



# Alba Power Station 5 Block 4 Supplementary ESIA Stakeholder Identification and Mapping

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### Table of abbreviations

ALBA	Aluminium Bahrain
CCGT	Combined Cycle Gas Turbine
EACS	Environment Arabia Consultancy Services WLL
Km	Kilometre
ESIA	Environmental and Social Impact Assessment
PS	Power Station

## 1 INTRODUCTION

This report constitutes the Stakeholder Identification and Mapping and is a part of a suite of documents prepared as supplementary reports to the Environmental and Social Impact Assessment (ESIA), undertaken for the Aluminium Bahrain B.S.C. (Alba) Power Station 5 (PS5) Block 4 project.

### 1.1 Project Description

Alba is the largest single site smelter in world, save for China. In 2019, Power Station 5 was constructed within the northwest corner of the Alba site (**Figure 1.1**). It is a Combined Cycle Gas Turbine (CCGT) plant utilising latest and proven 'H' class gas turbine technology in a 1 x 1 x 1 multi-shaft configuration. The CCGT plant has a minimum net electrical output capacity of 1800 Mega Watts (MW) at ISO conditions. A minimum of three separate and independent generating blocks in a multi-shaft of 1:1:1 configuration are included at the Station. The gas turbine units are fired on natural gas although one unit has the capability of being fired on distillate for the purpose of emergency shutdown of the smelter plant in the event of total loss of natural gas supply.

Block 4 is an expansion of Power Station 5 and shall have a similar 1:1:1 configuration with J-class gas turbine technology and with minimum nominal ISO rating of 680.8 MW. It includes a connection to the existing 220kV Substation. This expansion will increase the capacity of Power Station 5 from 1,800 MW to 2,481 MW. The Block 4 gas turbine unit will have the capability to operate on 100% Khuff gas, 100% residual will also have the capability to operate on any proportionate mixture of Khuff-residual gas.

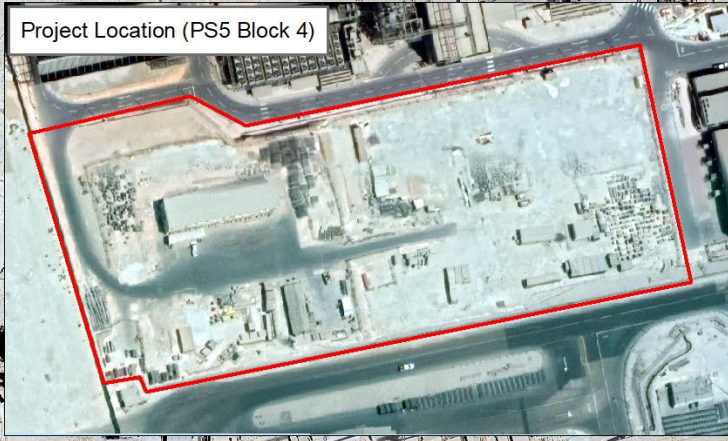
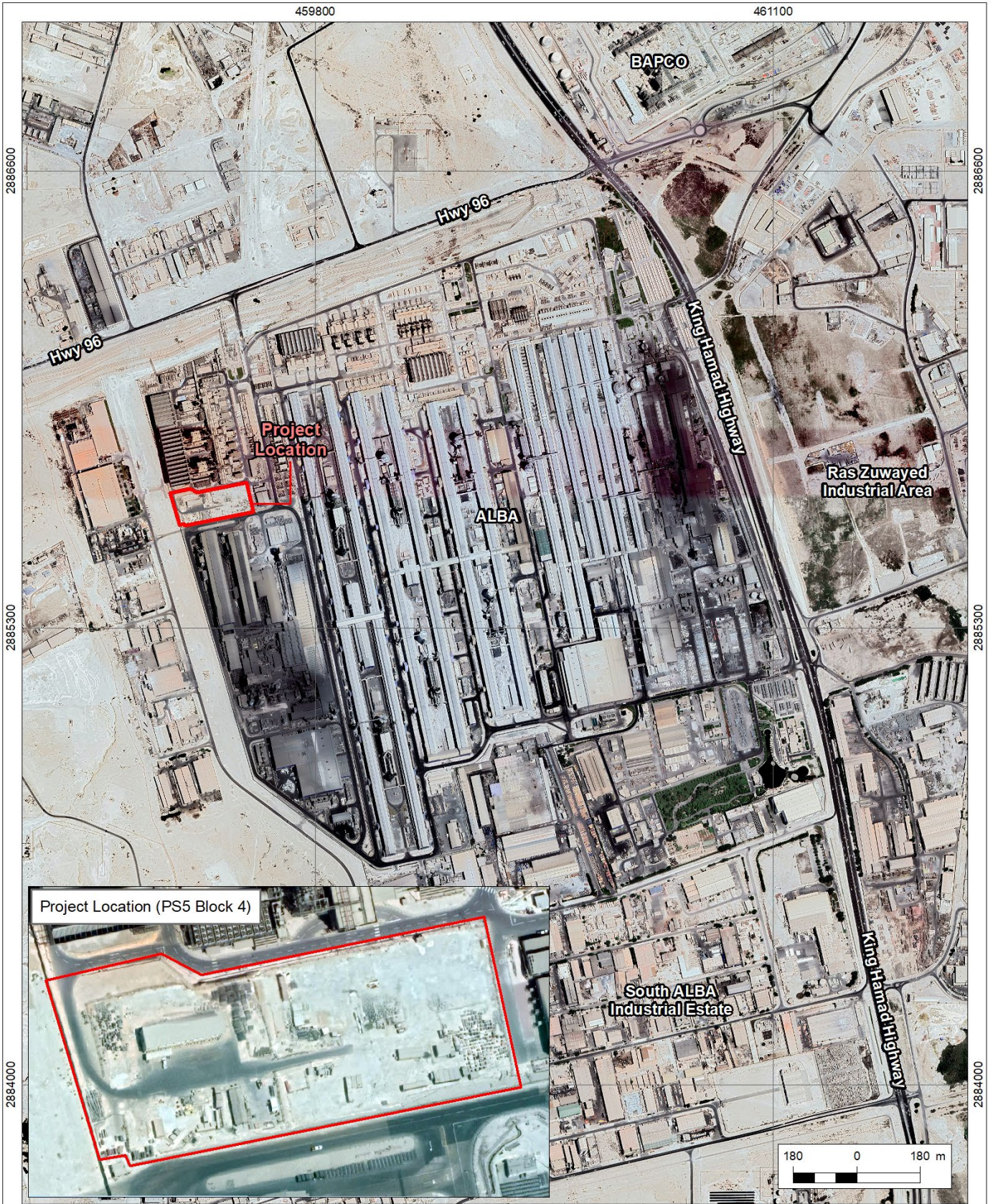
The increased capacity and efficiency of Power Station 5 will eliminate the need for other power stations current operating at Alba. It is understood that Power Station 3, which is operating on a low load, will be shut down and will be kept as emergency standby and Power Station 4 will run partially.

A Consortium of Mitsubishi Power Ltd. and SEPCO III Electric Power Construction Co. Ltd. (SEPCO III) (hereby known as the Contractor) will execute the construction of Power Station 5 Block 4.

### 1.2 Project Location

The project is located in the Alba Industrial Estate, 1.5 kilometers (km) west of the King Hamad Highway.

The laydown area utilized for the storage of construction equipment and vehicles used in the construction of the Project are stored in Al Dur, 0.8 km off the south east coast of Bahrain adjacent to the SEPCO III Labour accommodation (**Figure 1.2**).




CLIENT:




CONSULTANT:

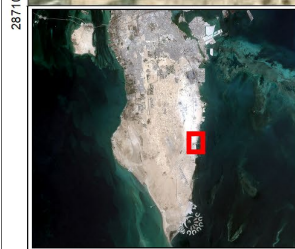




LEGEND:	 Project location (PS5 Block 4)
FIGURE TITLE:	Project location
PROJECT TITLE:	Alba Power Station 5 Block 4 Supplementary ESIA
DATE:	December 2022
DATUM:	WGS 1984 (UTM Zone 39N)
PREPARED BY:	MS
SCALE (A4):	1:13,982

NORTH ARROW:



D:\GIS Database\1. Projects\1B0114201 - ALBA Stn 5 Rd Traffic Safety Risk Assmt\mxd\1.1 Project location.mxd



CLIENT:  
  
 CONSULTANT:  
  
 Environment Arabia

LEGEND:  
 Accommodation   
 Laydown area   
 Site office   
 Sensitive receptor

FIGURE TITLE:  
**Al Dur Labour Accommodation and Laydown Area**

PROJECT TITLE:  
 Alba Power Station 5 Block 4 Supplementary ESIA

DATE:  
 December 2022

PREPARED BY:  
 CN


NORTH ARROW:  


FIGURE NO.:  
 4.1

SCALE (A4):  
 1 cm = 140 m

### 1.3 Scope of work

The scope of this report is to identify stakeholders that are likely to affect or be affected by the construction of the Project. These stakeholders will be identified within different categories and placed in a matrix according to their respective levels of impact and influence. The result of this matrix will determine the required nature and frequency of stakeholder engagement.



## 2 METHODOLOGY

### 2.1 Stakeholder identification

A stakeholder is defined as: “a person who has an interest in a particular decision or activity, either as an individual or as a representative of a group. This includes people who influence a decision, or can influence it, as well as those affected by the Project.”

The stakeholders of Alba were identified based on the ESIA parameters, the Project's features, potential degree of impact and interest in the Project and their relation in terms of how they will be impacted by the Project.

### 2.2 Stakeholder mapping

For each category of identified stakeholder, a low, medium or high value will be assigned in relation to their impact on or by the Project as presented in the ESIA.

The below references will allow for a clear understanding of the stakeholders.

Impact: High (H), Medium (M) or Low (L)

Level of knowledge

U – Unaware – this group has no information about the Project;

R – Resistant – aware of Project and resistant to the changes and impacts the Project may bring;

N – Neutral – aware of the Project and neither supportive nor resistant;

S – Supportive – aware of the Project and the potential changes and impacts and is supportive; and

L – Leading – aware of the Project and actively engaged to ensure the Project's success.

### 2.3 Area of influence

When considering impacts on receptors, the areas of influence considered for each category is defined in **Table 2.1**.

**Table 2.1 AOIs relevant to assessment**

AOI No.	Parameter	Notes
1	Air Quality Stack Emissions	5 km radius from Block 4 based on air quality modelling
2	Air Quality Construction Dust	350 m radius from Block 4
3	Air Quality Road Traffic Emissions	200 m from road centreline
4	Noise	1 km radius from Block 4
5	Construction traffic	Based on construction vehicle routes provided by the contractor

For the purpose of identifying stakeholders related to this Project, a five km radius is considered around the Project Site in the Alba Industrial Estate (**Figure 1.1**) to capture all areas of influence as specified in **Table 2.1**.



### 3 STAKEHOLDER IDENTIFICATION AND MAPPING

#### 3.1 Stakeholder Identification

Within the area of influence specified in **Section 2.1**, stakeholders have been identified within the following categories:

1. Government: Government or authorities are those agencies or bodies of the Kingdom of Bahrain who have the power to regulate or influence Alba's operations and the Project in terms of establishing policies, granting permits or other approval and monitoring and enforcing compliance with Bahrain laws.
2. Industries, businesses and commercial enterprises: any industrial, business or commercial establishment within the area of influence.
3. Area representatives: Representatives of the local communities within the area of influence, often in the form of a municipal council which is elected by local residence.
4. Non-Government Organisations (NGOs): This refers to the smaller groups representing particular interests including vulnerable groups (women, children, migrant workers) in society who may have an interest in the Project's environmental and social aspects.
5. Alba Employee: All employees of Alba: permanent, temporary or contractual and the unions comprise this category.
6. Alba Contractors: In very broad terms, contractors are the companies appointed or contracted by Alba to carry out various works within and outside Alba premises. This also includes the contractors and sub-contractors for the Project.
7. General Public: This category may be defined as the people and communities who are not directly impacted or impacting the Project and its activities but have an interest in the development of the Project.
8. Sensitive Receptors: this category includes any facility which provides services to the general public including schools, hospitals and recreational areas.
9. Media: Media is a key stakeholder that plays an important role in shaping public opinion. It has a wide reach, ranging from local to national or international levels.

The list of individual stakeholders for each category is presented in **Table 3.1**.

**Table 3.1 Stakeholder per category**

Category	Stakeholders	Category	Stakeholders
Government	<ul style="list-style-type: none"> <li>• Supreme Council for Environment</li> <li>• Central Planning Office</li> <li>• Electricity and Water Authority</li> <li>• Agricultural Engineering and Water Resources Directorate</li> <li>• Bahrain Authority for Culture and Antiquities</li> <li>• Traffic Directorate</li> </ul>	Commercial Industrial Enterprises and	<ul style="list-style-type: none"> <li>• Tatweer Petroleum</li> <li>• MERCO</li> <li>• Delmon Readymix</li> <li>• GEMS Fabrication Shop</li> <li>• SPK Autoshop and Workshop</li> <li>• Newbury Events</li> <li>• Komy Safety</li> <li>• 2010 Garage</li> <li>• Rego Metal Workshop</li> <li>• CROWN industries</li> <li>• Downtown Group</li> <li>• Bahrain Pipeline Construction</li> <li>• Gulf Pump Factory</li> <li>• Middle East Fiber Glass Factory</li> <li>• Polycon Bahrain W.L.L</li> <li>• Kitchen Supplies Store</li> <li>• Al Salam Furniture Industries</li> <li>• Kingdom Oil Company</li> <li>• West Point Home Bahrain</li> <li>• Al Madina Garage</li> <li>• Tylos Plastic Industries</li> <li>• West Point Home Bahrain</li> <li>• Eminenet Packaging Industries</li> <li>• Kymera International</li> <li>• Bahrain Atomisers International</li> <li>• Al Haram Centre</li> </ul>

Category	Stakeholders	Category	Stakeholders
			<ul style="list-style-type: none"> <li>• Riffa Souq Centre</li> <li>• Prime mall</li> <li>• BAPCO club</li> </ul>
NGOs	<ul style="list-style-type: none"> <li>• Migrant Worker Protection Society</li> <li>• Arab Youth Climate Movement – Bahrain Chapter</li> <li>• Manama shapers</li> <li>• Bahrain Environment Society</li> <li>• Bahrain Women’s Association</li> <li>• Supreme Council for Women</li> <li>• Al Hekma Retirement Centre</li> <li>• BAPCO BMP offices</li> </ul>	Community Representatives	<ul style="list-style-type: none"> <li>• Southern Municipal Council<sup>1</sup></li> </ul>
The Media	<ul style="list-style-type: none"> <li>• Akhbar Al Khaleej</li> <li>• Al Ayam</li> <li>• Al Bilad</li> <li>• Al Watan</li> <li>• Bahrain News Agency</li> <li>• Daily Tribune</li> <li>• Gulf Daily News</li> <li>• Gulf Industry</li> </ul>	Sensitive Receptors	<ul style="list-style-type: none"> <li>• Mohammed Bin Khalifa Bin Salman Al Khalifa Specialist Cardiac Centre</li> <li>• Royal Golf Club</li> <li>• Al Moaskar Military Training Facility</li> <li>• Riffa Walk Park</li> <li>• KIMS Bahrain Medical Centre</li> <li>• East Riffa Primary Girls School</li> <li>• Riffa Views International School</li> <li>• Al Rayan Hospital</li> <li>• Al Hajiyat Public Park</li> <li>• Askar Intermediate Boys School</li> <li>• Ahmed Al Fateh Primary &amp; Intermediate Boys School</li> <li>• Al Malaki Specialist Hospital</li> <li>• East Riffa Health Centre</li> </ul>

<sup>1</sup> The Project site and the Al Dur Labour Accomodation site both fall within the Southern Governate. Different areas within the Southern Governorate are represented by different council members, collectively known as the Southern Municipal Council. There are no separate community councils or individual representatives

Category	Stakeholders	Category	Stakeholders
			<ul style="list-style-type: none"> <li>• East Riffa Secondary Boys School</li> <li>• Royal University for Women</li> <li>• Al Fateh Secondary School for Boys</li> <li>• International Medical Centre W.L.L</li> <li>• West Virginia University - Bahrain Campus</li> <li>• Awali Hospital</li> <li>• Princess Sabeeka Park</li> <li>• Hunainiyah Public Park</li> <li>• Ibn Rushd Intermediate Boys School</li> <li>• Salah Al-Deen Primary Boys school</li> <li>• Madinat Khalifa Health Center</li> <li>• American University of Bahrain</li> <li>• Middle East Medical Centre – Askar</li> <li>• Al-Hilal Multi Speciality Medical Center Riffa</li> <li>• BSPCA Animal Welfare Center</li> </ul>

## 3.2 Stakeholder Mapping

Reference to the findings of the Project's ESIA document and its addendum, **Table 3.2** summarizes the impacts to the previously mentioned stakeholder categories. The ESIA and supplementary studies have identified impacts on local industries and business from construction dust, noise and traffic; however, during the operational phase of the project, only air quality impacts from emissions are anticipated on this category.

Site works from both Alba and Sepco III could also be impacted by construction noise and dust. During the operational phase of the Project only Alba workers maybe impacted by the noise and emissions arising from the power station.

The study did not find any impacts on any sensitive receptors or Sepco Labour accommodations. Community representatives and the media have been included here for the sake of completeness, although no impact is assigned to them and were not considered in the ESIA.

**Table 3.2 Environmental impacts of stakeholder categories**

Stakeholder Group	Construction			Operation		
	Air Quality	Noise	Traffic	Air Quality	Noise	Traffic
Government						
Local industries and Business (South Alba Industrial Estate)	X (within 350 meters from site boundary)	X	X	X		
Local industries and Business (Al Dur)						
NGOs				X		
Alba workers (on site)	X	X		X	X	
Sepco III workers (onsite)	X	X				
Sepco III workers (labour accommodation)						
The Media						
Community representatives						
Sensitive receptors						

In **Table 3.3**, each category of stakeholders is assigned a value of a High (H), Medium (M) or Low (L) with respect to their impact by and influence of the project. A value is assigned to the level of knowledge as follows:

- Unaware (U) - this group has no information about the project
- Resistant (R) – aware of the Project and resistant to the changes and impacts the Project may bring
- Neutral (N) - aware of the Project and neither supportive nor resistant
- Supportive (S) aware of the Project and the potential changes and impacts and is supportive

Leading (L) - aware of the Project and actively engaged to ensure Project's success

Levels of knowledge are assigned based on an initial round of engagement undertaken for the Project as part of the ESIA.

**Table 3.3 Stakeholder mapping table**

Stakeholder	Impact on the Project	Impacted by the Project	Level of Knowledge about the Project
<b>Government</b>			
Central Planning Office	H	L	U
Electricity and Water Authority	H	L	N
Agricultural Engineering and Water Resources Directorate	H	L	S
Bahrain Authority for Culture and Antiquities	H	L	U
Roads Planning and Project Directorate	H	L	N
Supreme Council for Environment	H	L	N
<b>Area Representatives</b>			
Southern Municipal Council	M	M	N
<b>Commercial and Industrial Enterprises</b>			
Delmon Readymix	L	M	N
GEMS Fabrication Shop	L	M	U
SPK Autoshop and Workshop	L	M	U
Newbury Events	L	M	U
Komy Safety	L	M	U
2010 Garage	L	M	U
Rego Metal Workshop	L	M	U
Downtown Group	L	M	N
Bahrain Pipeline Construction	L	M	U
Gulf Pump Factory	L	M	N
Middle East Fiber Glass Factory	L	M	N
Polycon Bahrain W.L.L	L	M	N
Kitchen Supplies Store	L	M	U
Al Salam Furniture Industries	L	M	N
Kingdom Oil Company	L	M	U
West Point Home Bahrain	L	M	R
Al Madina Garage	L	M	U
Tylos Plastic	L	M	R
Eminent Packaging Systems	L	M	N
Kymera International	L	M	N
<b>NGOs</b>			
Migrant Worker Protection Society	L	L	U
Arab Youth Climate Movement – Bahrain Chapter	L	L	U
Manama shapers	L	L	U
Bahrain Environment Society	L	L	U
Bahrain Women’s Association	L	L	U
Supreme Council for Women	L	L	U
Al Hekma Retirement Centre	L	L	U
<b>Sensitive Receptors</b>			
Mohammed Bin Khalifa Bin Salman Al Khalifa Specialist Cardiac Centre	L	L	U





Stakeholder	Impact on the Project	Impacted by the Project	Level of Knowledge about the Project
Royal Golf Club	L	L	U
Al Moaskar Military Training Facility	L	L	U
Riffa Walk Park	L	L	U
KIMS Bahrain Medical Centre	L	L	U
East Riffa Primary Girls School	L	L	U
Riffa Views International School	L	L	U
Al Rayan Hospital	L	L	U
Al Hajjiyat Public Park	L	L	U
Askar Intermediate Boys School	L	L	U
Ahmed Al Fateh Primary & Intermediate Boys School	L	L	U
International Medical Centre W.L.L	L	L	U
West Virginia University - Bahrain Campus	L	L	U
Awali Hospital	L	L	U
Princess Sabeeka Park	L	L	U
Hunainiyah Public Park	L	L	U
Ibn Rushd Intermediate Boys School	L	L	U
Salah Al-Deen Primary Boys school	L	L	U
Madinat Khalifa Health Center	L	L	U
American University of Bahrain	L	L	U
Middle East Medical Centre – Askar	L	L	U
Al-Hilal Multi Speciality Medical Center Riffa	L	L	U
BSPCA Animal Welfare Center	L	L	U
<b>Media</b>			
Akhbar Al Khaleej	M	L	U
Al Ayam	M	L	U
Al Bilad	M	L	U
Al Watan	M	L	U
Bahrain News Agency	M	L	U
Daily Tribune	M	L	U
Gulf Daily News	M	L	U
Gulf Industry	M	L	U
Akhbar Al Khaleej	M	L	U
Al Ayam	M	L	U
<b>Alba Employees</b>	H	H	L
<b>Sepco III Employees</b>	H	H	L

## 4 CONCLUSION AND RECOMMENDATIONS

Stakeholder Engagement is an integral part of the ESIA process and implementation of the Project in general. Engagement refers to two key activities: disclosure of information on a proposed Project and direct two-way consultations with stakeholders. Stakeholders have two main sources of information to help them participate meaningfully in consultations: information on the Project and their knowledge of the proposed Project site and the surrounding areas and their inhabitants.

During the preparation of the ESIA by Envirotech in 2021, engagement was undertaken with government authorities and some of the neighbouring businesses. Due to Covid-19 restriction limited responses were received.

Reference to **Table 3.2**, the stakeholder category most likely to be impacted by the Project are the local industries and business within the South Alba Industrial Estate. Reference to **Table 3.3**, a number of local industries and business and sensitive receptors within the area of influence defined in **Section 2** have been identified as unaware of the Project. However, the latter category is not expected to be impacted by the Project.

Active engagement throughout the construction and operation of the Project is recommended with the local industries and business for the purpose of informing this category of the Project as well as creating channels of communication between the Project team and the stakeholder.

During construction, this engagement can be in the form of:

1. Project information sheets;
2. Date and timings of large deliveries, abnormal loads, road closures or diversions; and
3. Alba needs to develop and share the Grievance Mechanism for the Project with these respective establishments.

During the operational phase, communication should be maintained with this category to inform them of any air quality emissions measures implemented and ensure that they are informed of the Grievance Mechanism through which any complaints can be communicated.

The second category most likely to be impacted is the worker category (both Alba and Sepco III). EACS is aware of Alba's high health and safety standards and the procedures in place to ensure that safety measures are followed and safety training is continuously delivered. Furthermore, Alba ensures daily tool box talks are given to the workers on site, therefore, no recommendation for additional engagement is required.

Monitoring, performance evaluation and reporting of a stakeholder engagement process are important elements of stakeholder management. The following indicators can be used to monitor and assess the efficiency of the stakeholder engagement activities throughout the Project lifecycle:

1. Maintain a log and minutes of any meeting with stakeholders;
2. Maintain a record of all complaints, major concerns, comments, suggestions and queries received and handled; and
3. Alba's feedback to concerns, suggestions, queries, etc. raised by stakeholders, including actions undertaken.

These recommendations should be further detailed in a Project specific SEP.