



## Port of Umm Qasr Yard 5 Terminal Development Environmental and Social Impact Assessment

### Non-Technical Summary

On Behalf of:  
Basra Multipurpose Terminal

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## List of Abbreviations and Acronyms

Abbreviation/Acronym	Description
AOI	Area of Influence
BMT	Basra Multipurpose Terminal
CEMP	Construction Environmental Management Plan
EAME	Earth & Marine Environmental Consultants
EMP	Environmental Management Plan
ESIA	Environmental and Social Impact Assessment
ESMP	Environmental and Social Monitoring Plan
GCPI	General Company Ports of Iraq
HGVs	Heavy Goods Vehicles
KBA	Key Biodiversity Area
KZP	Khor Al-Zubair Port
NTS	Non-Technical Summary
Ro/Ro	Roll-on/Roll-off
SMP	Social Management Plan
UQP	Umm Qasr Port

## Introduction

### Overview

This document is the Non-Technical Summary (NTS) of the Environmental and Social Impact Assessment (ESIA) for the proposed development of a cargo terminal at Umm Qasr Port (UQP) (the Project). This NTS describes the Project and the potential impacts (both positive and negative) it may have on the environment and on people. It also describes the mitigation measures that will be implemented during the Project's construction, operation and decommissioning phases, to reduce significant negative impacts.

### The Project

Basra Multipurpose Terminal (BMT) is proposing to develop an international container, general cargo and Roll-on/Roll-off (Ro/Ro) terminal at an area of UQP known as Yard 5. BMT is an Iraqi registered company that shall design, finance, construct and operate the terminal to international standards.



**Figure 1: Project Location**



**Figure 2:** Conceptual View of the Proposed Project Development

### Need for the Project

The port sector has been recognised by the Government of Iraq as an important sector which requires investment and expansion. Iraq's commercial ports are not working to capacity due to lack of investment in facilities, management and operational processes. There is a gap between the design capacity of the Iraqi port sector now (approximately 15 million tonnes per year) and the future demand (estimated to be 53 million tonnes in 2018). There is thus a need to develop, expand and modernise the Iraqi port sector.

## ESIA Approach and Methodology

### Introduction

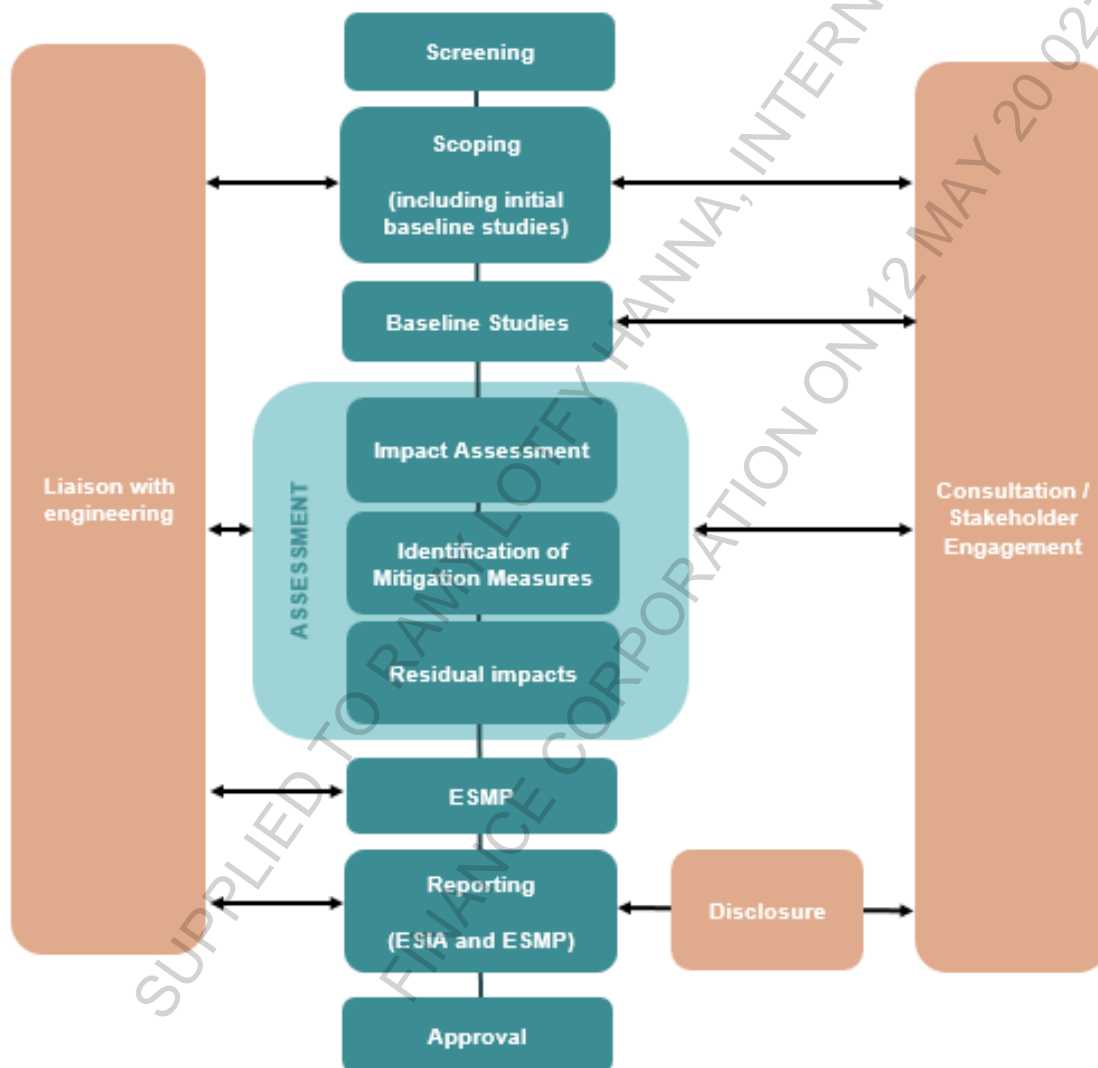
The purpose of the ESIA is to assess the baseline environmental and social conditions of the project area and identify how the project might change those baseline conditions (positively and negatively). If significant negative impacts are identified the report defines mitigation measures to avoid, minimise or mitigate negative impacts.

The ESIA has been prepared in accordance with BMT policies, the Iraq regulatory framework, relevant Iraqi policies, regulations, legislation, international conventions/protocols (to which Iraq is a signatory), plans and permitting requirements including:

- The National Development Plan (2013 – 2017);

- Law No. 27 of 2009 on the Law for Protection and Improvement of Environment;
- World Bank Environmental, Health and Safety Guidelines (2007); and
- International Finance Corporation Performance Standards on Environmental and Social Sustainability (2012).

Taking this into account, the approach and key stages undertaken to prepare the ESIA for the Project is should in **Figure 3**.



**Figure 3: ESIA approach for this Project**

### Screening

The Project was screened by potential investors and EAME as Category A project, requiring a full ESIA.

### Scoping

Prior to the ESIA Report, a Scoping Report was prepared which set out potential impacts that were to be considered in the ESIA as well as those environmental and social issues scoped out, with reasons why.

### Baseline Studies

Baseline environmental and social conditions were identified by a review of existing published sources, site reconnaissance visit, field surveys, anecdotal evidence, and analysis and interpretation of data.

### Assessment

The assessment of impacts has been undertaken by technical specialists for each topic identified as relevant during the scoping phase of the Project. Topics considered included: land quality; surface water resources; surface water quality; groundwater; biodiversity; transport; air quality; noise and vibration; waste management; sediment; social impact assessment; cultural heritage and archaeology; landscape and visual impacts; conflict sensitivity; and climate risk and vulnerability.

A generic assessment methodology has been used, which has been adapted where necessary by the specialists based on relevant international guidance for their topic. Impacts are categorised as minor, moderate or major, positive or negative, and may be direct or indirect. For all negative impacts, mitigation measures have been identified where possible, based on the following hierarchy: avoid, minimise, restore, and where that is not possible, compensate or improve conditions. Residual impacts were then identified – these are the impacts that remain following the implementation of the proposed mitigation.

### Environmental and Social Management Plan

An Environmental and Social Management Plan (ESMP) will be prepared, based on the findings in the ESIA. The ESMP consists of a set of management, mitigation and monitoring measures to be taken during Project construction and operation and maintenance to manage key potential environmental and social impacts identified in the ESIA.

## Project Programme and Activities

Construction is proposed to take approximately 33 months and will commence in 2018. The overall lifespan of the development and supporting infrastructure is 50 years. Operations will commence following construction and commissioning.

## Project Alternatives

The ESIA has considered alternatives to infrastructure site locations, routes to site, technologies and processes. A 'Do Nothing' option was also considered and rejected as this could result in Iraq would face a shortfall in import/export capacity, worsening over time.

The specific site location at Umm Qasr was dictated by General Company Ports of Iraq (GCPI) and BMT have had no influence on the location and size of the proposed Project site. However, the development layout has been considered to reduce travel distances, for example, the container storage area and Ro/Ro storage areas are located adjacent to the berths, whilst, administrative area will be situated away from the main operational activities.

## Stakeholder Engagement

Stakeholder consultation is critical in gaining an understanding of how the Project will impact on stakeholders and the public. The ESIA recognises the importance of this and has completed comprehensive consultation with a wide range of stakeholders to date.

The Stakeholder Engagement Plan includes a database of stakeholders and has been grouped and compiled by type and will continue to be updated, as presented in **Figure 4**.



**Figure 4:** Stakeholder groups

## Baseline Environmental and Social Conditions

This section summarises the key baseline conditions and environment and social sensitivities with the Project AOI.

### Climate

Iraq is characterised by hot, dry desert conditions, having long, hot, dry summers and short cool winters, although night time temperatures often remain above freezing. For example, in Baghdad, temperatures range from an average July maximum of 43°C to an average January minimum of 3°C. Dew point and humidity are usually quite low, except for areas close to the Arabian Gulf where moisture content of the air is slightly greater.

The winter and spring season are very short, usually consisting of a two-month winter typically occurring in December and January, and often, only a single spring month, usually occurring in March or April. Small amounts of rainfall occur in the winter and spring.

### Land Quality

Twenty surface soil samples were collected from across the Project area. No visual or olfactory observation of potential contamination was observed in terms of oil, chemical staining or odours. The analysis results were compared to relevant guidelines and no elevated concentrations were noted. No significant receptors have been identified on or close to the Project area.

### Surface Water Resources and Quality

The Project area site itself has no surface water features, however, it is at the head of a dock basin that is fed from the Khor Al-Zubair and which will be partially dredged to accommodate the berth pocket for the new development.

Ten surface water samples were collected from the dock basin in front of the Project area. No visual or olfactory observation of potential contamination was observed in terms of hydrocarbon or chemical sheens or odours. Elevated concentrations, above guideline values, of copper and sulphate were noted. Overall, the water quality would not be regarded as significantly contaminated.

### Groundwater

As part of a geotechnical site investigation, five monitoring wells were installed to 20m below ground level on the Project area. EAME collected four groundwater samples for chemical analysis. No visual or olfactory observation of potential contamination was noted in the groundwater samples. Overall the contamination levels are considered to be very low and insignificant.

### Biodiversity

A review of the Project area has identified that there are no biodiversity receptors on the site or adjacent sites that may suffer significance adverse effects resulting from the construction, operation and decommissioning of the Project. In addition to the land area being significantly disturbed and thus ecologically degraded, the port basin is frequented by ships with draughts extending to a significant depth of the water profile and the basin is regularly dredged, again preventing the establishment of any habitat and communities. EAME believes that the Project area and port basin is a heavily degraded environment and should not be regarded as a sensitive ecological receptor.

### Transport

Iraq suffers from a poor traffic planning and management as well as an inadequate and poorly maintained road network. In particular, the road network servicing the UQP cannot cope with the existing traffic generated by the Port with long queues of HGVs entering and exiting the Port.

### Air Quality

Existing emissions to air within Umm Qasr are likely to arise from road traffic, marine traffic, light and heavy industry (including flaring from the oilfields) and domestic fuel use.

Fugitive dust emissions from exposed dry soil surfaces and unpaved roads are likely to contribute to localised ambient concentrations of particulate matter. During dry weather, the existing vehicular traffic using unpaved roads is likely to be an appreciable source of dust at roadside properties. The region experiences sand and dust storms which contribute to increased quantities of suspended particulate matter (dust), particularly in the dry summer months.

### Noise and Vibration

The main sources of ambient noise in the study area are road traffic, agricultural activities and industrial/commercial sources associated with the port activities, making this a relatively noisy environment, already disturbed by many noise sources.

### Waste

Iraq's relatively underdeveloped solid waste sector lacks the integrated capacity and strategic planning to deliver an effective national solid waste solution. This is evidenced by the lack of facilities with environmental protection measures and an under developed, ad-hoc recycling market. There is no waste generated from the project site presently.

### Sediment

EAME collected ten sediment samples from the basin pocket in front of the Project area to provide analysis of the baseline sediment quality conditions. All ten samples were submitted to an ISO17025 certified laboratory for chemical analysis. No visual or olfactory observation of potential contamination was observed in terms of oil, chemical staining or odours. Overall, the level of contamination in the sediments is considered low as is their pollution potential.

### Social Conditions

Social surveys and engagement with key stakeholders (including a public exhibition) was undertaken in January to March 2018. Standardised questionnaires were completed by respondents from across the social spectrum during informal meetings by community stakeholders in and around the Project area as well as in Umm Qasr itself. This information informed the social baseline conditions.

- Respondents indicated that the major challenges faced were employment, then income and then access to water;
- 18% of respondents indicated that a vulnerable person was living in their household;

- There is a high unemployment rate mainly due to the economy being affected by the D'aesh conflict and reduction in oil price. Just over half the respondents were unemployed. Community stakeholders in Umm Qasr and surrounding areas indicated that there is a strong hope that the Project will provide job opportunities for local people with varying backgrounds;
- Stakeholders hoped the project would positively impact/rehabilitate local services/infrastructure including roads, drinking water, electricity, sewage, refuse collection, and health care;
- The key concerns regarding the potential negative impacts of the project focused on impacts to fishermen, air quality and roads/traffic hazards;
- Many were concerned that the consultation process continues and proposed a committee of local stakeholders be founded to engage with BMT; and
- Many stakeholders considered possible social outreach projects that could be conducted by BMT including aid to schools, local medical facilities, community projects etc.

### Cultural Heritage and Archaeology

Information on cultural heritage and archaeology has been obtained from secondary sources, informal meetings and public exhibitions, and field observations. A review of the Project site has identified no archaeological or cultural heritage receptors that are likely to be impacted by the project.

### Landscape and Visual

The topography of the Project area is relatively flat with a slight slope towards the port basin. A series of roadways have been constructed on-site which are elevated above the 'natural' level of the Project area. No significant receptors have been identified on or close to the Project area that could see the site.

## Summary of Impacts and Mitigation Measures

### Land Quality

There is the potential for the contamination of soils and groundwater importation of contaminated dredgings and due to accidental spillage of fuels or chemicals to occur during construction and operation. Residual effects with the proposed mitigation measures are negligible.

#### Mitigation Measures

- Sediment Management Plan
- Construction Environmental Management Plan

- Environmental Management System

### Surface Water Resources and Quality

No significant impacts on water resources are expected from construction activities if best practice is followed.

### Groundwater

There is the potential for groundwater contamination due to leaks and spills during construction and operation. Residual effects with the proposed mitigation measures are negligible.

#### Mitigation Measures

- Construction Environmental Management Plan
- Hazardous Materials Management Plan
- Emergency Response Plan
- Environmental Management System

### Biodiversity

Biodiversity has been scoped out of the ESIA as it was considered that there were no biodiversity receptors that were likely to experience significance adverse effects resulting from the construction.

### Transport

It is expected that there will be an increase in HGVs transporting construction equipment and materials as well as people to/from the BMT permanent camp and the construction site, and operational loads. These have the potential to cause severance, driver delay, and an increase in accidents and reduction in safety to drivers using the road network within the Project AOI. Residual effects with the proposed mitigation measures are minor adverse.

#### Mitigation Measures

- Shuttle Bus Service
- Traffic and Transport Management Plan
- Reduction in Traffic Movements
- Driver Training
- Health and Safety Systems

- Vehicle Maintenance
- Signposting
- Consultation

### Air Quality

Local communities could potentially be impacted from dust raised during construction activities and vehicle emissions from construction and operational activities. However, the impacts would be temporary in nature and are not anticipated to be significant. Residual effects with the proposed mitigation measures are negligible to minor adverse.

#### Mitigation Measures

- Preparation and implementation of a Dust Management Plan
- Use of Best Practice measures
- Route selection to avoid areas of large settlement.

### Noise and Vibration

Noise levels are expected to temporarily increase due to traffic movement and construction activities, potentially impacting residential areas and other noise-sensitive receptors, but no significant impacts are expected for operational activities. The new vehicle movements at the new site will be compensated for by a reduction in vehicle movements at the old site. Residual effects with the proposed mitigation measures are negligible to minor adverse.

#### Mitigation Measures

- Use of Best Practice measures incorporated into a CEMP
- Use of low noise equipment and acoustic screens where appropriate
- Traffic Management Plan

### Waste

Waste impacts will arise during construction due to the excavation works required to build the structures. Construction waste will also be generated during the subsequent activities and operation and is likely to include non-hazardous waste, such as construction debris, packaging waste, waste wood and metals in addition to small amounts of hazardous waste (e.g. paint cans, fuels). Overall, if careful planning and management measures are used it will aid the prevention, reuse and recycling

the materials where possible and will minimise the overall amount of material disposed of in a suitable landfill. Residual effects with the proposed mitigation measures range from minor adverse to negligible.

**Mitigation Measures**

- Apply Best Practice measures
- Develop and implement Waste Management Plan
- Development and implement Soil Management Plan
- Development and implement Dredged Material Management Plan
- Development and implement Hazardous Material Management Plan
- Environmental Management System

**Sediment**

The construction and operational phases have the potential to impact upon sediment quality if oils leak into the water and basin. Residual effects with the proposed mitigation measures are negligible.

**Mitigation Measures**

- Silt Management Plan
- Materials Storage Plan
- Waste Management Plan
- Spill Prevention and Response Plan
- Environmental Management System

**Social Impact**

It is anticipated that overall there will be positive impacts on local and wider employment opportunities. The arrival of the construction teams will also increase the demand for goods and services resulting in economic growth. An increased operational workforce will also provide economic input and job creation. Residual impact after implementation of the proposed mitigation measures for the negative aspects of the project are moderate beneficial.

Adverse impacts on the social characteristics of the area are anticipated to include:

- Labour and human rights impacts to workers;
- Impacts on community health, safety and security;

- Pressure on local infrastructure and services, such as existing water, wastewater and power supplies as well as health infrastructure;
- Population influx; and
- A heightened risk of terrorism, kidnapping, piracy and banditry and increased social tensions and ethnic conflict due to its employees representing a political, economic and cultural target may occur. Project infrastructure itself is also a potential target.

Residual effects with the proposed mitigation measures are minor to moderate adverse.

#### Mitigation Measures

- Preparation and implementation of the ESMP, to include key personnel roles and responsibilities, training, health and safety, identification of religious and cultural sites
- Preparation and implementation of a Local Resourcing Plan, Labour Management Plan, and recruitment and human resources policies
- Maintenance of a Stakeholder Engagement Plan and community grievance mechanism
- Appointment of a Community Liaison Officer
- Compliance with all national laws related to labour rights and working conditions.
- Carry out toolbox talks to cover labour law issues and the labour grievance mechanism
- Implement a skill development programme for the local populations and keep a register of local people for employment opportunities
- Develop and implement a community health and safety education campaign with programmes in schools and a community liaison programme
- Provide transport for employees from permanent accommodation camp to the construction site
- Provide workers with appropriate medical care
- Provide international personnel with cultural sensitivity training
- Undertake of a Security Threat Assessment and implement a Security Management Plan, to include checks on security companies and the training of security personnel. Manage and implement security arrangements throughout construction
- Prohibit the holding and controlling of passports
- Inform workers are of their rights
- Uphold safe working conditions
- Implement standards for the procurement of Sub-contractors and there is a formal induction of Sub-Contractors on responsibilities with regards to worker rights

## Cultural Heritage and Archaeology

Cultural Heritage and Archaeology were scoped out of the ESIA as it was considered that there were no cultural heritage and archaeological receptors that were likely to experience impacts.

## Landscape and Visual

Landscape and visual impacts were scoped out of the ESIA as it was considered that there were no landscape or visual receptors that were likely to experience significance adverse effects.

## Conflict Sensitivity

A conflict sensitivity and security assessment was undertaken to provide an understanding of the security context of the Project. Key economic, political, and social issues were considered. The assessment concluded that:

- The conflict between Islamic State and government-aligned forces is unlikely to affect the Project;
- There is an incidental threat to Project workers due to general potential threats in areas such as public areas, markets or commercial interests;
- The threat from organised crime is low and is unlikely to affect foreign organisations or personnel engaged in legitimate business;
- The threat from tribal unrest or communal violence is also low and is unlikely to pose a significant or direct threat to Project personnel. Religious and ethnic dynamics have not prompted significant unrest or violence that would the Project or affect its personnel; and
- Project could also act as a driver for labour or local community unrest if expectations for employment and other issues are not managed appropriately.

### Mitigation Measures

- The effect of the Project on the local communities should be monitored through the Community Grievance Mechanism.
- Undertaking a security threat assessment immediately prior to the construction works and update as necessary to reflect changes in the security situation.
- All Project sites and equipment/construction material storage areas should be secured from the general public and guarded.
- Due diligence of local suppliers and Sub-contractors should take place to ensure that they are not
- connected to criminal groups.

- Stakeholder engagement with government and local communities to manage expectations of the Project.
- Preparation and implementation of a Labour Resource Plan.
- Ensure that the ESMP, including all sub-plans such as the Waste Management Plan, is implemented.

## Climate Risk and Vulnerability

A Climate Risk and Vulnerability Assessment was undertaken as part of the ESIA to assess and demonstrate the consideration of climate change adaptation throughout the design of the Project.

The implementation, of an Emergency Preparedness and Response Plan will serve to reduce risks to assets and people from change events like flooding. Initiatives in support of wider sustainability that improve the Project's climate resilience have been considered, such as the use of building structures to promote shade and the promotion of water retention measures and energy efficient equipment.

Given the level of uncertainty in future climate change projections, it is important to ensure that resilience/adaptation measures are monitored and, where necessary, structures and measures are retrofitted to reduce vulnerability during asset management/maintenance activities.

## Environmental and Social Management Plan

The mitigation, management and monitoring measures that have been proposed in the ESIA to reduce potential negative impacts and enhance potential benefits have been set out in an ESMP, together with good construction practice measures. The ESMP also sets out the organisational structure, roles and responsibilities for its implementation.

Within these EMPs and SMPs there are several sub-plans that relevant to each phase of works:

- |                                         |                                                 |
|-----------------------------------------|-------------------------------------------------|
| ▪ Noise and Vibration Management Plan   | ▪ Community Grievance Mechanism                 |
| ▪ Silt Management Plan                  | ▪ Labour and Working Conditions Management Plan |
| ▪ Ground Contamination Management Plan  | ▪ Labour Management Plan                        |
| ▪ Waste Management Plan                 | ▪ Labour Grievance Mechanism                    |
| ▪ Hazardous Waste Management Plan       | ▪ Occupational Health and Safety Plan           |
| ▪ Soil Management Plan                  | ▪ Construction Worker's Accommodation Plan      |
| ▪ Materials Storage Plan                | ▪ Cultural Heritage Management Plan             |
| ▪ Traffic and Transport Management Plan | ▪ Chance Finds Procedure                        |

- Water Management Plan
- Aggregates Management Plan
- Spill Prevention and Response Plan Emergency Preparedness and Response Plan
- Worker's Accommodation Plan
- Community Health and Safety Plan
- Dust Management Plan

These plans will be developed further by the Construction Contractor and BMT, as necessary. A commitments register has also been compiled as part of the ESMP that provides a list of the new commitments (mitigation measures) that have been identified as a result of assessment of environmental and social impacts of the Project design.

## Cumulative and Transboundary Impacts

Cumulative environmental and social impacts may occur as a result of multiple projects, actions, or activities located in the same geographic region or affecting the same baseline conditions (e.g. people). A Cumulative Impact Assessment was undertaken as part of the ESIA Report to identify and assess the potential cumulative environmental and social impacts that may result from the Project acting together with other reasonably foreseeable future projects in the AOI.

The potential for transboundary effects, such as use or pollution of international waterways, was also considered. However, no transboundary impacts were found to occur as a result of the Project.

Developments underway or proposed that were considered in the cumulative impact assessment are:

- **Basra Gateway Terminal Expansion.** In October 2017, ICTSI announced that two new berths are to be developed at Basra Gateway Terminal to double its container handling capacity to 1.2 million TEU; and
- **Road Upgrades** – The road infrastructure in and around Umm Qasr is being upgraded including the junction off Highway 28 to the Project area including separate lanes for HGVs which will divert them to the newly installed weighbridges. This will separate the HGVs from normal traffic.

These developments are likely to have positive cumulative effects on employment as well as promoting economic growth. Unfortunately, the potential exists for adverse cumulative impacts due to the lack of appropriate waste management facilities during the construction phase. In addition, there may be adverse cumulative impacts from operational traffic, however, this may be mitigated by the road upgrading programme.

## Conclusions

Overall the conclusion of the ESIA is that the impacts of the Project are manageable, and construction and operation of the Project will not result in irreversible, unacceptable risks to people or the environment.

The main benefits of the Project include:

- Economic benefits to the local and regional (and potentially national) economies; and
- Employment and skills training in construction and operation.

For adverse effects, the ESIA has identified mitigation and management measures that have been integrated as part of the Project design by BMT and/or include best practice measures and additional recommended measures by the ESIA Team with the intent of further avoiding or minimising adverse effects and complying with international standards and guidelines such as the International Finance Corporation. Where possible, measures have also been identified to maximise the benefit of the Project.

An ESMP has been developed and will be further refined and implemented during the construction and operation phases.

Overall, the environmental and social impact of the project is considered to be **minor to moderately positive**.