of these artefacts being identified is considered to be low. Care and due diligence will be undertaken during excavation and ground disturbance, and as delineated in the ESMS (as described), and in line Cultural Heritage Preservation Act Article 33, a chance finds procedure will be followed in the event of cultural heritage resources being identified onshore or offshore.

Given the current baseline conditions (i.e. no cultural heritage resources or practices have been identified within the Project AoI), as well as the mitigation measures in place, this impact is expected to be **low.** A summary of the impact assessment is captured in **Table 5-6**.

Table 5-6 Social Impact Significance: Cultural Heritage

Impact	**Cultural Heritage**				
Extent	Household	Township	County	Taiwan	
	The extent of onshore and offshore components have the potential for the impact to be felt at the township level.				
Duration	Temporary	Short term	Long term	Permanent	
	Impacts are expected to be short term.				
Scale	Negligible	Perceptible	Clearly evident	Large	
	Negligible change is expected based on current baseline conditions.				
Frequency	Rare	Occasional	Often	Constant	
	Based on the sonar survey no underwater cultural resources were deemed to be detected. As for the onshore aspect, given that the Project components are located on reclaimed land it is not considered a concern. Both aspects facilitate a low frequency rating.				
Magnitude	Negligible	Minor	Moderate	Major	Positive
	Based on the previous four (4) categories the magnitude is ranked as negligible.				
Likelihood	Low	Medium	High		
	The likelihood of occurrence is low.				
Significance	**Low**	**Medium**	**High**	**Very High**	**Positive**
	With the magnitude being low and the low likelihood of this impact occurring, the significance of this impact is considered to be low.				

5.7 Community Safety

Projects often present a range of community safety hazards. These hazards can be due to the presence or linked to the use of heavy machinery, new structures, the transport of goods, materials and workers within the Project AoI, as well as the employment of security personnel.

5.7.1 Background

There are a range of safety hazards that are presented by the Project, which may present risks to the receptors located with the AoI. Some of these hazards exist during the construction phase, such as the use of heavy machinery or the presence of an active construction site, while others exist during the operation phase, such as the presence of offshore structures.

The transport of goods, materials and workers also present a safety hazard during construction and operation. The resulting increase in vehicle or vessel movements can create congestion, as well as

unsafe conditions for others within the Project AoI (e.g. navigational hazards, increased potential for an accident to occur).

Works onshore during the construction phase will involve a total of nine (9) truck movements (one-way trips) per hour. Additionally, it is estimated that the Project will generate 30 one-way trips per hour for light vehicles (i.e. cars and motorcycle) during construction, due to personnel movements. There will also be an increase in vessel movements offshore, particularly during the construction phase.

The volume of vehicle and vessel movements is expected to decrease substantially during the operation phase. Specific details on the likely number of vehicle and vessel movements during operation was not available at the time of writing the SIA.

Moreover, the contractor will provide a continuous 24-hour security for the Project, inclusive of the onshore and offshore areas (HL HSE Requirement, 2021) . This will result in the employment of several unarmed security guards, who will be tasked with monitoring the Project area. Although the use of security personnel, can help reduce the potential for receptors to interact with the Project, there is the potential, as has been seen in other developments, for issues to occur. This includes abuse of power and the use of inappropriate, disproportionate or excessive force by security personnel.

5.7.2 Mitigation Measures

A range of management and monitoring plans have been developed to manage and mitigate potential impacts to community safety.

An overarching **Community Health, Safety and Security Management Plan** will guide the actions relating to community safety impacts. Additionally, the **ESMS** is the primary management plan that will be implemented during the construction and operation of the Project. Specifically, the ESMS establishes the following suite of mitigation measures (such as within the **Traffic Management Plan** and **Marine Safety and Vessel-related Management Plan**) to manage community safety impacts during the construction phase:

- Onshore transportation:
  - Driving during peak hours will be avoided to the extent possible;
  - Assign workers to direct traffic and ensure traffic safety at all times when laying underground cables;
  - Place signage and assign workers to direct traffic; and
  - Guidance shall be provided for contractors working within the perimeter of the construction site to ensure they are insured, thereby protecting the rights and interests of the driver and pedestrians.
- Offshore transportation:
  - All vessel operations and reporting thereof shall be in compliance with vessel safety management procedures and contingency plans;
  - All vessels shall use only designated routes;
  - Proper communications should be given to other vessels or operating stations during shipment to avoid accidents;
  - Appropriate signage will be put up on larger vessels;
  - Vessel surveys shall be conducted throughout pre-construction, construction, and operation of the Project. These surveys will consider the broad range of commitments made by the Project;
  - Only qualified personnel will be allowed to operate the vessels. Regular vessel maintenance will be undertaken; and

– Contractors shall deploy vessels and appropriate signs around the construction areas to avoid other vessels from entering the construction area.

Notably, suppliers are required to develop their own management plan in accordance with the **Employer's Requirement – HSE Requirement**, which sets minimum HSE requirements.

Additional mitigation measures to be implemented to manage community safety impacts, which will be reflected in the ESMS include:

- **SEP:** The SEP outlines ongoing engagement activities that will be undertaken. Engagement activities will include providing information to receptors in the Project AoI about the potential safety hazards associated with construction and operation, and eventually decommissioning, of the Project.
- **Grievance Mechanism:** The Grievance Mechanism will provide a means for stakeholders to raise concerns/issues with the Project, including those related to safety. Furthermore, the Grievance Mechanism will provide a means for stakeholders to raise concerns regarding the behaviour of workers, including security personnel. Issues raised via the Grievance Mechanism will facilitate a timely identification of community safety related issues and allow for a resolution to be achieved. It will be managed by the HL Community Relations Manager with support from other managers and team members.
- The Project will adhere to the International Association of Marine Aids to Navigation and Lighthouse Authority (IALA) requirements by installing signage and accurately marking the WTGs on nautical charts.
- An exclusion zone will be established to reduce the likelihood of an interaction between the Project and offshore vessels.
- **HSE Management Plan:** The use of unarmed security personnel to provide continuous 24-hour surveillance. The use of security personnel will help reduce the potential for receptors to enter the Project area. All security personnel will be required to complete relevant training, as well as adhere to the Project's **Code of Conduct**. Security personnel will be vetted and are also expected to adhere to the requirements outlined in the Private Security Service Act, which governs private security services in Taiwan. The combination of the Project's requirements and the Private Security Service Act align with IFC handbook on the Use of Security Forces: Assessing and Managing Risks and Impacts (2017).

5.7.3 Significance of the Impact

Safety hazards will be present during both construction (e.g. active construction site, increase in traffic volumes, use of security personnel) and operation (e.g. navigational hazards).

A range of mitigation measures have been introduced to reduce the likelihood of the Project interacting with receptors in the Project AoI. This includes measures to reduce the potential for receptors to enter an active construction site either via vehicles or vessels (e.g. employment of security personnel), as well as measures to reduce the potential for a vehicle or vessel accident to arise (e.g. establishment of exclusion zones, speed management of vehicles).

In addition, given the distance between the nearest community and the onshore substation, the likelihood of a receptor in the AoI interacting with the Project components is reduced.

While the impact is expected to be localised, the potential outcome of this impact is an injury, or worst case scenario, a fatality. For this reason, despite the mitigation measures in place, this impact is **high**. A summary of the impact assessment is captured in **Table 5-7**.

There is potential for this impact to be compounded by other proposed OWF projects, should their schedules overlap with the Project's timeline. However, it is not clear where the other wind projects will place their onshore infrastructure or when construction on these projects will commence. The Project will continue to engage with the TOWIA Platform to discuss project status/progress, and how to best

collaborate. As information is made available on construction timeframes for other OWF projects, the potential community safety impacts will need to be reviewed and updated appropriately.

Table 5-7 Social Impact Significance: Community Safety

Impact	Community Safety				
Extent	Household	**Township**	County	Taiwan	
	The impact is expected to be limited to the township level within the Project AoI, given this is where much of the traffic will exist.				
Duration	Temporary	Short term	Long term	**Permanent**	
	The potential outcome is an accident, resulting in an injury, and worst case scenario a fatality.				
Scale	Negligible	Perceptible	**Clearly evident**	Large	
	Given the nature of the potential outcome the scale is considered clearly evident.				
Frequency	Rare	**Occasional**	Often	Constant	
	There is potential for the impact to occur daily, particularly during construction. However, due to the mitigation measures in place, the potential frequency of the impact arising can be reduced – in particular an accident or injury.				
Magnitude	Negligible	Minor	**Moderate**	Major	Positive
	Based on the previous categories the magnitude is ranked as moderate. This is largely linked to the potential outcome, which is an accident resulting in an injury or fatality.				
Likelihood	Low	**Medium**	High		
	The likelihood is medium because accidents have been seen within the industry. However, given the mitigation measures that are in place, this will help to reduce the potential likelihood of occurrence.				
Significance	**Low**	**Medium**	**High**	**Very High**	**Positive**
	The magnitude being moderate and the medium likelihood of this activity, the significance is considered to be high. While the impact is expected to be localised, the potential outcome of this impact is an injury, or worst case scenario, a fatality (i.e. a permanent change). For this reason, despite the mitigation measures in place, this impact is considered high.				

5.8 Community Health

New developments can contribute to a change in the prevalence of infectious diseases in a project's AoI. The term 'infectious disease' refers to illnesses caused by a range of pathogens. These pathogens can be transmitted through various means, including disease vectors (e.g. mosquitos), ingestion of unsanitary food and/ or water (e.g. diarrhoea), and human or pest contact (e.g. sexually transmitted infections (STIs), rabies).

5.8.1 Background

Project activities that may contribute to a change in infectious disease prevalence include:

- **An increase or influx of people**, which can lead to new or more virulent forms of existing infectious diseases being introduced; and
- **The creation of vector habitat leading to an increased prevalence of vector borne diseases**, which is linked to construction activities that can create opportunities for water to

pool and become vector habitat (e.g. trenches filled with rainwater during earth moving activities), or improper disposal of waste.

The Project will result in an increase in people in the AoI. The largest increase is expected to occur during the construction phase. During this period, workers may interact with members of the local townships when they are not working (i.e. during their down time). With this comes a potential risk for these individuals to introduce new or a more virulent form of an existing infectious disease.

Construction, at its peak, will create an influx of around 216 workers for a 12 month period, of which 145 workers will come from the Project AoI. Accordingly, approximately 71 workers will be sourced from outside the Project AoI where the onshore components are located. An influx of 71 workers, if accommodated in Lukang Township, represents 0.08% of the total population of the township.

The workforce will decrease substantially during the operation phase. The total workforce required during operation is expected to be 120 people, most of whom will be sourced from the Project AoI.

The extent of earthworks undertaken during construction is expected to be limited. It is often earthworks (e.g. such as trenching and application of water for dust suppression) that lead to the creation of vector habitat. For this reason, it is not expected, given the nature of the Project (i.e. limited earth moving activities) that the creation of vector habitat will be a significant risk.

While improper waste disposal, which can create vector habitat, particularly vermin, this is not expected to be an issue within the context of the Project. Often this issue arises due to improper disposal of food waste but given the Project will not operate an accommodation facility that provides workers with meals and appropriate waste disposal will be employed on site, this is unlikely to be an issue. Workers will be provided with areas to rest (i.e. to get out of the sun, drink water, and eat). These rest areas will incorporate appropriate waste disposal facilities.

5.8.2 Mitigation Measures

Mitigation measures to be implemented to manage potential impacts to community include:

- **SEP:** Implementation of the SEP will help in identifying any potential community health issues early through proactive engagement.
- **Grievance Mechanism:** The Grievance Mechanism has been rolled out and is accessible by stakeholders and workers involved in the Project. If a stakeholder or worker has concerns related to community health, the mechanism will help to identify issues in a timely manner and allow for a resolution to be achieved. The Grievance Mechanism will be managed by the HL Community Relations Manager with support from other managers and team members.
- **Code of Conduct:** The Project will implement a Code of Conduct, applicable to all employees and contractors. The Code of Conduct will be updated to clearly set out expectations for workers, in relation to the way that they interact with receptors in the AoI, this includes interactions that have the potential to spread infectious diseases. Implementation of the Code of Conduct will be monitored.
- **Worker Inductions:** A Project induction will be delivered to all workers employed as part of the Project. This will include contractors (a requirement of the **Supplier and Contractor Management Plan**). The induction will cover the issue of community health, ensuring that workers are aware of their role in reducing the potential spread of infectious diseases, and in managing waste.
- **Engage with the TOWIA Platform**. The focus of this engagement will be on understanding project status/progress, and how to appropriately collaborate to ensure that where there are matters relevant to community health these can be appropriately and expeditiously addressed.

5.8.3 Significance of the Impact

The key Project activity that may increase the prevalence of infectious diseases is the influx of workers. For this reason, the primary focus of the assessment is understanding the potential impact resulting from an influx of workers.

The influx of workers is expected to primarily occur during the construction phase, given this is when the largest number of workers are expected to be hired from outside the Project AoI. The 71 workers who will be employed from outside the Project AoI during construction, represents approximately 0.08% of the population currently residing in the Lukang Township.

While the introduction of workers presents the potential for infectious diseases to be introduced, it is anticipated that due to the limited size of the anticipated influx, the potential for this impact to eventuate is limited.

As noted in the baseline, the most common causes of death in Taiwan, as well as the Project AoI are non-communicable diseases (i.e. cancer). Although not key contributors to mortality rates, infectious diseases are present within the Project AoI, including COVID-19 and influenza. There is potential for the workers who move into the Project AoI to contribute to the spread of these diseases or introduce new infectious diseases.

Although the extent of influx is expected to be limited, and a range of mitigation measures have been introduced, an infectious disease can result in temporary and long-term health issues, and in the worst case a fatality. Given the outcome that can occur (e.g. a serious illness or fatality), there is potential for this to have a **medium** impact. A summary of the social impact assessment is captured in **Table 5-8**.

There is potential for this impact to be compounded by other proposed OWF projects, should their schedules overlap with the Project's timeline. However, it is not clear where the other wind projects will place their onshore infrastructure or when construction on these projects will commence. There are currently six (6) nearby projects (refer to Appendix A) under construction totalling 4,829.5 MW (highest value possible), while the Project will produce 1,044 MW. Assuming these projects require the same composition of workforce and that the power to be generated is 4.6 times of the Project's then it is possible to expect an influx of 328 workers, which would result in an influx of 0.38% of the total population of the County.

The Project will continue to engage with the TOWIA Platform to discuss project status/progress, and how to best collaborate (as noted above in **Section 5.8.2**). As information is made available on construction timeframes for other OWF projects, the potential community safety impacts will need to be reviewed and updated appropriately.

Table 5-8 Social Impact Significance: Community Health

Impact	**Community Health**				
Extent	Household	Township	County	Taiwan	
	Direct and measurable impacts of community health will be at a local Township level.				
Duration	Temporary	Short term	Long term	Permanent	
	Given that community health impacts are generally tied to the influx of workers during the construction phase, the impact is considered short term.				
Scale	Negligible	Perceptible	Clearly evident	Large	
	The influx of workers could have an evident impact on community health.				
Frequency	Rare	Occasional	Often	Constant	
	The frequency of this community health impacts are occasional with the implementation of mitigation measures.				
Magnitude	Negligible	Minor	Moderate	Major	Positive

Impact	Community Health				
	Based on the previous four (4) categories the magnitude is ranked as moderate.				
Likelihood	Low	Medium	High		
	Given the small number of workers compared to the population of the township, the likelihood is marked as low.				
Significance	**Low**	**Medium**	**High**	**Very High**	**Positive**
	This impact has a moderate magnitude and low likelihood but with potentially severe consequences making the significance of this impact medium.				

5.9 Fisheries Livelihoods

Projects located in offshore locations have the potential to displace existing users, such as fishers, which can impact on livelihoods derived from the fishing industry.

5.9.1 Background

No physical displacement is expected to occur as a result of the Project, as the onshore infrastructure is located in an existing industrial zone, which has been earmarked for industrial development. Further details are provided in **Section 4.6**.

While no physical displacement is expected, there is potential for economic displacement of fishers to occur. Displacement of fishers can occur due to a range of Project activities, including the presence of offshore infrastructure, installation of cables, the creation of an exclusion zone and the presence of vessels (transporting goods and materials to and from the Sites). In addition, noise, light and turbidity generated by construction and installation activities can cause fish to disperse, at least for the duration of the disturbance.

The above activities can result in temporary and/or permanent economic displacement of fishers. As a result, the livelihoods of those involved in the fishing industry can be detrimentally impacted. This includes those who own and operate the vessels as well as those who work on the vessels or are involved in selling the fish to/at market.

There are a range of vulnerable groups that could be impacted by economic displacement. This includes fishers who have chosen not to join regional and national FAs (referred to as informal fishers), migrant workers who have been hired to work in the fishing industry, and fishers' wives who are often employed in the sale of fish catch. The interests of these vulnerable groups are not necessarily represented by FAs.

As noted in **Section 4.9**, it is anticipated that there are very few informal fishers, and where informal fishers do exist, they are expected to operate in coastal areas. These fishers are not expected to operate in the locations where the largest extent of displacement is expected to occur, which is in and around the location of the turbines.

Based on the Fisheries Baseline Survey, migrant workers are involved in the fishing industry in the Project AoI. Migrant workers are of particular note, as there are ongoing allegations of forced labour within the fishing industry in Taiwan, specifically in relation to the employment of migrant workers, as noted in **Section 4.10**.

5.9.2 Mitigation Measures

According to IFC Performance Standard 5: Involuntary Resettlement,

> *Where the exact nature or magnitude of the land acquisition or restrictions on land use related to a project with potential to cause physical and/or economic displacement is unknown due to the stage of project development, the client will develop a Resettlement and/or Livelihood Restoration Framework outlining general principles compatible with this Performance Standard.*

A **LRP** has been developed in line with local regulatory requirements as well as the requirements of IFC Performance Standard 5. The LRP identified Project Affected Persons (PAPs) which includes fishers with licenses, informal fishers and migrant workers, all of whom are covered under the LRP. As part of the LRP, a Fisheries Baseline Survey has been completed (refer to **Section 4.9**), which involved engagement with fishers who operate in the Project AoI. The outcomes of this Fisheries Baseline Survey have been used to inform development of the LRP. Furthermore, there will be ongoing engagement with affected fishers, development of a Skills and Vocational Training Program for PAPs, as well as monitoring of the livelihood restoration efforts, as part of the implementation of the LRP.

As part of the LRP, the Project's Grievance Mechanism will be available to stakeholders to raise concerns. This will enable informal fishers and migrant workers, who are captured in the LRP, to raise issues or concerns, which will be dealt with on a case-by-case basis.

In addition to the LRP, compensation agreements have been established with fishers. This has involved engagement between the Project and the Changhua Fisheries Association and the Penghu Fisheries Association. The process was guided by the local regulatory framework.

Additional mitigation measures to be implemented include:

- **Construction Phase Environmental Monitoring Plan (included as part of the ESMS):** The social management component of the Construction Phase Environmental Monitoring plan requires HL to disclose relevant Project information in line with the relevant government approvals. The intent is to help affected communities and other stakeholders understand the risks, impacts, and opportunities associated with the Project in a timely, understandable, accessible and appropriate manner and format. Additionally an external monitoring should be undertaken on a semi-annually basis during the construction phase.
- **Operation Phase Environmental Monitoring Plan (included as part of the ESMS):** The **Fishery Economy Monitoring Plan** requires that once per year an assessment of the annual reporting of the fisheries within the Project AoI is completed to help ensure the appropriateness of the management measures implemented. This includes assessment of the environment, the facilities, and production of fishers; the data is to be provided by the Fisheries Associations.
- **SEP:** The SEP, which has already been developed and is currently being implemented, outlines ongoing engagement that will be undertaken for the life of the Project. This includes proactive engagement with those involved in the fishing industry to understand issues and/ or concerns, including vulnerable populations such as migrant workers and informal fishers.
- **Grievance Mechanism:** A Grievance Mechanism has been developed to provide a means through which stakeholders, including vulnerable populations such as migrant workers working in the fishing industry and informal fishers, will have access to in order to raise concerns or issues. The Grievance Mechanism will maintain the confidentiality of those who have raised concerns. It will provide a means to readily address concerns, and investigate, and as required, remediate impacts that are identified. The Grievance Mechanism will be managed by the HL Community Relations Manager with support from other managers and team members.

Critical to the effectiveness of a grievance mechanism is ensuring that stakeholders, in particular vulnerable populations, are aware of how to access the mechanism. The Project will continue to engage with stakeholders to ensure that they are aware of the Grievance Mechanism (as outlined in the SEP), which will involve posting details on how to use the mechanism on the Project's website, on signage at the main Project locations, and sharing the details of the mechanism during face-to-face or similar engagement activities. This communication will be an ongoing process throughout the life of the Project. A review of the effectiveness of the Grievance Mechanism will be undertaken six (6) monthly during construction, and annually during operation, to ensure that it is meeting the needs of stakeholders as well as the Project.

5.9.3 Significance of the Impact

The Project is expected to temporarily impact coastal fishers who operate within the EFR. This impact will occur during installation of the subsea export cable, which transects a small portion of the EFR. However, it is worth noting that the EFR expired in 2019. The activities undertaken for the installation of those cables (which involves trenching and horizontal directional drilling) is expected to take 8 months (i.e. four (4) months per cable in a consecutive time period). It is anticipated that the fishers who operate in the EFR will not be impacted during operation of the Project.

It is noted that the majority (more than 70%) of fishers who live in the Project AoI operate in coastal areas. This means the majority of fishers, including informal fishers, will not be permanently impacted by the Project, as they do not operate in offshore area where the permanent structures will be installed.

In terms of offshore fishers, there is the potential to permanently displace these fishers, which make up approximately 30% of fishers in the Project AoI. The installation of the turbines will limit the use of nets, which is the most commonly used fishing method in the Project AoI. While fishers will likely look for other areas to fish, the ability to fish elsewhere may be limited to some extent given the other Projects that are being developed in and around the Project area.

There are vulnerable groups that exist within the fishing industry that may be disproportionately impacted by the Project. The Fisheries Baseline Survey found that migrant workers are employed in the industry. It is anticipated that some degree of informal fishing does occur, but it is expected to be very small. There may also be other fishers (e.g. fishers who come from neighbouring countries) that operate in the area.

The LRP captures measures to mitigate the impact that will be experienced by fishers. This includes a range of livelihood restoration programs. There is a requirement within the local regulatory framework to provide compensation, which is reflected in the LRP and a separate compensation agreement has been established with fisheries.

The LRP pays particular attention to potential vulnerable populations (e.g. migrant workers, informal fishers) within the fishing industry. A robust Grievance Mechanism has been established, as part of the LRP which builds upon the existing Project Grievance Mechanism. Those that are considered to be vulnerable will be able to access the Grievance Mechanism, and their concerns regarding economic displacement will be handled on a case-by-case basis.

Given the challenges in reporting on the extent of the presence of vulnerable populations within the fishers who operate in the Project AoI, a precautionary approach has been taken, which is reflected in the rating presented as well as the mitigation measures established.

Given the mitigation measures that will be introduced, and the ongoing monitoring that will be involved in implementation of the LRP (i.e. to ensure that the mitigation measures are working effectively), the impact significance is considered **medium** for coastal fishers and **high** for offshore fishers**.** A summary of the impact assessment is captured in **Table 5-9** and **Table 5-10**.

Table 5-9 Social Impact Significance: Coastal Fisheries Livelihoods

Impact	Coastal Fisheries Livelihoods			
Extent	Household	Township	County	Taiwan
	Fishers located within the Changhua and Penghu townships will be directly impacted by the Project.			
Duration	Temporary	Short term	Long term	Permanent
	The Project will create a short term impact on the fisheries' livelihoods.			
Scale	Negligible	Perceptible	Clearly evident	Large
	Numerous fishers will be impacted by the Project.			

Frequency	Rare	Occasional	Often	Constant	
	The impact will occur occasionally during the lifecycle of the Project due to the installation of subsea cables and their maintenance.				
Magnitude	Negligible	Minor	Moderate	Major	Positive
	Based on the previous four (4) categories the magnitude is ranked as minor for fisheries livelihood. This takes into account vulnerable groups that, if present, operate on the coast.				
Likelihood	Low	Medium	High		
	While pre-mitigation the impact is expected to be high, given the strategies in place to mitigate the impact it is anticipated that this will reduce the likelihood of the impact.				
Significance	**Low**	**Medium**	**High**	**Very High**	**Positive**
	The magnitude being minor and the medium likelihood of this impact, the significance is considered medium.				

Table 5-10 Social Impact Significance: Offshore Fisheries Livelihoods

Impact	**Offshore Fisheries Livelihoods**				
Extent	Household	Township	County	Taiwan	
	Fishers located within the Changhua and Penghu townships will be directly impacted by the Project.				
Duration	Temporary	Short term	Long term	Permanent	
	The Project will create a permanent impact on the offshore fisheries' livelihoods.				
Scale	Negligible	Perceptible	Clearly evident	Large	
	Numerous fishers will be impacted by the Project.				
Frequency	Rare	Occasional	Often	Constant	
	The impact will occur daily during the lifecycle of the Project and even after the decommissioning phase given the species of fish may have migrated to another location. The impact will be mitigated through livelihood restoration measures.				
Magnitude	Negligible	Minor	Moderate	Major	Positive
	Based on the previous four (4) categories the magnitude is ranked as moderate for offshore fisheries livelihood.				
Likelihood	Low	Medium	High		
	While pre-mitigation the impact is expected to be high, given the strategies in place to mitigate the impact it is anticipated that this will reduce the likelihood of the impact				
Significance	**Low**	**Medium**	**High**	**Very High**	**Positive**
	The magnitude being moderate and the medium likelihood of this impact, the significance is considered high.				

5.10 Employment

Short-term (construction) and medium-term (operation) employment opportunities will be generated by the Project. These opportunities include direct and indirect employment (e.g. through the supply chain). In addition, Project decommissioning will bring about detrimental economic impacts, as employment and business opportunities will cease once decommissioning is completed.

5.10.1 Background

Employment and business opportunities for the communities located in the AoI during the construction and operation phases of the Project is considered to be a positive impact. Through an analysis of the baseline conditions, it is understood that there is capacity within the local communities for Project based employment.

As the life of the Project is approximately 25 years, it remains challenging to assess the full extent of the employment impact at decommissioning. It is recognised that there will be employment opportunities during the decommissioning phase, however these will cease once the decommissioning process is completed. As such, this impact will need to be reassessed closer to the time of decommissioning (e.g. five (5) years prior to commencement of decommissioning). Appropriate strategies will be put in place as part of the ESMS to ensure this occurs.

5.10.2 Mitigation Measures

The **ESMS** is the primary management plan that will be implemented during the construction and operation phases of the Project. Specifically, the ESMS establishes the following mitigation measures to manage employment during the life of the Project:

- **Retrenchment Policy:** Outlines how retrenchment will be undertaken if required. Any retrenchment required will align with the requirements outlined in IFC Performance Standard 2, as well as the requirements set out by the International Labor Organization (ILO).

In addition, the Project is committed to the development of a **Decommissioning Plan** five (5) years prior to commencement of the decommissioning phase. At present, the impacts associated with employment will need to be revisited as part of the Decommissioning Plan, and if required, the existing mitigation measures will be updated.

Additional mitigation measures to be implemented with respect to employment include the following, where both mechanisms will provide confidentiality for those who raise concerns and protect against potential retaliation:

- **Grievance Mechanism:** Workers will have access to grievance mechanisms. The Grievance Mechanism (internal) will be accessible to Project employees, and the Grievance Mechanism for contractors and subcontractors' workers will be accessible within the Project's supply chain. Both mechanisms will provide confidentiality for those who raise concerns and protect against potential retaliation. The Grievance Mechanisms will be managed by the HL's HR Manager and Contractor Management Team Lead with support from other managers and team members; and
- **Whistleblower Mechanism:** Workers will have access to a whistleblower mechanism. The whistleblower mechanism will be accessible to Project employees as well as contractors and subcontractors' workers within the Project's supply chain. The mechanism will provide confidentiality for those who raise concerns and protect against potential retaliation. The whistleblower mechanism will be managed by the HL's Compliance Officer with support from external consultant. As of July 2023, the Project has engaged KPMG Taiwan to optimize the whistleblower policy and whistleblower system.

5.10.3 Significance of the Impact

Through an analysis of the baseline conditions, it is understood that there is capacity within the Project AoI to take up employment opportunities with the Project. As of 2021, the construction industry employed 45,000 workers in Changa Country and 6,000 in Penghu County. Additionally, Changhua County's and Penghu County's most common occupation is Craft and Machine Operation with 248,000 and 14,000 workers employed, respectively in 2021.

Employment and business opportunities for the receptors in the Project AoI is a **positive** impact, providing local economic opportunities. There will be employment opportunities during the

decommissioning phase also, however employment will cease at the when decommissioning is complete, which will be further assessed prior to decommissioning.

5.11 Labor and Working Conditions

Without appropriate safeguards there is potential for the rights of workers (including those within the Project's supply chain) to be impacted by a project. Migrant workers are particularly vulnerable to this impact.

5.11.1 Background

The Project will employ 216 employees at the peak of construction (period of 12 months), with the construction phase expected to last three (3) years. During the construction phase, approximately 145 workers are anticipated to be sourced from townships within the Project AoI. This means approximately 71 workers are expected to originate from outside the Project AoI and will be accommodated within the Project AoI - some of which will be housed on offshore vessels. It should be noted that the Project will provide accommodation for workers who relocate to Changhua County, while contractor staff who will relocate to the area on a temporary basis will be housed in rental accommodation.

The workforce will decrease substantially during the operation phase of the Project. The total workforce required during the operation phase is expected to be 120 people, most of whom will be sourced from within the Project AoI.

There is potential without appropriate safeguards for the rights of workers to be impacted during the course of Project construction and operation. This impact extends to employees directly engaged by the Project, contractors and subcontractors, and workers located within the Project's supply chain.

If safeguards are not in place, a range of potential impacts can arise, including discrimination within the workplace, mistreatment of workers, prevention of workers joining trade unions, and use of bonded and/or child labour. Within this context, migrant workers are particularly vulnerable to experiencing impacts.

5.11.2 Mitigation Measures

The Project has established a **Human Resources Policy** (Hai Long, 2023), which commits the Project to meeting the requirements set out in the IFC Performance Standard 2, the ILO Declaration on the Fundamental Principles and Rights at Work, and the United Nation's Guiding Principles on Business and Human Rights.

The Human Resources Policy specifically addresses the following: prohibition of use of child and forced labour, discrimination, freedom of workers organisation, benefits and conditions of work, equal opportunities, provision for retrenchment, and support for migrant workers. This includes a commitment not to engage child labour (within this context this refers to persons under the age of 18 years old).

The Human Resources Policy is applicable to HL, including its employees and non-employee staff such as contractors, and explicitly recognises the vulnerability of migrant workers. It seeks to ensure that they are treated with respect.

Accordingly, the Human Resources Policy aims to ensure the following:

- Workers are not discriminated against on the grounds of race, colour, sex, religion, political opinion, national extraction, social origin, age, marital or relationship status, sexual orientation or trade union activity. As part of the hiring process, age checks will be conducted ;
- Passports or other forms of identification are not withheld. An offer can be made to workers to store the relevant forms of identification in a safe location, but workers will always have access to their identification;

- Workers are paid appropriately and in a timely manner, informed by national standards and industry benchmarks;
- Workers are provided an easy to understand contract that specifies working hours, overtime hours, breaks, and holidays;
- Safeguards are in place,if recruitment agents are utilised. This includes pre-screening of potential agents and establishment of appropriate contractual obligations with the agent to ensure appropriate oversight is in place (so that workers are not placed in debt). Passports or other forms of identification should not be withheld; and
- Workers are made aware of their rights, such as part of the induction process.

In addition the following mitigations are in place to manage potential impacts associated with labour and working conditions:

- **Grievance Mechanism:** Workers will have access to grievance mechanisms. The Grievance Mechanism (internal) will be accessible to Project employees, and the Grievance Mechanism for contractors and subcontractors' workers will be accessible within the Project's supply chain. Both mechanisms will provide confidentiality for those who raise concerns and protect against potential retaliation. The Grievance Mechanisms will be managed by the HL's HR Manager and Contractor Management Team Lead with support from other managers and team members; and
- **Whistleblower Mechanism:** Workers will have access to a whistleblower mechanism. The whistleblower mechanism will be accessible to Project employees as well as contractors and subcontractors' workers within the Project's supply chain. The mechanism will provide confidentiality for those who raise concerns and protect against potential retaliation. The whistleblower mechanism will be managed by the HL's Compliance Officer with support from external consultant. As of July 2023, the Project has engaged KPMG Taiwan to optimize the whistleblower policy and whistleblower system.
- **Accommodation Management Plan:** An Accommodation Management Plan will be developed. It will outline the Project's commitment to meeting international good practice standards, and how this commitment will be cascaded to suppliers and contractors, and monitored over time. The Project will ensure, where accommodation is provided, that international good practice requirements, specifically those outlined IFC and EBRD's Workers' Accommodation: Processes and Standards (IFC, 2009) are applied. As mentioned in the Declaration letter this requirement will be cascaded to contractors via contractual obligations. Offshore, workers will be housed on the appropriate offshore vessels, accommodation arrangements on these vessels will comply with DNV GL minimum Comfort Class 3 or equivalent class notation and the flag requirements (HL Project HSE Management Plan) which states that flagged vessels shall with the Maritime Labour Convention (2006). Further detail as to the minimum requirements for offshore worker accommodation is delineated in HL's TSA-V.E.09 Minimum Requirements for Accommodation document. Given the extent of the work that will necessitate accommodation offshore, it is not expected that a separate accommodation plan be required, as the commitments outlined will be monitored through the ESMS.
- **Supplier Screening Process:** The Project has implemented a supplier screening process to reduce the potential of working with organisation's that may not have in place the appropriate suite of policies, procedures and systems that align with those of the Project (refer to **Box 5-1**).
- **Supplier Contractual Obligations:** Contractual obligations have been established with suppliers to ensure that the Project's commitments are met. These obligations include a requirement to align with the Human Resources Policy and the requirements set out in IFC Performance Standard 2, as well as a commitment to implement the Supplier Code of Conduct and Code of Business Conduct and Ethics.

- **Supplier and Contractor Management Plan:** A Supplier and Contractor Management Plan will be developed. This will articulate the process for selecting suppliers and contractors, the requirements that will be cascaded to suppliers and contractors (related to human resource management, environmental management, health and safety management), and a process for monitoring the requirements that have been cascaded to suppliers and contractors. This will include, amongst other things, ensuring that Project suppliers and contractors establish their own systemic Environmental Management Plan for works.
- **Monitoring Programs (included as part of the ESMS):** Implementation of the above measures will be monitored through the ESMS. Monitoring will involve ongoing engagement with and auditing of suppliers. The focus of the monitoring carried out will be on verifying that contractors are meeting the Project's requirements and commitments as specified through the various policies, mechanisms, obligations and processes. The monitoring programs comprise:
  - Internal Monitoring: The focus will be on the adequacy and effectiveness of HL's internal control processes and risk management. The monitoring results will be evaluated and presented in an internal monitoring report.
  - External Monitoring: HL will engage an independent party to carry out external monitoring and evaluation. The independent party will monitor and evaluate the implementation of the respective proposed commitments outlined in the ESMS (as updated to align with those captured in this document). The independent party will submit the monitoring and evaluation report to Lenders and HL. External monitoring is to be undertaken on a bi-annually basis during the construction phase and annually during operation phase.
  - Inspections: monthly, quarterly, irregular inspections of all site activities by HL will be conducted.
  - Ongoing Monitoring: Monitoring of the implementation of any actions identified as a result of any incident, complaint, or non-conformance will be undertaken to ensure the effectiveness of any changed procedure(s).
  - Corrective Action Plans: Corrective action plans will be developed to address any significant environmental and social issues identified through the internal monitoring, external monitoring, inspections and ongoing monitoring activities.

It is also noted that according to the Project's HRIS, which involved a review of the Project employment contracts, the Project follows the Standard Labor Law in terms of working hours, wages and benefits which are in line with ILO requirements. In addition, the Project has a range of measures to manage labour and working conditions such as the Consortium Partners' human rights commitments, Code of Business Conduct and Ethics, Diversity Policy, which are expected to flow through to the Project.

Moreover, due to the vulnerability of migrant workers in the construction sector, the HRIS (2021) proposed a **Labor Management Plan** as an additional mitigation measure to guide the Project's contractors in ensuring the fair treatment of their workforce and protect migrant workers' rights. The Labor Management Plan should include clauses around:

- Standards and expectations for labour and working conditions;
- Accommodation conditions and usage;
- Staffing and systems for monitoring and reporting on labour rights;
- Use of recruitment agents with specific safeguards on recruitment fees for migrant workers;
- Assessment of indicators of forced labour; and
- Guidelines for identifying non-compliances and corrective actions.

Box 5-1 Overview of the Supplier Screening Process

The Project uses a multi-pronged approach to screening suppliers. This approach includes use of the following:

- **EcoVardis:** which focuses on understanding potential sustainability related risks. This includes environmental, social and ethical issues.
- **Dow Jones RiskCenter:** which provides information on reported social issues (e.g. workforce issues, discrimination, and health and safety issues), reported competitive or financial issues, reported regulatory issues, and reported environmental issues.
- **D&B Finance Analytics:** which focuses on understanding financial performance.

Collectively these provide insight on supply chain risks, based on the performance of suppliers.

Key Project suppliers, such as Siemens Gamesa Renewable Energy S.A., have been vetted through this screening process to confirm the presence or absence of potential risks. Where risks have been identified these suppliers have not been selected. With the suppliers that have been selected to be involved in the Project, no specific risks have been identified.

5.11.3 Significance of the Impact

If safeguards are not in place a range of potential impacts can arise, including:

- Potential employment of children, forced or bonded labour. This risk is often higher for vulnerable groups (e.g. migrant labour);
- Accidents, injuries or other health and safety risks, which can arise from inappropriate working conditions, such as excessive working hours and insufficient breaks;
- Potential for discriminatory practices to occur in the hiring process;
- Potential for discrimination against workers that join unions (or other similar organisations) or take part in collective bargaining;
- Inappropriate or delayed payments to workers; and
- Risk of association with contractors or third parties (e.g. recruitment agents) adhering to relevant laws and international standards and guidance.

If left unmanaged, such practice can result in instances of modern slavery, also referred to as trafficking in persons[39].

As noted in the baseline, forced labour appears to occur primarily in sectors reliant on migrant workers in Taiwan, this includes the construction sector. This presents a potential risk, which the Project has recognised. A range of management strategies have been introduced to minimise the potential for such issues to arise, as reflected in **Section 5.11.2**.

The Project has established a range of measures, including a Grievance Mechanism and a commitment to ongoing monitoring of implementation of its Human Resources Policy, and alignment with international good practice standards as they relate to accommodation. These measures will help reduce the potential for a violation of work rights, including Project employees, contractors and workers within the Project's supply chain, to arise.

A number of factors were considered in determining the impact significance. This included:

[39] The term trafficking in persons, often used interchangeably with human trafficking and modern slavery, is defined by the Palermo Protocol as "the recruitment, transportation, transfer, harbouring or receipt of persons, by means of the threat or use of force or other forms of coercion, of abduction, of fraud, of deception, of the abuse of power or of a position of vulnerability or of the giving or receiving of payments or benefits to achieve the consent of a person having control over another person, for the purpose of exploitation. Exploitation shall include, at a minimum, the exploitation of the prostitution of others or other forms of sexual exploitation, forced labour or services, slavery or practices similar to slavery, servitude or the removal of organs."

- The size of the workforce, which is relatively small and largely drawn from the Project AoI;
- The potential use of migrant labour during construction, which presents a risk, given the local context where the construction industry in Taiwan is known to draw on forced labour;
- The use of contractors – which can make it more difficult to identify and remedy human rights violations; and
- The Project's commitment to protecting rights of its workers through its policies and processes.

For these reasons the significance of the potential impact to workers' rights is **medium**. A summary of the social impact assessment is captured in **Table 5-11**.

Table 5-11 Social Impact Significance: Labour and Working Conditions

Impact Issue	Labour and Working Conditions				
Extent	Household	Township	County	Taiwan	
	The majority of the workforce employed on the Project will be sourced from the townships located in the Project AoI.				
Duration	Temporary	Short term	Long term	Permanent	
	Labor and working conditions are a potential impact throughout the Project's lifecycle.				
Scale	Negligible	Perceptible	Clearly evident	Large	
	Negligible change from baseline conditions.				
Frequency	Rare	Occasional	Often	Constant	
	Given the mitigations put in place from the start, including selection of supply chain contractors and policies and plans in place, the frequency is deemed to be occasional.				
Magnitude	Negligible	Minor	Moderate	Major	Positive
	Based on the previous four (4) categories the magnitude is ranked as minor.				
Likelihood	Low	Medium	High		
	The use of contractors, the potential use of migrant labour results in a medium likelihood.				
Significance	**Low**	**Medium**	**High**	**Very High**	**Positive**
	The magnitude being minor and the medium likelihood of this impact, the significance is considered to be medium.				

5.12 Visual Amenity

Projects can create a range of visual impacts which can impact receptors. Visual impacts typically result from the installation of sizeable structures, but also from light spill.

5.12.1 Background

The Project will create light spill during the construction phase, as well as involve the installation of large structures (i.e. the WTGs). These can negatively impact on the visual amenity of receptors located within the Project AoI.

Based on the visual impact assessment conducted for the Project however, it appears that an impact is unlikely to occur. The visual simulations prepared for the Project are provided in **Figure 5-3** and **Figure 5-4**.

The visual impact assessment noted that the WTGs are located approximately 40 km from Changhua shore, which makes it difficult for receptors within the AoI to see from shore. Onshore, while there will be light spill, this is expected to be limited to the Changhua Binhai Industrial Zone.

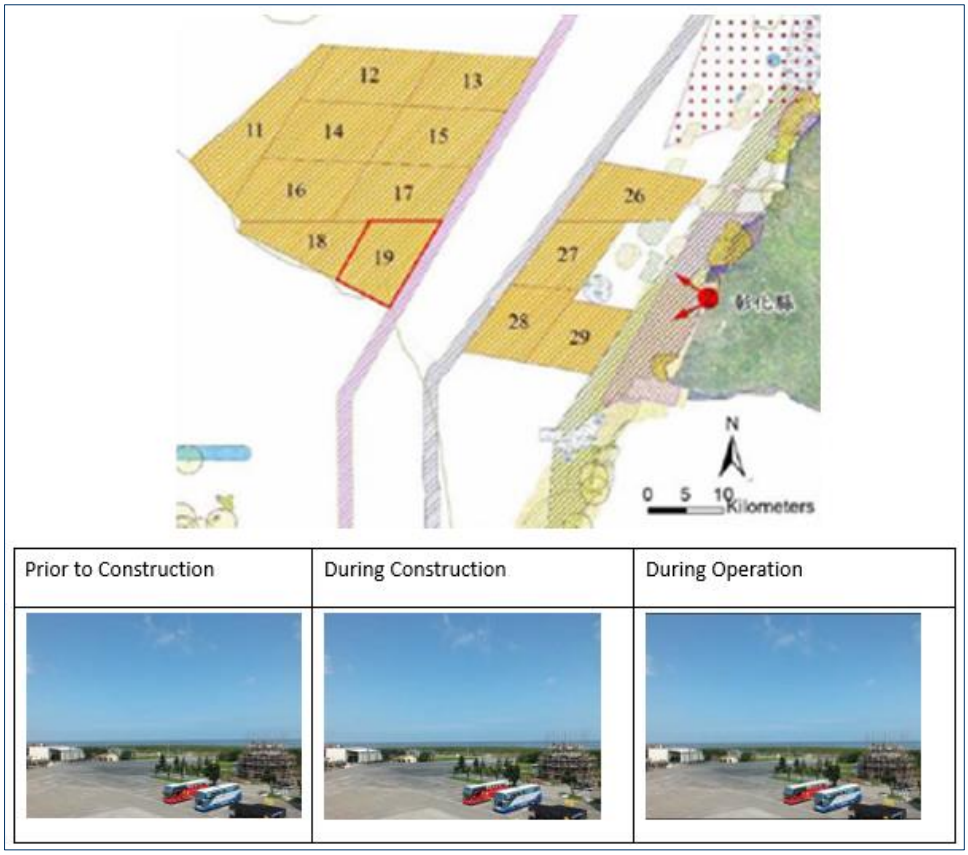


Figure 5-3 Visual Simulation from Changhua Shore to HL2A and HL2B

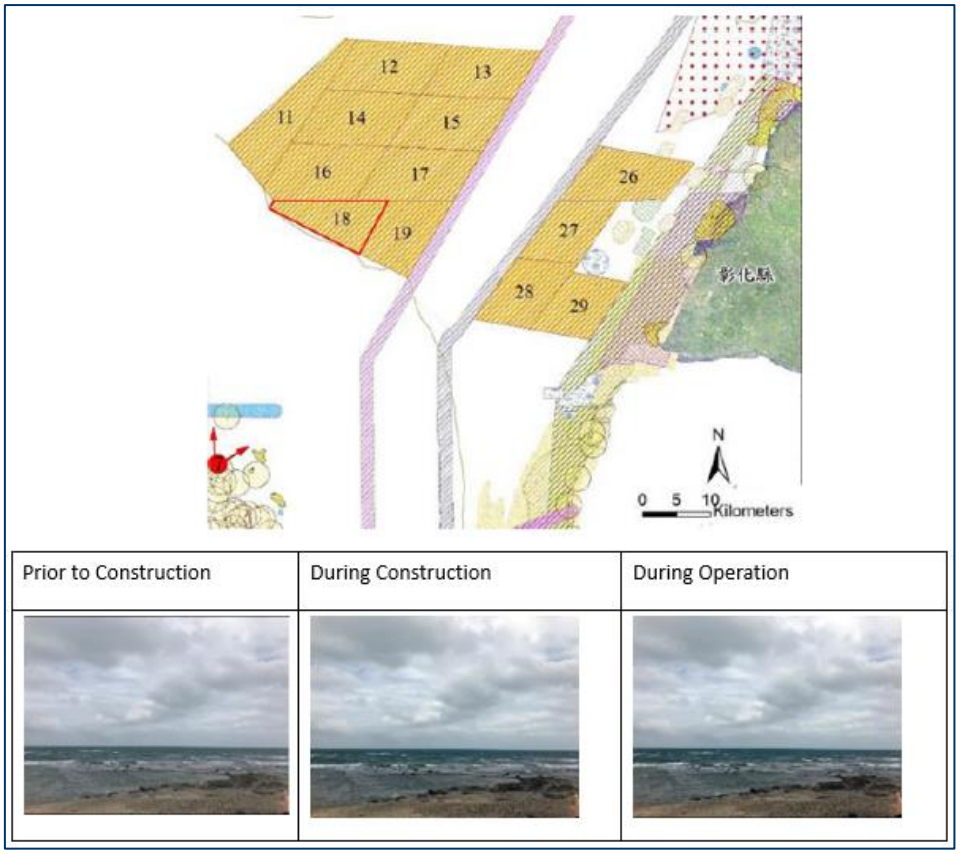


Figure 5-4 Visual Simulation from Penghu to HL3 (closer to Penghu County)

5.12.2 Mitigation Measures

While the visual amenity impacts are not expected to be significant, the Project has implemented the following mitigation measures:

- **SEP:** The engagement process, as outlined in the SEP, will help ensure stakeholders are aware of the visual impact the Project may induce.
- **Grievance Mechanism:** The Grievance Mechanism has been rolled out and is accessible by stakeholders, if any issues regarding visual impact arises it will be dealt in a timely manner and allow for a resolution to be achieved. The Grievance Mechanism will be managed by the HL Community Relations Manager with support from other managers and team members.

5.12.3 Significance of the Impact

Given the current baseline conditions and the nature of this Project, as well as the mitigation measures in place, the significance of the impact is **low**. A summary of the social impact assessment is captured in **Table 5-12**.

Table 5-12 Social Impact Significance: Visual Amenity

Impact	Visual Amenity			
Extent	Household	Township	County	Taiwan
	Visual amenity impact will be experienced at both Changhua and Penghu County level.			
Duration	Temporary	Short term	Long term	Permanent

Impact	**Visual Amenity**				
	The visual impact will occur during the construction and operation phases of the Project.				
Scale	Negligible	Perceptible	Clearly evident	Large	
	Visual modelling has been done and the Project WTGs are unlikely to be visible from shore.				
Frequency	Rare	Occasional	Often	Constant	
	The Project will have an operating life of 25 years, visual impact to be rare.				
Magnitude	Negligible	Minor	Moderate	Major	Positive
	Based on the previous four (4) categories the magnitude is ranked as minor.				
Likelihood	Low	Medium	High		
	The likelihood is low, based on the outcomes of the visual impact assessment.				
Significance	**Low**	**Medium**	**High**	**Very High**	**Positive**
	With the magnitude being minor and the likelihood low, the significance is considered to be low.				

5.13 Summary of Social Impacts

Table 5-13 provides and overall summary of the social impact assessment for the Project, as detailed in the proceeding sections.

Table 5-13 Summary of Social Impacts

Impact	Description	Mitigation Plans	Impact Significance
Air Quality	Dust is often generated from construction related activities (e.g. earthworks). The dust produced can cause a nuisance and/or health impacts such as exacerbating existing respiratory illnesses.	■ ESMS – ■ ESMS – Air Quality Management Plan ■ ESMS – Construction Phase Environmental Monitoring Plan ■ HSE Management Plan ■ SEP ■ Grievance Mechanism	Low
Noise Emission	Projects generate noise which can stem from a range of activities. Noise, particularly from construction related activities, can cause a nuisance and/or health related impacts such as sleep deprivation and mental health impacts.	■ ESMS ■ ESMS – Airborne Noise and Vibration Management Plan ■ ESMS – Construction Phase Environmental Monitoring Plan ■ HSE Management Plan ■ SEP ■ Grievance Mechanism	Low
Infrastructure and Services	There are a host of ways in which a project can place pressure on existing community infrastructure (e.g. roads) and services (e.g. health care): ■ An influx of workers can place pressure on existing community infrastructure (e.g. roads, recreation facilities) and services (e.g. health care) and accommodations. ■ Emergency situations, such as vessel collisions or health and safety accidents, can also place pressure on existing infrastructure and services (including rental accommodation), in particular emergency responders and health care providers. ■ At decommissioning there will be a large volume of waste, which can place pressure on local waste facilities. This can result in existing services and infrastructure not being able to meet the needs/ demand of the local communities.	■ ESMS ■ Waste Management Plan ■ ERP ■ Decommissioning Plan ■ SEP ■ Grievance Mechanism	Low
Cultural Heritage	Projects have the potential, particularly where there are ground disturbing activities, to impact or and/or interfere with cultural heritage resources. Impacts to cultural heritage can occur in both the onshore/offshore environment.	■ ESMS ■ ESMS – Archaeology and Cultural Heritage Chance Finds Management Plan ■ ESMS – Pre-Construction Phase Environmental Monitoring Plan	Low

Impact	Description	Mitigation Plans	Impact Significance
		■ ESMS – Construction Phase Environmental Monitoring Plan ■ SEP ■ Grievance Mechanism	
Community Safety	Projects often present a range of community safety hazards. These hazards can be present or linked to the use or presence of heavy machinery, new structures, and the transport of goods, materials and workers within the Project AoI.	■ ESMS ■ ESMS – Traffic Management Plan ■ ESMS – Marine Safety and Vessel-related Management Plan ■ Community Health, Safety and Security Management Plan ■ HSE Management Plan ■ Employer's Requirement – HSE Requirement ■ SEP ■ Grievance Mechanism ■ Code of Conduct	High
Community Health	New developments can contribute to a change in the prevalence of infectious diseases in the Project's AoI. The term 'infectious disease' refers to illnesses caused by a range of pathogens. These pathogens can be transmitted through various means, including disease vectors (e.g. mosquitos), ingestion of unsanitary food and/or water (e.g. diarrhoea), and human or pest contact (e.g. STIs, rabies). There is potential for the Project to contribute to an increase prevalence of infectious diseases within the Project AoI.	■ Code of Conduct ■ Worker Inductions ■ TOWIA Platform ■ SEP ■ Grievance Mechanism	Medium
Fisheries Livelihoods	Projects located in offshore locations have the potential to displace existing users, such as fishers, which can impact on livelihoods derived by the fishing industry.	■ ESMS – Construction Phase Environmental Monitoring Plan ■ ESMS – Operation Phase Environmental Monitoring Plan ■ ESMS – Fishery Economy Monitoring Plan ■ LRP ■ SEP ■ Grievance Mechanism	High
Employment	Short-term (construction) and medium-term (operation) employment opportunities will be generated as a result of the Project. These opportunities include direct and indirect employment (e.g. through the supply chain). In addition, Project decommissioning will	■ ESMS – Retrenchment Policy ■ Decommissioning Plan ■ Grievance Mechanism ■ Whistleblower Mechanism	Positive

Impact	Description	Mitigation Plans	Impact Significance
	bring about detrimental economic impacts, as employment and business opportunities will cease once decommissioning is completed.		
Labour and Working Conditions	Without appropriate safeguards there is potential for the rights of workers (including those within the Project's supply chain) to be impacted by the Project. Migrant workers are particularly vulnerable to this impact.	■ Human Resources Policy ■ Grievance Mechanism ■ Whistleblower Mechanism ■ Worker Accommodation Requirements ■ Supplier Screening ■ Supplier Contractual Obligations ■ Supplier and Contractor Management Plan ■ Accommodation Management Plan ■ ESMS – Monitoring Programs ■ Labour Management Plan	Medium
Visual Amenity	Projects can create a range of visual impacts which can impact receptors. Visual impacts typically result from the installation of sizeable structures and light spill.	■ SEP ■ Grievance Mechanism	Low

APPENDIX A NEARBY PROJECTS

Cumulative Impact Assessment

ERM, 2022

Development/ Project	Description	Developer/ Sponsor	Location	Distance to Project Location	Approval Status[40]	Source of Information	Cumulative Impact Assessment Consideration
Taiwan Strait Offshore Wind Farm Project (Site 28)	Proposed wind farm of 73.8 km^2 area, composed of at most 75 WTG of 8-12 MW each. Submarine power cable of 33/66 kV to connect the wind farm to land power source.	Green Power Company Preparatory Office	Offshore area near Fangyuan Township and Dasheng Township of Changhua County. Proposed submarine power cable connecting to Fangyuan Township.	29.6 km East	**No development right before 2025**	EIA, MOEA selection and bidding result	Due to proximity and approval status, there is no cumulative impact to be considered.
Offshore Wind Farm Project Phase 2 (Site 26)	Proposed wind farm of 89.21 km^2 area, composed of at most 108 WTG of 5-10 MW each.	Taiwan Power Company	Taiwan Strait. Offshore area near Xianxi Township, Lukang Township, Fuxing Township, and Fangyuan Township of Changhua County.	42.6 km Northeast	300 MW awarded for 2024. **Construction on-going.**	EIA, MOEA selection and bidding result	No information found around a SIA, unable to estimate cumulative impact. Due to proximity and approval status, potential cumulative impact include: ■ Air quality- during construction and onshore ■ Noise emissions- during construction and onshore ■ infrastructure and services ■ Community health and safety ■ Fisheries livelihoods ■ Employment ■ Visual amenities These will be considered in project and resource planning.

[40] Status updated in May 2023

Development/ Project	Description	Developer/ Sponsor	Location	Distance to Project Location	Approval Status[40]	Source of Information	Cumulative Impact Assessment Consideration
Changhua Changfang Offshore Wind Farm Project (Site 27)	Proposed wind farm of 82.4 km^2 area, composed of 32-72 WTG of 6-12 MW each. Submarine power cable of 13 km to connect wind farm to land power source.	Changfang Wind Power Co., Ltd.	Taiwan Strait. Offshore area near Fangyuan Township of Changhua County Proposed submarine power cable connecting through Fangyuan Township or through both Fangyuan Township and Dacheng Township.	34.2 km East	100 MW and 452 MW awarded for 2021 and 2023 respectively. **Construction on-going.**	EIA, MOEA selection and bidding result	No information found around a SIA, unable to estimate cumulative impact. Due to proximity and approval status, potential cumulative impact include: ■ infrastructure and services ■ Community health and safety ■ Employment These will be considered in project and resource planning.
Changhua Xidao Offshore Wind Farm Project (Adjacent to Site 27)	Proposed wind farm of 68.81 km^2 area, composed of 54-65 WTG of 6-9.5 MW each. Submarine power cable of 33/66 kV to connect wind farm to land power source.	Xidao Wind Power Co., Ltd.	Taiwan Strait. Offshore area near Fangyuan Township of Changhua County. Proposed submarine power cable connecting through Fangyuan Township or through Fangyuan Township and Dacheng Township of Changhua County.	39.6 km East	48 MW awarded for 2024. **Construction on-going.**	EIA, MOEA selection and bidding result	No information found around a SIA, unable to estimate cumulative impact. Due to proximity and approval status, potential cumulative impact include: ■ infrastructure and services ■ Community health and safety ■ Employment These will be considered in project and resource planning.
Haineng Offshore Wind Farm Project (Site 5&6)	Proposed wind farm of 50.7 km^2 area, composed of 23-53 WTG of 6-12 MW each. Submarine power cable of 13 km to connect wind farm to land power source.	FORMOSA 2 Wind Power Co., Ltd.	Taiwan Strait. Offshore area near Zhunan Township and Houlong Township of Miaoli County. Proposed submarine power cable connecting through Northern Zhonggang River in	133 km Northwest	378 MW awarded for 2020. **Completed installation in January 2023 and grid connection in March 2023.**	EIA, MOEA selection and bidding result	Given the status no cumulative impacts to be considered.

Development/ Project	Description	Developer/ Sponsor	Location	Distance to Project Location	Approval Status[40]	Source of Information	Cumulative Impact Assessment Consideration
			Zhunan Township of Miaoli County.				
Haiding Offshore Wind Farm Project Site 1 (Site 11)	Proposed wind farm of 95 km^2 area, composed of wind turbines of 8-12 MW each, totalling at more than 475.1 MW. Submarine power cable to connect wind farm to land power source.	Haiding 1 Wind Power Co., Ltd. Preparatory Office	Taiwan Strait. Offshore area near Shengang Township, Xianxi Township, and Lukang Township of Changhua County and Baisha Township of Penghu County. Proposed submarine power cable connecting through Xianxi Township of Changhua County.	19.7 km Northeast	**No development right before 2025**	EIA, MOEA selection and bidding result	Due to the approval status no cumulative impacts are under consideration.
Haiding Offshore Wind Farm Project Site 2 (Site 16)	Proposed wind farm of 111.7 km^2 area, composed of WTG of 8-12 MW each, totalling at more than 558.5 MW. Submarine power cable to connect wind farm to land power source.	Haiding 2 Wind Power Co., Ltd. Preparatory Office	Taiwan Strait. Offshore area near Xianxi Township, Lukang Township, and Fuxing Township of Changhua County and Baisha Township of Penghu County. Proposed submarine power cable connecting through Xianxi Township of Changhua County.	9.2 km North	**No development right before 2025**	EIA, MOEA selection and bidding result	Due to the approval status no cumulative impacts are under consideration.

Development/ Project	Description	Developer/ Sponsor	Location	Distance to Project Location	Approval Status[40]	Source of Information	Cumulative Impact Assessment Consideration
Haiding Offshore Wind Farm Project Site 3 (Site 17)	Proposed wind farm of 103.4 km^2 area, composed of WTG of 8-12 MW each, totalling at 516.8 MW or above. Submarine power cable to connect wind farm to land power source.	Haiding 3 Wind Power Co., Ltd. Preparatory Office	Taiwan Strait. Offshore area Xianxi Township, Lukang Township, and Fuxing Township of Changhua County. Proposed submarine power cable connecting through Xianxi Township of Changhua County.	12 km North	**No development right before 2025**	EIA, MOEA selection and bidding result	Due to the approval status no cumulative impacts are under consideration.
Greater Changhua Southeast Offshore Wind Farm Project (Site 15)	Proposed wind farm of 120.4 km^2 area, composed of 55-76 WTG of 8-11 MW each. Submarine power cable to connect wind farm to land power source.	Greater Changhua Offshore Wind Farm SE Ltd.	Taiwan Strait. Offshore area near Xianxi Township of Changhua County. Proposed submarine power cable connecting through northern joint channel with other Changhua developers	21.5 km North	605.2 MW awarded for 2021. **Construction on-going.**	EIA, MOEA selection and bidding result	No information found around a SIA, unable to estimate cumulative impact. Due to proximity and approval status, potential cumulative impact include: ■ Air quality- during construction and onshore ■ Noise emissions- during construction and onshore ■ infrastructure and services ■ Community health and safety ■ Fisheries livelihoods ■ Employment ■ Visual amenities These will be considered in project and resource planning.

Development/ Project	Description	Developer/ Sponsor	Location	Distance to Project Location	Approval Status[40]	Source of Information	Cumulative Impact Assessment Consideration
Greater Changhua Southwest Offshore Wind Farm Project (Site 14)	Proposed wind farm of 126.3 km^2 area, composed of 58-80 WTG of 8-11 MW each. Submarine power cable to connect wind farm to land power source.	Greater Changhua Offshore Wind Farm SW Ltd.	Taiwan Strait. Offshore area near Xianxi Township and Lukang Township of Changhua County. Proposed submarine power cable connecting through northern joint channel with other Changhua developers.	16.3 km North	294.8 MW and 337.1 MW awarded for 2021 and 2025 respectively. **Approved but work has not started.**	EIA, MOEA selection and bidding result	Potential for cumulative impacts on terrestrial and marine ecology. Due to proximity and approval status, potential cumulative impact include: ■ Air quality- during construction and onshore ■ Noise emissions- during construction and onshore ■ infrastructure and services ■ Community health and safety ■ Fisheries livelihoods ■ Employment ■ Visual amenities These will be considered in project and resource planning.
Greater Changhua Northwest Offshore Wind Farm Project (Site 12)	Proposed wind farm of 117.4 km^2 area, composed of 54-74 WTG of 8-11 MW each. Submarine power cable to connect wind farm to land power source.	Greater Changhua Offshore Wind Farm NW Ltd. Preparatory Office	Taiwan Strait. Offshore area Xianxi Township of Changhua County. Proposed submarine power cable connecting through northern joint channel with other Changhua developers.	25 km North	582.9 MW awarded for 2025. **Approved but work has not started.**	EIA, MOEA selection and bidding result	Due to proximity and approval status, potential cumulative impact include: ■ Air quality- during construction and onshore ■ Noise emissions- during construction and onshore ■ infrastructure and services ■ Community health and safety ■ Fisheries livelihoods ■ Employment ■ Visual amenities These will be considered in project and resource planning.

Development/ Project	Description	Developer/ Sponsor	Location	Distance to Project Location	Approval Status[40]	Source of Information	Cumulative Impact Assessment Consideration
Greater Changhua Northeast Offshore Wind Farm Project (Site 13)	Proposed wind farm of 111.8 km^2 area, composed of 51-71 WTG of 8-11 MW each. Submarine power cable to connect wind farm to land power source.	Greater Changhua Offshore Wind Farm NE Ltd. Preparatory Office	Taiwan Strait. Offshore area near Xianxi Township of Changhua County. Proposed submarine power cable connecting through northern joint channel with other Changhua developers.	31 km North	**No development right before 2025.**	EIA, MOEA selection and bidding result	Due to the approval status no cumulative impacts are under consideration.
Zhongneng / Chung-Neng Offshore Wind Farm Project	Proposed wind farm of 59.2 km^2 area, composed of 63-84 WTG of 6-9.5 MW each. Submarine power cable to connect wind farm to land power source.	Zhongneng Power Co., Ltd. Preparatory Office	Taiwan Strait. Offshore area near Dacheng Township and Fangyuan Township of Changhua County. Proposed submarine power cable connecting through Dacheng Township of Changhua County or through Changhua Offshore Common Corridor.	36.5 km East	300 MW awarded for 2024. **Construction on-going.**	EIA, MOEA selection and bidding result	Due to proximity and approval status, potential cumulative impact include: ■ Air quality- during construction and onshore ■ Noise emissions- during construction and onshore ■ infrastructure and services ■ Community health and safety ■ Employment These will be considered in project and resource planning.
Yunlin / Yun-neng Offshore Wind Farm	Proposed wind farm of 82 km^2 area, composed of 80 WTG of 8.0 MW each. The Project will use twelve strings of 66 kV subsea cables to connect wind turbines in a series array	Yunneng Wind Power Co., Ltd.	Off the coast of Sihu and Kouhu Townships of Yunlin County	52.5 km Southeast	640 MW awarded for 2020. **Construction on-going.**	EIA, MOEA demonstration selection result	Due to the location of the project no cumulative impacts are being considered.

APPENDIX B SCOPING MATRIX

Impact Statement	Onshore, Offshore or Both	Receptors	Phase*			Scope		Scoping Rationale**	Existing Mitigation Measure
			C	O	D	In	Out		
Community cohesion: Community cohesion in townships within the AoI may be impacted as a result of the introduction of workers from outside of the local communities, particularly during the construction phase as construction will require a larger workforce than operation.	Both	Local Community- Direct Local Community- Indirect	x	x			✓	The Project has committed to prioritising the employment of workers from the local region, where possible. In doing so, this will help to reduce the likelihood of this impact eventuating. Construction at its peak will create an influx of around 200 workers for a 12 month period. Lukang Township where the onshore components are located had a population of 85,837 in 2021. If all 200 workers come from outside the local area (which is not expected), this influx represents 0.09% of the total population of the township. Given this, the potential impact is not expected to eventuate so has been scoped out, meaning it will not be evaluated further in the SIA.	■ SEP: Proactive engagement, as outlined in the SEP will help to identify potential issues before they become grievances. This will provide insights as to whether issues relating to community cohesion emerge. ■ Grievance Mechanism: This will help to identify if issues /concerns arise.
Infectious diseases: An increase or influx of people can introduce new or more virulent forms of diseases in an area. Construction activities may create opportunities for water to pool and become vector habitat (e.g. trenches filled with rain water during earth moving activities), which may increase the prevalence of vector borne diseases.	Onshore	Local Community- Direct Project Workforce Local Workforce	x	x		✓		The term 'infectious disease' refers to illnesses caused by a diverse range of pathogens that can be transmitted through means such as disease vectors (e.g. mosquitos), ingestion of unsanitary food and water (e.g. diarrhoea), and human or pest contact (e.g. STIs, rabies). An infectious disease can result in temporary and long-term health issues, and in the worst case a fatality. The extent of earthworks is expected to be limited. It is often earthworks (e.g. such as trenching) that create vector habitat. It is not expected, given the nature of the Project (i.e. limited earth moving activities) that the creation of vector habitat will not be a significant risk. The Project has committed to prioritising the employment of workers from the local region, where possible. In doing so, this will help to reduce the likelihood of the impact occurring, through human contact. Construction at its peak will create an influx of around 200 workers for a 12 month period. It will be during this period that the risk is highest. However, an infectious disease can be transmitted whenever new workers enter the local area, and interaction with local community members or nearby workers occurs. Given the potential outcome (e.g. a serious illness or fatality), there is potential for this to be a moderate impact. For this reason, it will be further investigated in the SIA, with a focus on infectious diseases linked to human contact. There is potential for this impact to be compounded by other proposed offshore wind projects, should their schedules overlap with the Project's timeline. However, it is not clear where the other wind projects will house their workforce. This will be further explored in the SIA.	■ SEP: Proactive engagement, as outlined in the SEP will help to identify potential issues before they become grievances. This will provide insights as to whether issues relating to community cohesion emerge. ■ Grievance Mechanism: This will help to identify if issues / concerns arise.
Dust emissions: Dust from construction related activities (e.g. earthworks) can cause a nuisance and/or health impacts such as exacerbating existing respiratory illnesses, mental health impact, etc.	Onshore	Local Community- Direct Business and Local Services Project Workforce Local Workforce	x			✓		Earthworks, and other dust generating activities, are expected to be limited. The roads that will be used, including local access roads, are sealed. The construction works will be required to meet local regulatory requirements related to air quality. In addition, a range of dust mitigation measures will be implemented by the Project. Dust modelling results captured in the Project EIA indicates that nearby communities are unlikely to be impacted by dust. Based on the above, it is not expected that local communities will be impacted by dust. However, workers at the Project, and working at the adjacent industries may be impacted. All employees are to be equipped with PPE by their Employer.	■ Stakeholder Plan Engagement: Proactive engagement, as outlined in the SEP will help to identify potential issues before they become grievances. ■ Grievance Mechanism: This will help to identify if issues / concerns arise.

Impact Statement	Onshore, Offshore or Both	Receptors	Phase*			Scope		Scoping Rationale**	Existing Mitigation Measure
			C	O	D	In	Out		
								Due to the duration of the dust generating activities (, which are limited to the construction phase, and the extent of the potential impact (i.e. highly localised), this impact is expected to be minor, but will be more fully evaluated in the SIA.	
Noise emissions: Noise, particularly from construction related activities, can cause a nuisance and/or health related impacts such as sleep deprivation, mental health impact, etc.	Onshore	Local Community- Direct Business and Local Services Project Workforce Local Workforce	x			✓		A range of construction activities will generate noise. Construction works are required to adhere to regulatory noise criteria. In addition, a range of noise mitigation measures will be implemented to minimise potential impacts. Noise modelling results, as captured in the Project's EIA, indicates that the nearest communities are unlikely to be affected by noise generated by the Project. Based on the above, it is not expected that the local communities will be impacted. However, workers at the Project, and those employed at adjacent industries may experience noise related impacts. The Project workers will be required to wear appropriate PPE. Due to the duration of the noise generating activities (i.e. construction phase), and the extent of the potential impact (i.e. highly localised), this impact is expected to be minor, but will be more fully evaluated in the SIA.	■ Stakeholder Plan Engagement: Proactive engagement, as outlined in the SEP will help to identify potential issues before they become grievances. ■ Grievance Mechanism: This will help to identify issues and concerns as they emerge.
Infrastructure and services: An influx of workers can place pressure on existing community infrastructure (e.g. roads, recreation facilities) and services (e.g. health care). Emergency situations, such as vessel collisions or health and safety accidents, can also place pressure on existing infrastructure and services, in particular emergency responders and health care providers. At decommissioning there will be a large volume of waste, which can place pressure on local waste facilities. This can result in existing services and infrastructure not being able to meet the needs/ demand of the local communities.	Both	Local Community- Direct Local Community- Indirect Business and Local Services	x	x	x	✓		The Project has committed to prioritising the employment of workers from the local region, where possible. In doing so, this will help to reduce the likelihood of impacting existing infrastructure and services. Construction at its peak will create an influx of around 200 workers for a 12 month period. Lukang Township where the onshore components are located had a population of 85,837 in 2021. If all 200 workers come from outside the local area (which is not expected), this influx represents 0.09% of the total population of the township. It is at peak construction, and in emergency situations (should one arise), where there is the greatest likelihood that an impact will result. This is particularly the case for health care providers. Given the duration of the impact, the impact is expected to be minor, but will be further evaluated in the SIA, with a particular focus on health care services. There is potential for this impact to be compounded by other proposed offshore wind projects, should their schedules overlap with the Project's timeline. However, it is not clear where the other wind projects will house their workforce. This will be further explored in the SIA. In addition to the above, there is also potential for waste facilities to be impacted, particularly during decommissioning, as a large volume of waste will be generated. There is potential for this to impact local facilities. Where possible, the waste streams should be recycled. The potential impact on waste facilities will need to be reassessed closer to the time of decommissioning (e.g. 5 years prior to commencement of decommissioning). Appropriate strategies will need to put in place as part of the ESMS so that this occurs.	■ Stakeholder Plan Engagement: Proactive engagement, as outlined in the SEP will help to identify potential issues before they become grievances. ■ Grievance Mechanism: This will help to identify issues and concerns as they emerge.

Impact Statement	Onshore, Offshore or Both	Receptors	Phase*			Scope		Scoping Rationale**	Existing Mitigation Measure
			C	O	D	In	Out		
Accommodation: An increase in population (e.g. an influx of workers) requiring accommodation can place pressure on existing facilities. This can result in a reduction in availability for other users.	Both	Local Community- Direct Local Community- Indirect Business and Local Services	x	x		✓		The Project has committed to prioritising the employment of workers from the local region, where possible. In doing so, this will help to reduce the likelihood of this impact eventuating. Construction at its peak will create an influx of around 200 workers for a 12 month period. Lukang Township where the onshore components are located had a population of 85,837 in 2021. If all 200 workers come from outside the local area (which is not expected), this influx represents 0.09% of the total population of the township. It is noted that a portion, around a third of these employees, will be accommodated offshore. This means that they will not place pressure on existing accommodation facilities. The remaining workforce, for those who are not employed from the local area, will require accommodation. Given the size of the workforce, as well as the duration, it is anticipated that the impact will be minor, but will be further evaluated during the SIA. There is potential for this impact to be compounded by other proposed offshore wind projects, should their schedules overlap with the Project's timeline. However, it is not clear where the other wind projects will house their workforce. This will be further explored in the SIA.	■ Grievance Mechanism: This will help to identify issues and concerns as they emerge.
Cultural heritage: Possible destruction and/or interference with tangible and intangible cultural heritage in the onshore/ offshore area while undertaking construction works	Both	Local Community- Direct	x			✓		There have been no buildings, archaeological sites, or relics with cultural or historical value found in within or surrounding the Project area. In addition, there are no cultural practices have been identified that could be impacted or disturbed as a result of the Project. Given the current baseline conditions, it is not anticipated that a significant impact will occur. However, this will be further assessed in the SIA, once the fisheries baseline details are available.	■ Grievance Mechanism: This will help to identify issues and concerns as they emerge.
Employment: Employment opportunities will be generated. This includes direct and indirect (e.g. through the supply chain). This will include short-term (construction) and medium-term (operation) employment opportunities.	Both	Local Community- Direct Local Community- Indirect Business and Local Services	x	x	x	✓		Employment and business opportunities for the local community is a positive impact, providing local economic opportunities. There will be employment opportunities during decommissioning, it will be at the end of decommissioning when employment opportunities will cease (as captured below). Through an analysis of the baseline conditions, it is understood that there is capacity within the local communities for employment. This will be further explored during the SIA, including opportunities to support local development to contribute to the Project.	■ Grievance Mechanism: This will help to identify issues and concerns as they emerge.
Employment: Decommissioning will bring about detrimental economic impacts, as employment and business opportunities will cease at the end of decommissioning.	Both	Local Community- Direct Local Community- Indirect Business and Local Services			x	✓		The life of the Project is approximately 25 years, therefore it is challenging to assess the full extent of the impact. However, while the decommissioning process will generate employment opportunities, once decommissioned there will be a loss of employment. This impact will need to be reassessed closer to the time of decommissioning (e.g. 5 years prior to commencement of decommissioning). Appropriate strategies will need to put in place as part of the ESMS so that this occurs.	■ Grievance Mechanism: This will help to identify issues and concerns as they emerge.

Impact Statement	Onshore, Offshore or Both	Receptors	Phase*			Scope		Scoping Rationale**	Existing Mitigation Measure
			C	O	D	In	Out		
Health and safety: The operation of heavy machinery during construction and the installation and operation of offshore structures, as well as the transport of goods and materials all present health and safety risks for nearby communities. Construction and operation will increase traffic volumes, both onshore and offshore. An increase in traffic movements can lead to congestion and unsafe conditions, leading to an increased likelihood of accidents occurring.	Both	Local Community- Direct Business and Local Services Project Workforce Local Workforce	x	x	x	✓		The Project presents a number of health and safety hazards. Some of these exist during construction, such as the use of heavy machinery or the presence of an active construction site, while others exist during operation, such as the presence of offshore infrastructure which creates navigational hazards. There are also health and safety hazards that exist across construction and operation, such as the risk presented by an increase in vessel or vehicle movements. This increase in traffic can create congestion, as well as unsafe conditions. The likelihood of this eventuating is higher during construction, given the construction phase will generate larger volumes of traffic compared to onshore. The Project and its associated structures will adhere to the IALA requirements by installing signage and accurately marking the WTGs on nautical charts. These measures will help to reduce the likelihood of an impact occurring. An exclusion zone will be established during construction to reduce potential risks to offshore vessels. The potential outcome of this impact is an injury, or worst case scenario, a fatality. For this reason, despite the mitigation measures already in place, this impact is expected to be moderate to major, and will be further evaluated in the SIA. There is potential for this impact to be compounded by other proposed offshore wind projects, should their schedules overlap with the Project's timeline. It is not clear where the other wind projects will operate onshore, to understand the full scope of the potential impact. This will be further explored in the SIA. It is noted that the Project has assessed the following impacts, and established appropriate management strategies, so have been scoped out from further assessment. This includes potential impacts associated with blade throw, electromagnetic interference, and abnormal load transportation.	■ SEP: Proactive engagement, as outlined in the SEP will help to notify stakeholders early about the health and safety hazards presented by the Project. ■ Grievance Mechanism: This will help to identify if issues /concerns arise. ■ Adherence to the International Association of Marine Aids to Navigation and Lighthouse Authority requirements
Livelihoods: The Project will displace fishing activities, which can impact on livelihoods derived by this industry.	Offshore	Local Community- Direct Business and Local Services	x	x		✓		The presence of infrastructure, construction activities, creation of exclusion zones and presence of vessels (transporting goods and materials to and from the offshore Project area) can displace fishing operations. In addition, noise, light and turbidity generated by construction and installation activities can cause fish to disperse, at least for the duration of the disturbance. This too can impact on fishing operations. The above can led to economic displacement, impacts on livelihoods of those involved in the fishing industry. This includes potentially vulnerable groups, such as those fishers who have chosen not to join regional and national Fisheries Associations, migrant workers who have been hired to work in the fishing industry, and fishers' wives who are often employed in the market sales of fishing catches, but whose interests are not necessarily represented by Fisheries Associations. A Livelihood Restoration Plan is currently being developed to help mitigate the impact to livelihoods. The extent of this impact, particularly the impact experienced by vulnerable groups, will be assessed following completion of the fisheries baseline survey, and captured in the SIA.	■ SEP: Proactive engagement, as outlined in the SEP will help to notify stakeholders early about the health and safety hazards presented by the Project. ■ Grievance Mechanism: This will help to identify if issues /concerns arise. ■ Livelihood Restoration Plan (in development)

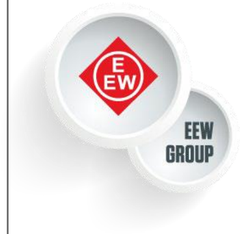
Impact Statement	Onshore, Offshore or Both	Receptors	Phase*			Scope		Scoping Rationale**	Existing Mitigation Measure
			C	O	D	In	Out		
								There is potential for this impact to be compounded by other proposed offshore wind projects, should their schedules overlap with the Project's timeline. However, it is not clear where the other wind projects will house their workforce. This will be further explored in the SIA.	
Working conditions: Without appropriate safeguards there is potential for the rights of workers (including those within the Project's supply chain) to be impacted. Migrant workers are particularly vulnerable to this impact.	Both	Project Workforce	x			✓		There is potential without appropriate safeguards for workers' rights to be impacted, in particular workers located within the Project's supply chain. If safeguards are not in place a range of potential impacts can arise, including discrimination within the workplace, mistreatment of migrant labour or other vulnerable groups, prevention of workers joining trade unions, and use of forced or child labour. Within this context, migrant labour is particularly vulnerable to experiencing impacts. A Human Rights Screening Assessment was undertaken, which explores this potential impact in further detail. The Project has a robust supplier screening process. This includes the use of EcoVadis to understand potential environmental and social risks at the time of selecting suppliers. The outcomes of the EcoVadis help to inform the supplier selection process. In addition, suppliers are required to commit to meeting the requirements outlined in the Project's Supplier Code of Conduct. While there are a range of existing mitigation measures, a risk still exists that this impact could eventuate. For this reason, the impact is considered minor to moderate. This impact will be further explored in the SIA, with a particular focus risks presented by suppliers.	■ Grievance Mechanism: This will help to identify if issues /concerns arise. ■ Supplier Code of Conduct: Suppliers have been required to commitment to implementing the Supplier Code of Conduct. ■ Procurement process: This includes the use of EcoVadis to understand potential environmental and social risks at the time of supplier selection.
Visual amenity: The installation of large structures, such as WTGs, as well as the light spill created, particularly during construction activities, can negatively impact the visual amenity of an area.	Both	Local Community- Direct Local Community- Indirect Business and Local Services	x	x		✓		A visual impact assessment was conducted, which indicates that an impact is unlikely to occur. The WGT are largely difficult to see from shore, but are still visible. Given the outcomes of the visual impact assessment, this impact is expected to be minor, but will be further explored in the SIA. There is potential for this impact to be compounded by other proposed offshore wind projects, should their schedules overlap with the Project's timeline. This will be further explored in the SIA.	■ Grievance Mechanism: This will help to identify if issues /concerns arise.

*C: Construction, O: Operation, D: Decommissioning

** The terminology – minor, moderate and major (see **Section 3.3**) – have been used to provide an indication of likely magnitude. The impacts identified as 'scoped in' will be more fully evaluated in the SIA.

APPENDIX C SUPPLIER EVALUATION

Supplier	Supplier Overview	Potential Risk Consideration	Previous Issues (Publicly Available Media Review)	Management Policies / Strategies	Supplier Screening Process
SIEMENS Gamesa RENEWABLE ENERGY	Siemens Gamesa Renewable Energy S.A. (Siemens Gamesa) is a Spanish-German wind engineering company with 30 years of experience in sustainability energy technologies. Siemens Gamesa is the global market leader for offshore wind turbines and has the most extensive installed base and the largest order book in the industry. Siemens Gamesa will supply 73 wind turbine generators for the Project.	As supplier of the wind turbine generators for the Hai Long Offshore Wind Project, Siemens Gamesa has the potential to impact human rights in the following manner: • **Mineral Supply Chains:** the copper, manganese, nickel, and zinc used in wind turbines may be associated with decreased access to water for local communities, increased instances of mining-related illnesses, lack of meaningful free, prior and informed consent (FPIC), and environmental pollution. • **Wind Turbine Production Process:** turbine components may be produced in countries that have a high instance and/or risk of child labour, abuses of indigenous people's rights, and corruption. In order to address these risks, Siemens Gamesa have developed and implemented several management policies/strategies, including a Human Rights Policy and Supplier Code of Conduct. These policies/strategies require Siemens Gamesa to address these concerns and work with their suppliers to ensure that human rights are adequately protected.	• Environment/Production: *Production/Supply Chain Issues, Environmental Issues, Product/Service Issues* • Social/Labor: *Workplace Health/Safety Issues, Workforce Disputes, Discrimination/Workforce Rights Issues* • Competitive/Financial: *Management Issues, Ownership Issues, Financial Difficulty, Information Rights/Copyright/Patent Issues* • Regulatory: *Fraud Issues, Regulatory Issues*	• Siemens Gamesa Policy • Human Rights Policy • Suppliers Code of Conduct • Supplier Relationship Policy • Business Conduct Guidelines • Crime Prevention and Anti-Fraud Policy • Social Commitment Policy • Diversity and Inclusion Policy • Sustainability Policy • Climate Change Policy • General Risk Control and Management Policy • Cybersecurity Policy • ESG Awards, Indexes & Recognitions: – Member of Dow Jones Sustainability Indices – STOXX ESG Leaders & STOXX Europe Sustainability Indexes – FTSE4Good Indexes – Received #1 Environment & #1 Social Recognitions by ISS ESG – Industry Top Rated List by Sustainalytics – Included in Euronext Vigeo Indexes • Certifications: – ISO 9001 Quality Management – ISO 14001 Environmental Management – ISO 45001 HSE Management	DOW JONES RISKCENTER PLATINUM Top 1% 2022 ecovadis Sustainability Rating

Supplier	Supplier Overview	Potential Risk Consideration	Previous Issues (Publicly Available Media Review)	Management Policies / Strategies	Supplier Screening Process
	EEW Group is a German manufacturing company producing a range of steel pipes for use in onshore power plants and general construction, as well as offshore developments. EEW Group is one of the world's leading manufacturer of monopiles, the foundations for offshore wind turbines. EEW Group (through EEW Korea Co., Ltd) will be responsible for the supply of 156 pin piles for the Project.	As supplier of the pin piles for the Hai Long Offshore Wind Project, EEW Group has the potential to impact human rights in the following manner: • **Mineral Supply Chains:** the iron ore and zinc (used in galvanisation) may be associated with decreased access to water for local communities, increased instances of mining-related illnesses, lack of meaningful FPIC, and environmental pollution. • **Manufacturing Process:** EEW Group manufactures pin piles six locations globally in North America, Europe and Asia. The manufacturing sector typically has a higher risk of human rights violations, particularly as it pertains to worker rights and freedoms, and corruption. In order to address these risks, EEW Group has developed and implemented a Management Policy and System Procedure relevant to their various manufacturing locations (including South Korea). These policies outline means by which EEW Group respects worker rights in its member companies and business partners.	• Competitive/Financial: *Anti-Competitive Issues* • Regulatory: *Regulatory Issues*	• Management Policy • System Procedure • Certifications: – ISO 9001 Quality Management – ISO 14001 Environmental Management – ISO 50001 Energy Management – ISO 45001 HSE Management	 

Supplier	Supplier Overview	Potential Risk Consideration	Previous Issues (Publicly Available Media Review)	Management Policies / Strategies	Supplier Screening Process
DEME CDWE 台船環海風電工程公司	DEME Group (DEME) is a Belgian company with a global footprint and more than 145 years of experience. DEME is a world leader in dredging, land reclamation, marine infrastructure, offshore energy (windfarm) installation, and environmental remediation. DEME has synergised with CSBC Corporation, Taiwan as part of a Joint Venture arrangement, forming CDWE-DEME Wind Engineering (CDWE). As part of the Joint Venture arrangement, DEME will be undertaking the transportation and installation for the Project.	As DEME (via CDWE) will be undertaking the transportation and installation of the wind turbines for the Hai Long Offshore Wind Project, it has the potential to impact human rights in the following manner: • **Construction Activities:** the construction of the Project has the potential to adversely impact human rights through impacts on community health and safety via threats from security personnel, the spread of communicable diseases via non-localised labour, improper transportation of goods, and environmental pollution caused by poor waste management practices. • **Migrant Labor:** construction of the Project will likely involve the employment of migrant workers. While all workers are at risk from human rights violations in the form of mismanaged labour rights, restriction to freedoms, and corruption; migrant workers are particularly vulnerable and will need to be managed appropriately. In order to address these risks, DEME has developed and implemented a Code of Ethics, Whistleblowing Policy, Human Rights Policy, and other policies / key performance measures that will be implemented on the Hai Long Offshore Wind Project.	• Competitive/Financial: *Management Issues* • Regulatory: *Regulatory Issues, Corruption Issues*	• Code of Ethics & Business Integrity • Code of Ethics & Business Integrity for Business Partners • Whistleblowing Policy • Internal Action Plan for Health & Wellbeing and Diversity & Inclusion (2022 Annual Report) • The following referenced in the 2021 Sustainability Report: – Energy & Greenhouse Gas Emissions Policy – Quality, Health, Safety and Environment Policy – Human Rights Policy – Raising and Reporting Integrity Issues Policy & procedures – Compliance Policy – ESG Materiality Matrix & KPIs • Certifications: – ISO 14064 Reporting – ISO 50001 Energy Management – ISO 14001 Environmental Management – ISO 45001 HSE Management – ISO 9001 Quality Management • CDWE Team Norms (Ocean Team)	DOW JONES RISKCENTER SILVER 2023 ecovadis Sustainability Rating

Supplier	Supplier Overview	Potential Risk Consideration	Previous Issues (Publicly Available Media Review)	Management Policies / Strategies	Supplier Screening Process
台灣國際造船股份公司 CSBC CORPORATION,TAIWAN CDWE 台船環海風電工程公司	CSBC Corporation, Taiwan (CSBC) is the largest shipbuilding company in Taiwan. Founded in 1973, CSBC offers a variety of products and services, such as the constructions of merchant ships, naval vessels, official ships, and commercial services, large steel structures, machinery manufacturing, offshore engineering manufacturing, assembly, transportation, hoisting, commercial and other core business projects. CSBC has synergised with DEME Group as part of a Joint Venture arrangement, forming CDWE-DEME Wind Engineering (CDWE). As part of the Joint Venture arrangement, CSBC will supply 63 pin piles for the Project.	As supplier of the pin piles for the Hai Long Offshore Wind Project, CSBC (via CDWE) has the potential to impact human rights in the following manner: • **Mineral Supply Chains:** the iron ore and zinc (used in galvanisation) may be associated with decreased access to water for local communities, increased instances of mining-related illnesses, lack of meaningful FPIC, and environmental pollution. • **Manufacturing Process:** this will only be the second pin pile manufacturing project undertaken by CSBC. CSBC will collaborate with CSBC Coating Solutions Co., Ltd. to manufacture the pin piles locally in Taiwan. The manufacturing sector typically has a higher risk of human rights violations, particularly as it pertains to worker rights and freedoms, and corruption. In order to address these risks, CSBC has developed and implemented a range of policies and systems, including a Management System, Code of Ethics, and Procedures for Ethical Management and Guidelines for Conduct. These policies outline means by which CSBC will uphold worker rights and implement ethical business practices.	• Competitive/Financial: *Management Issues* • Social/Labor: *Workplace Health/Safety Issues, Workforce Disputes* • Regulatory: *Corruption Issues* • Environment/Production: *Production/Supply Chain Issues*	• Management System, including: – Quality Policy – OH&S Policy – Environment Policy – Intellectual Property Management Policy • Sustainable Development Policy • Principles of Sustainability Development • Code of Corporate Governance • Code of Ethics • Code of Ethics & Conduct for Directors and First-Level or Higher Management • Directions Governing the Processing of Material Information and Prevention of Insider Trading • Principles of Risk Management • Risk Management Policy • Code of Ethics for Employees of CSBC • Procedures for Ethical Management and Guidelines for Conduct • Internal Audits • Certifications: – ISO 14001 Environmental Management – ISO 9001 Quality Management • CDWE Team Norms (Ocean Team)	DOW JONES RISKCENTER

Supplier	Supplier Overview	Potential Risk Consideration	Previous Issues (Publicly Available Media Review)	Management Policies / Strategies	Supplier Screening Process
SEMCO maritime	Semco Maritime is an international engineering and contracting company dedicated to projects in the energy sector. Semco Maritime has been facilitating engineering design, fabrication, installation, service and maintenance of offshore assets, providing comprehensive project management across all phases of energy projects for more than 40 years. Semco Maritime has formed a consortium with PTSC Mechanical & Construction for the Project. As part of the consortium, Semco Maritime will be jointly responsible for supplying the two offshore substations required for the Project.	As supplier of the two offshore substations for the Hai Long Offshore Wind Project, Semco Maritime has the potential to impact human rights in the following manner: • **Mineral Supply Chains:** the metals involved in the manufacturing of the foundations, structure, and electrical components of the substation plant may be associated with decreased access to water for local communities, increased instances of mining-related illnesses, lack of meaningful FPIC, and environmental pollution. • **Construction/Installation Activities:** the construction and installation of the substations may adversely impact worker and community health and safety, the spread of communicable diseases via use of non-localised labour, worker rights and freedoms, improper transportation of the substations offshore, and environmental pollution caused by inappropriate installation. In order to address these risks, Semco Maritime has implemented a range of policies, including a HSSEQ Policy, Code of Conduct, and Employee Health Policy. In addition, a Whistle-blower Portal for complaints and implements a process for Supplier Relationship Management have been developed.	• Social/Labor: *Workforce Disputes, Discrimination/Workforce Rights Issues*	• Code of Conduct • Whistle-blower Portal • Anti-Bribery & Corruption Policy • HSSEQ Policy • No PO No Pay Policy • Member of the UN Global Compact • The following policy documentation is referenced in the 2022 Sustainability Report: – Corporate Social Responsibility Policy – Global Compact Procedure – Supplier Relationship Management – Inclusion Policy – Employee Health Policy – Hybrid Workplace Policy – Personnel Policy – Drugs and Alcohol Policy – Privacy Policy – Harassment and Violence Policy • KPIs for Gender Diversity & Inclusion, Signatory of the Gender Diversity Pledge (referenced in the 2022 Sustainability Report) • Certifications: – ISO 14001 Environmental Management – ISO 45001 HSE Management – ISO 9001 Quality Management	D&B Finance Analytics BRONZE 2022 ecovadis Sustainability Rating

Supplier	Supplier Overview	Potential Risk Consideration	Previous Issues (Publicly Available Media Review)	Management Policies / Strategies	Supplier Screening Process
PTSC M&C	PTSC Mechanical & Construction (PTSC M&C) is the leading turn-key contractor in Vietnam providing Engineering, Procurement, Construction, Installation, Transportation, Hook-up & Commissioning (EPC/EPCIC) services for the upstream, downstream & renewables energy sectors. PTSC M&C has formed a consortium with Semco Maritime for the Project. As part of the consortium, PTSC M&C will be jointly responsible for supplying the two offshore substations required for the Project.	As supplier of the two offshore substations for the Hai Long Offshore Wind Project, PTSC M&C has the potential to impact human rights in the following manner: • **Mineral Supply Chains:** the metals involved in the manufacturing of the foundations, structure, and electrical components of the substation plant may be associated with decreased access to water for local communities, increased instances of mining-related illnesses, lack of meaningful FPIC, and environmental pollution. • **Construction/Installation Activities:** the construction and installation of the substations may adversely impact worker and community health and safety, the spread of communicable diseases via use of non-localised labour, worker rights and freedoms, improper transportation of the substations offshore, and environmental pollution caused by inappropriate installation. PTSC M&C has implemented a Code of Culture and HSEQ System in order to address these issues.	• Environment/Production: *Environmental Issues* • Competitive/Financial: *Management Issues, Ownership Issues, Socially Responsible Investment Issues*	• Code of Culture • HSEQ System • Certifications: – ISO 9001 Quality Management – ISO 14001 Environmental Management – ISO 45001 HSE Management • Awards: – First-class Labor Order Award from the Government of Vietnam	D&B Finance Analytics

Supplier	Supplier Overview	Potential Risk Consideration	Previous Issues (Publicly Available Media Review)	Management Policies / Strategies	Supplier Screening Process
HELLENIC CABLES Member of CENERGY HOLDINGS	Hellenic Cables is a leading provider of cables and turnkey solutions worldwide. With over 70 years of experience, Hellenic Cables services the markets of energy transmission and distribution, renewables and offshore wind, telecom and data networks, construction and industry. Hellenic Cables will supply the inter-array cable for the Project.	As supplier of the inter-array cable for the Hai Long Offshore Wind Project, Hellenic Cables has the potential to impact human rights in the following manner: • **Mineral Supply Chains:** minerals used in inter-array cables comprise copper, aluminium and/or lead. These minerals may be associated with decreased access to water for local communities, increased instances of mining-related illnesses, lack of meaningful FPIC, and environmental pollution. • **Manufacturing Process:** cables are manufactured in Romania and Greece, with supporting wooden packaging products made in Greece and Bulgaria. The manufacturing sector typically has a higher risk of human rights violations, particularly as it pertains to worker rights and freedoms, and corruption. In order to address these risks, Hellenic Cables has implemented environmental, social and governance policies, such as a Sustainability Policy, Labour and Human Rights Policy, and Supplier Code of Conduct. Hellenic Cables also has an Integrity Hotline available for internal/external stakeholders.	• Environment/Production: *Production/Supply Chain Issues*	• Sustainability Policy • Integrated Policy on Quality, Occupational Health & Safety, Environmental, Energy Management and Climate Change • Business Continuity Policy • Business Ethics and Anti-Corruption Policy • Information Security Policy • Labour and Human Rights Policy • Business Code of Conduct • Supplier Code of Conduct • Integrity Hotline • Personal Data Privacy Statement • The following commitments are referenced in the 2021 Sustainability Report: – Science Based Targets Initiative Commitments to Net-Zero – Carbon Disclosure Project Disclosure – KPIs relevant to UN SDGs • Certifications: – ISO 14001 Environmental Management – ISO 45001 HSE Management – ISO 50001 Energy Management – ISO 27001 Information Security Management	D&B Finance Analytics SILVER 2022 ecovadis Sustainability Rating

Supplier	Supplier Overview	Potential Risk Consideration	Previous Issues (Publicly Available Media Review)	Management Policies / Strategies	Supplier Screening Process
LS Cable & System	Established in 1962, LS Cable & System Ltd. (LS Cable & System) is recognised as a leading manufacturer of communications cables and has contributed to power grids and communication networks in South Korea and globally. LS Cable & System supplies state-of-the-art products, such as submarine, extra-high voltage, high temperature superconducting and communications cables to power authorities, heavy electric equipment makers and common carriers around the world. LS Cable & System will supply the export cable for the Project.	As supplier of the export cable for the Hai Long Offshore Wind Project, LS Cable & System has the potential to impact human rights in the following manner: • **Mineral Supply Chains:** minerals used in the export cable include copper, aluminium and/or lead. These minerals may be associated with decreased access to water for local communities, increased instances of mining-related illnesses, lack of meaningful FPIC, and environmental pollution. • **Manufacturing Process:** cables are manufactured in South Korea and include the use of cross-linked polyethylene (XLPE). The manufacturing sector typically has a higher risk of human rights violations, particularly as it pertains to worker rights and freedoms, health and safety, and corruption. In order to address these risks, LS Cable & System has developed a range of policies, including an Anti-Slavery Policy, Compliance Management Code of Conduct, Code of Ethics, and the LS C&S Way. In addition, LS Cable & System has implemented an Ethics Hotline, and has a Contracting Guideline and Vendor Selection and Operation Guideline and Approved Vendor List System in place.	• Environment/Production: *Product/Service Issues* • Competitive/Financial: *Management Issues, Anti-Competitive Issues* • Regulatory: *Fraud Issues, Regulatory Issues*	• Sustainability Management: Vision & Strategy (‘LS C&S Way’) • Code of Ethics • Ethics Hotline • Anti-Slavery Policy • Contracting Guideline and Vendor Selection and Operation Guideline • Compliance Management Code of Conduct • ESG Vision and Strategy • Approved Vendor List System • Certifications: – ISO 14001 Environmental Management – ISO 45001 HSE Management	DOW JONES RISKCENTER

Supplier	Supplier Overview	Potential Risk Consideration	Previous Issues (Publicly Available Media Review)	Management Policies / Strategies	Supplier Screening Process
Century Wind Power co., Ltd.	Century Wind Power Co., Ltd. (Century Wind Power) is an international company specialising in large-scale and complex steel structures including pin piles, mono piles and jackets for offshore wind farms. Century Wind Power will supply 21 wind turbine jackets (foundations) for the Project.	As supplier of the wind turbine jackets (foundations) for the Hai Long Offshore Wind Project, Century Wind Power has the potential to impact human rights in the following manner: • **Mineral Supply Chains:** the iron ore and zinc (used in galvanisation) may be associated with decreased access to water for local communities, increased instances of mining-related illnesses, lack of meaningful FPIC, and environmental pollution. • **Manufacturing Process:** Century Wind Power manufactures wind turbine jackets in Taiwan. The manufacturing sector typically has a higher risk of human rights violations, particularly as it pertains to worker rights and freedoms, health and safety, and corruption. In order to address these risks, Century Wind Power has developed and implemented a few codes, policies and systems, including a Code of Ethical Conduct, Code of Practice for Sustainable Development, Occupational Safety and Health Policy, Environment Policy, and Supplier Management Program. Century Wind Power has also implemented a whistle-blowing system to manage internal/external complaints received.	• Competitive/Financial: *Financial Difficulty*	• Integrity Management Code • Code of Practice on Corporate Governance • Code of Ethical Conduct • Code of Practice for Sustainable Development • Integrity Management Operating Procedures and Behaviour Guidelines • Whistle-blowing System • Internal Major Information Processing and Management Procedures for Preventing Insider Trading • Environmental Policy • Security Policy • Occupational Safety and Health Policy • Employee Welfare Committee • Supplier Management Program • Certifications: – ISO 14001 Environmental Management – ISO 9001 Quality Management	D&B Finance Analytics

Supplier	Supplier Overview	Potential Risk Consideration	Previous Issues (Publicly Available Media Review)	Management Policies / Strategies	Supplier Screening Process
seaway7	Seaway7 offers specialist foundation, offshore substation, submarine cable and wind turbine installation services and heavy transportation for the renewables sector. Seaway7 will supply horizontal directional drilling (HDD) and cable transportation and installation for the Project.	As supplier for the cable transportation and installation, and carrying out of the HDD, for the Hai Long Offshore Wind Project, Seaway7 has the potential to impact human rights in the following manner: • **Mineral Supply Chains:** minerals used in the export cable include copper, aluminium and/or lead. These minerals may be associated with decreased access to water for local communities, increased instances of mining-related illnesses, lack of meaningful FPIC, and environmental pollution. • **Construction/Installation Activities:** the completion of the HDD and installation of the cables may adversely impact worker and community health and safety, the spread of communicable diseases via use of non-localised labour, worker rights and freedoms, and environmental pollution caused by inappropriate aquatic transportation and inappropriate installation of the cables on the seabed. Seaway7 has implemented a Health, Safety, Environment and Quality Policy Statement, Human Rights Policy Statement, Code of Conduct, Slavery and Human Trafficking Statement, and Ethics Policy Statement to address concerns. In addition, Seaway7 has implemented a Speak Up Policy.	• Social/Labor: *Workforce Disputes, Discrimination/Workforce Rights Issues* • Competitive/Financial: *Financial Difficulty*	• Health, Safety, Environment and Quality Policy Statement • Ethics Policy Statement • Code of Conduct • Human Rights Policy Statement • Slavery and Human Trafficking Statement • Speak Up Policy • Largest Shareholder (Subsea7) is a member of the UN Global Compact • The following commitments are referenced in the 2022 Sustainability Report: – Subsea7 introduced 'Enhanced Supplier Human Rights Risk-Tiering Matrix' – Independent assessments on business ethics (anti-bribery/anti-corruption programmes) – KPIs (targets) relevant to UN SDGs. – Environmental Ship Index (ESI) in the World Port Sustainability Program – Carbon Management System tool – in development with Subsea7 – Diversity and Inclusion Steering Committee • Certifications: – ISO 14001 Environmental Management – ISO 9001 Quality Management – ISO 45001 HSE Management	D&B Finance Analytics

Supplier	Supplier Overview	Potential Risk Considerations	Previous Issues (Publicly Available Media Review)	Management Policies / Strategies	Supplier Screening Process
LET'S BUILD IQIP Royal IHC	IQIP is a civil engineering company based in The Netherlands with over 30 years' experience in installation and foundation projects. IQIP provides fully integrated solutions for on and offshore foundation installation and decommissioning in the offshore wind, oil & gas, and coastal & civil markets. Royal IHC is a leading supplier of maritime technology, based in The Netherlands, focused on the development, design and construction of ships for dredging and various offshore industries. On 14 March 2023, Royal IHC disclosed via Press Release that it had reached an agreement to sell IQIP to HAL Investments B.V. IQIP will supply the jacket pile grippers for the Project.	As supplier of the jacket pile gripper for the Hai Long Offshore Wind Project, IQIP has the potential to impact human rights in the following manner: • **Mineral Supply Chains:** the iron ore used to produce the steel for the jacket pile grippers may be associated with decreased access to water for local communities, increased instances of mining-related illnesses, lack of meaningful FPIC, and environmental pollution. • **Manufacturing Process:** IQIP has facilities located in Europe, Asia, Australia, the Middle East and the Americas. The manufacturing sector typically has a higher risk of human rights violations, particularly as it pertains to worker rights and freedoms, health and safety, and corruption. In order to address these risks, IQIP, through its (current) parent company, Royal IHC, has developed a Modern Slavery and Human Trafficking Statement and Code of Conduct. They have also implemented sustainability commitments and the I-CARE Safety Program.	• Competitive/Financial: *Financial Difficulty* • Regulatory: *Regulatory Issues, Corruption Issues*	**IQIP Standalone:** • Certifications: – ISO 14001 Environmental Management – ISO 45001 HSE Management – ISO 9001 Quality Management **Royal IHC:** • Modern Slavery and Human Trafficking Statement 2022 • Code of Conduct • Sustainability Commitments • I-CARE Safety Program • The following are referenced in the 2021 Sustainability Report: – Sustainability Committee – Sustainability Transparency Benchmark – Royal IHC Rules and Regulations for Contractors and Suppliers – Objectives relevant to the UN SDGs	DOW JONES RISKCENTER

Supplier	Supplier Overview	Potential Risk Considerations	Previous Issues (Publicly Available Media Review)	Management Policies / Strategies	Supplier Screening Process
SK oceanplant	Samgkang M&T Company Limited is South Korean based offshore plant and shipbuilding specialist. On 31 January 2023, Samgkang M&T Company Limited rebranded into SK Oceanplant Co Ltd (SK oceanplant), with a desire to maintain its presence in substructures of offshore wind turbines as well as to expand its operation into floating offshore wind power generation and offshore substations. SK oceanplant will supply 52 wind turbine jackets (foundations) for the Project.	As supplier of the wind turbine jackets (foundations) for the Hai Long Offshore Wind Project, SK oceanplant has the potential to impact human rights in the following manner: • **Mineral Supply Chains:** the iron ore and zinc (used in galvanisation) may be associated with decreased access to water for local communities, increased instances of mining-related illnesses, lack of meaningful FPIC, and environmental pollution. • **Manufacturing Process:** SK oceanplant manufactures wind turbine jackets in South Korea. The manufacturing sector typically has a higher risk of human rights violations, particularly as it pertains to worker rights and freedoms, health and safety, and corruption. In order to address these risks, SK oceanplant has developed and implemented a range of policies and frameworks, including a Human Rights Policy, Health and Safety Management Policy, Supplier Code of Conduct, Supply Chain Sustainability Management Policy, Labor-Management Council, and Environmental Management Policy.	• Regulatory: *Regulatory Issues*	• Human Rights Policy • Ethics Management Counselling/Reporting Channel • Health and Safety Management Policy • Quality Management Policy • Information Security Mission and Security Framework • Supplier Code of Conduct • Supply Chain Sustainability Management Policy • Labor-management Council • Governance Charter • Environmental Management Policy • Climate Change Response Strategy • Green Purchasing Policy • ESG Management Principles • Certifications: – ISO 14001 Environmental Management – ISO 45001 HSE Management – ISO 9001 Quality Management	DOW JONES RISKCENTER

Supplier	Supplier Overview	Potential Risk Considerations	Previous Issues (Publicly Available Media Review)	Management Policies / Strategies	Supplier Screening Process
TECO	TECO Electric & Machinery Company Limited (TECO) is a Taiwanese company specialising in the development, manufacturing, and servicing of sophisticated value-added electrification solutions. TECO focuses on technologies for motors, drives, gears as well as engineered system across a global footprint and various industries. TECO will construct the onshore substation for the Project.	As supplier of the onshore substations for the Hai Long Offshore Wind Project, TECO has the potential to impact human rights in the following manner: • **Mineral Supply Chains:** the metals involved in the manufacturing of the electrical components of the substation plant may be associated with decreased access to water for local communities, increased instances of mining-related illnesses, lack of meaningful FPIC, and environmental pollution. • **Construction/Installation Activities:** the construction and installation of the substation may adversely impact worker and community health and safety, the spread of communicable diseases via use of non-localised labour, worker rights and freedoms, and environmental pollution caused by inappropriate construction practices. In order to address these risks, TECO has instituted a range of management policies, including a Human Rights Policy, Supplier Code of Conduct, Conflict-free Metal Declaration for Supply Chain, and an Environment Safety and Health Management system (manual).	• Competitive/Financial: *Management Issues, Ownership Issues* • Regulatory: *Fraud Issues* • Environment/Protection: *Product/Service Issues*	• Code of Practice for Corporate Social Responsibility • Human Rights Policy • Code of Integrity Management • Code of Ethical Conduct for Directors and Managers • Supplier Code of Conduct • Human Rights and Environmental Sustainability Commitment • Conflict-free metal declaration for supply chain • Environmental Safety and Health Management Manual • TECO Sustainability Commitment • Membership with the FTSE4Good TIP Taiwan ESG Index • The following are referenced in the 2021 Sustainability Report: – Member of the Dow Jones Sustainability Indices – Included in the 2022 S&P Global Sustainability Yearbook – KPIs relevant to UN SDGs • Certifications: – ISO 14001 Environmental Management – ISO 9001 Quality Management	DOW JONES RISKCENTER

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