Chapter 9 – Socio-economic Conditions

Contents

9 Socio Economic Conditions

9.1 Introduction

It is normal practice in an ESIA to consider the impact on social (or socio-economic) conditions of a project where the project has the potential to influence these conditions either positively or negatively. This is particularly important where the project has a direct interaction with occupied areas and residential or business communities.

In the context of the Terminal Project, the land itself upon which the berth and associated infrastructure will be developed, is unoccupied and unused and in that respect there is no community to be directly affected by the development proposals in terms of their physical extent. From a wider perspective though there are a number of stakeholders and interested parties that could be affected by the development proposals. These include:

- Local people that access the area for fishing;
- General Company for Ports of Iraq (GCPI);
- Road Users;
- Commercial Shipping operators; and
- Local Suppliers and Contractors

That is notwithstanding the wider national issue of the facility providing an import/export hub for petroleum products and an associated contribution to the hydrocarbon economy of Iraq.

The Scoping Report that was sent out at the onset of this ESIA project to numerous stakeholders, received only a very limited response with no substantial opinions or additional information coming forward.

9.2 Methodology

In order to assess both the baseline conditions and potential impacts of the project proposals a number of consultations and surveys were undertaken as follows:

- Reconnaissance of project area and surroundings to identify potential residents and land users;
- Scoping report consultation with stakeholders;

- Interviews with local fishermen;
- Land traffic impact assessment;
- Marine traffic impact assessment;
- Interviews with "local" residents; and
- Review of published data from the area.

The information obtained from these studies and research was then used to identify:

- Communities that could be affected by or interact with the development;
- Current socio-economic conditions of those communities;
- Qualitative assessment of impacts of the proposed development on these communities; and
- Identification of mitigation and control measures where significant impacts are identified.

These issues are discussed in more detail below.

9.3 Socio-Economic Conditions

The project area is unoccupied and effectively unused. The land is effectively owned by the Ministry of Finance (MoF) (*i.e.* state owned) and under the control of GCPI. The nearest residential premises are over 5km from the project site and the land in between the project site and nearest residential properties is similarly unused and unoccupied. Consequently, there are no residential communities likely to directly interact with the project activities and site development.

The main settlement in the area is the town of Zubair or Az Zubayr as it is often referred to on maps. The population here and in the surrounding regions is made up of a number of different tribes. These include:

- Abaddah Tribe;
- Al Busalh Tribe;
- Banyscain Tribe;

- Al Sadoon Tribe;
- Shrifat Tribe;
- Sraya Tribe; and
- Tamim Tribe.

There is a lot of intermarriage between the tribes and between Sunni and Shia Muslims in this area, however, the predominant religion in the region is Shia Islam.

The other main town some way south of As Zubayr is Umm Qasr. This is similarly a mixed Sunni/Shia settlement but with Shia predominate in the area generally.

The land in between these towns is sparsely populated with some small farms and sheep rearing taking place, however, no substantive agriculture or industry (other than the fertiliser plant close to Khor Al-Zubair Port (KZP)) operates in this area.

There is no potable supply network in the area with locals tending to obtain their water from shallow wells (*circa* 20m deep). One such well, closest to the project site, is illustrated in *Photograph 9.1*:

Photograph 9.1: *Local groundwater abstraction (well and pump) 5km from project site*

There is no productive activity on the site itself, however, it does neighbour the Freezone and KZP. These are described in the desk study[1] and a discussion of such is not repeated here.

[1] WTPS Iraq Oil Terminal Desk Study, Earth & Marine Environmental Consultants, August 2014, REF: 014-1287 REV00

The other key consideration in terms of economic activity is that presently the site provides no employment opportunities and is not a purchaser of goods and services so there is no net contribution to the local economy or employment status.

The main activity that takes place in the vicinity of the project site and which could potentially be affected by it is artisanal fishing.

9.4 Fishing Activity

During the ESIA survey works fishermen were regularly observed working from the shore on the project site and the in the river from small fishing boats (see photographs below).

Photograph 9.2: *Fishermen operating along the Khor Al-Zubair western bank and river*

As part of the stakeholder engagement and socio-economic field works. EAME identified the fishermen as a key social group to focus on as being the most likely to be affected by the development proposals. Consequently, EAME engaged in the following stakeholder engagement activities:

- Interview with Basra Fishing Union Leader; and
- Interviews with boat owners and fishermen at the fishing port, on site and at the fish sellers stalls.

The fishing "Port" is an officially registered site for boats and fishermen (built in an ad-hoc fashion by locals). The boats observed on the Khor Al-Zubair operate from this port (see *Photograph 9.3*):

Photograph 9.3: *KAZ Fishing Port near Umm Qasr*

The port (which is nothing more than a concrete jetty/ramp and beach area) is approved by Basra Municipality and The Ministry of Finance (land owner) for the local fishermen to use.

The fishermen are allowed to use small fishing vessels inside the Khor Al-Zubair channel, however, large vessels (wooden and iron Dhows) can only be used on the open sea beyond Khor Abdullah.

Photograph 9.4: *Dhows (left – not permitted in KAZ) and small fishing craft (Right - Permitted on KAZ)*

All fishermen have official letters issued from central Government which entitle them to fish inside any Iraqi territorial waters (except military exclusion zones) and the river police and GCPI cannot prevent the fishermen working the river.

Small catches are sold locally, either on the water to Kuwaiti fishermen (who cannot enter Iraqi waters), or at small roadside stalls in Umm Qasr and Zubair. If they land a large catch they call a fishing agent in Basra and sell them in the markets in Basra via an agent.

The proposed project site was not a concern to the fishermen as they say that area is seldom used and they can work outside of that area from their small boats or from land further

south. They are more concerned about planned development works in the small ad-hoc port they use for accessing their vessels and the waterway. Concerns have been raised by the local fishermen about plans for a new berth there which they fear will prevent them accessing this area in the future. They have said that they will insist on compensation or will demonstrate and protest if the proposed development affects their access. This site is close to Umm Qasr north and is well outside the project area.

The other main activities in the area which could interact with the project activities are land traffic and marine traffic. These are described in more detail in *Sections 9.5* and *9.6*.

9.5 Land Traffic and Transport

9.5.1 Introduction

Given the proposed truck access and road tanker loading/off-loading depot and the known congestion and long lorry queues that already occur on the main access road to KZP, it was felt prudent that a baseline traffic assessment was undertaken. The land traffic assessment encompassed the following scope of work:

- Review of base traffic data (where available);
- Collection of sample traffic data (via manual counting) at key intersections that would be used by traffic accessing the site;
- Assessment of construction related impacts (if necessary);
- Identification of traffic related mitigation measures (if necessary); and
- Identification of residual effects.

The results of the survey are discussed below.

9.5.2 Information from Desktop Study

The road network in Iraq includes motorways, highways, main or national roads, secondary or regional roads. Iraq generally has a good network of roads, notably within and running between main towns and cities, however the condition of many of these roads is poor, mainly as a result of over thirty years of war and a lack of investment in road infrastructure. A report by the World Health Organisation[2] states that in 2006 there were 2,242,269 registered vehicles in Iraq, comprising 35% cars, 53% minibuses, vans, etc. (seating <20), 7%

[2] Global Status Report on Road Safety, Time for Action, World Health Organisation, 2009

trucks and 5% buses. This total number is likely to have increased substantially since that time

The site will be connected to Highway 26 (via the KZP/Freezone access road), which runs from Umm Qasr before joining Highway 8 at to the south of the town of Zubair. Highway 26 is an asphalted dual carriageway with no central reservation. The highway has been undergoing subject to improvements since 2012, and, sections of the dual carriageway are closed. As such, these closures and the lack of central reservations mean that in many places, traffic from both ways use one side of the dual carriageway. The access road to KZP is frequently clogged with tankers waiting to load up and can lead to congestion on Highway 26. Furthermore, this is exacerbated by heavy traffic congestion (often with double parking on both carriageways) by HGVs at Umm Qasr or travelling to and from the Safwan Kuwaiti border crossing.

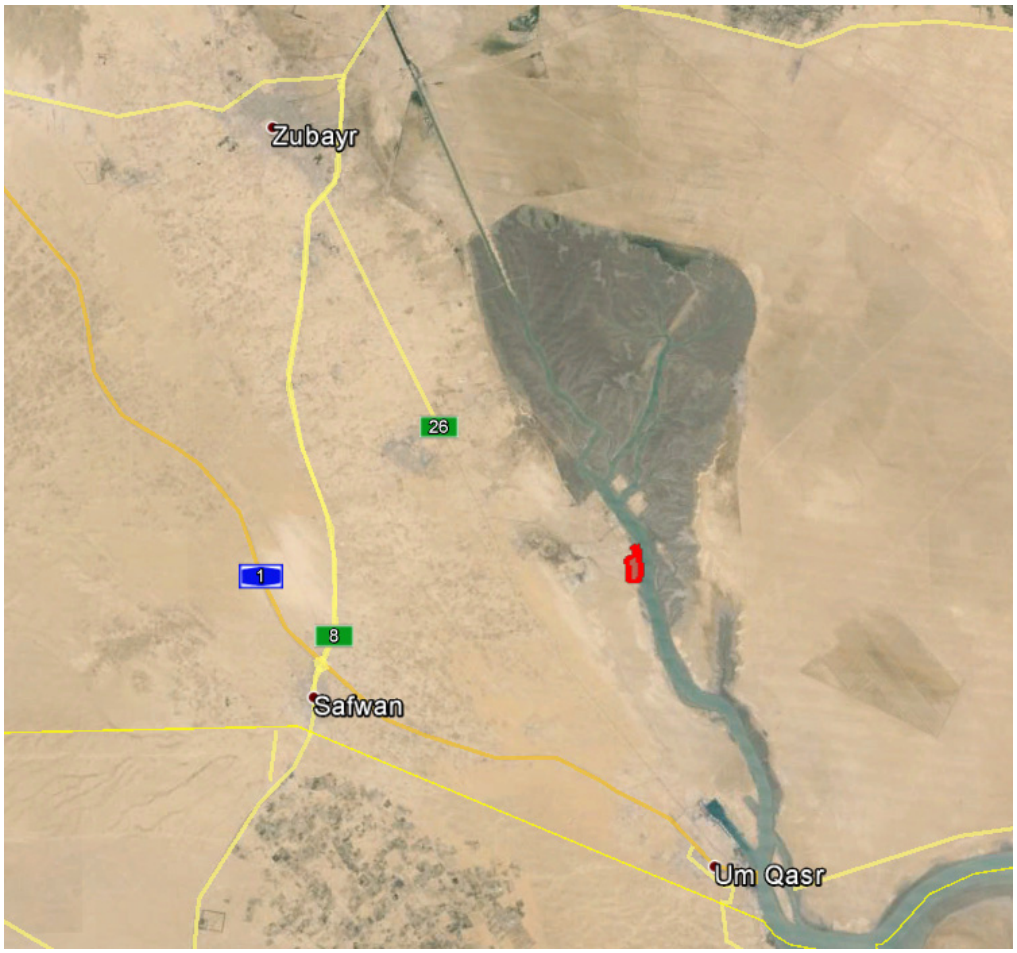

Figure 9.1: *Major road network within and around the Project Area*

Google Earth Imaging with the permission of Google – Licensed to Earth and Marine Environmental Consultants Limited

9.5.3 Field Survey Methodology

The traffic data was obtained by field surveys using local EAME staff who undertook manual counts over a three 8-hour periods over three days. The manual count of vehicles involved observers counting the number of vehicles passing a given point on a road and classifying these vehicles according to the vehicle type. In addition, any pedestrians on foot were also recorded. Traffic data was recorded onto proforma tally sheets.

The survey point is a 3-way junction. Consequently, there are six potential traffic flows that could occur at the junction at any given time (see *Figure 9.2*).

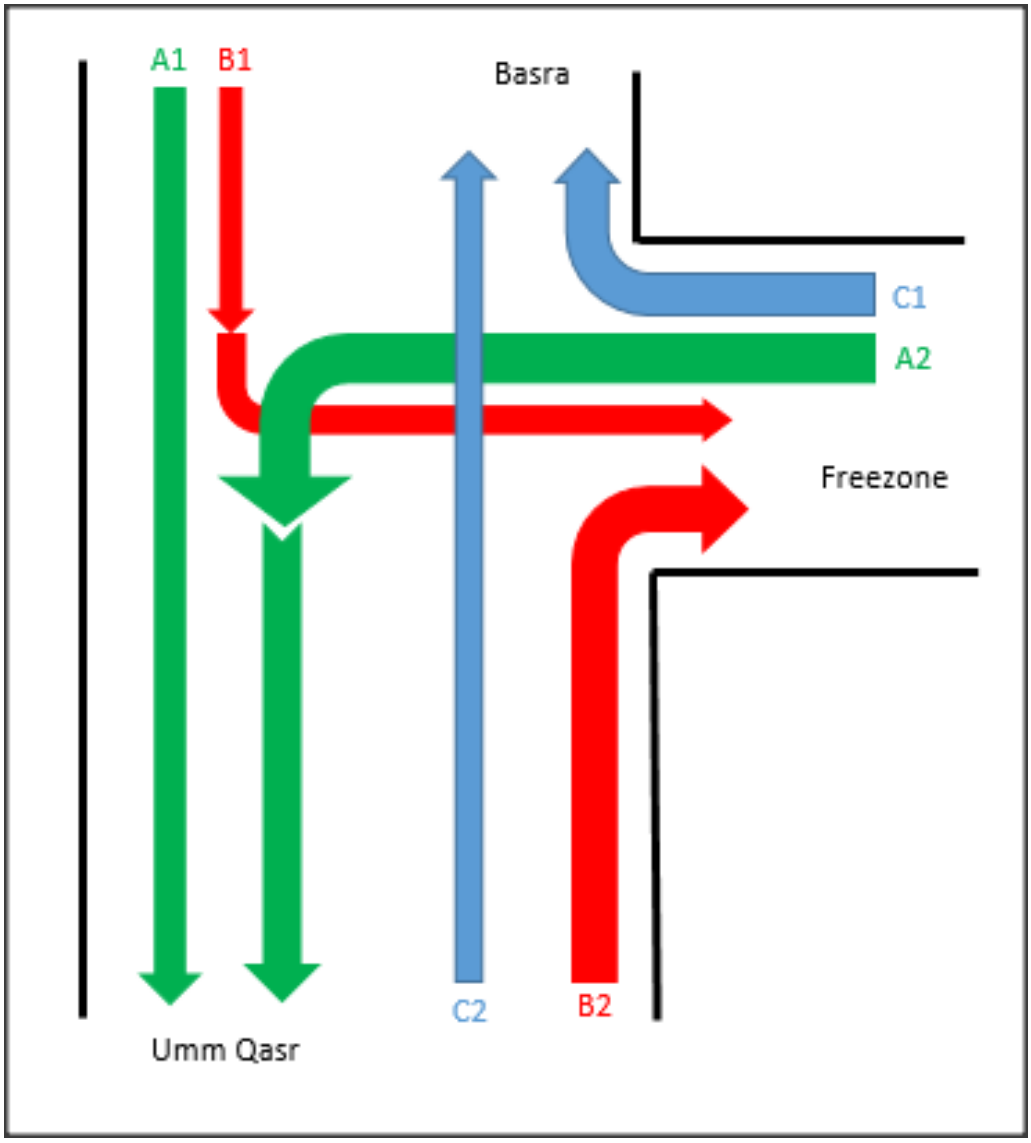

Figure 9.2: *Traffic flow directions*

The traffic flow directions are summarised in *Table 9.1:*

Table 9.1: Traffic Flow Directions	
Traffic Flow Reference	**Traffic Flow Direction**
A1	Traffic travelling from the direction of Basrah/Zubair to Umm Qasr
A2	Traffic travelling from Khor Al-Zubair Port Freezone towards Umm Qasr
B1	Traffic travelling from the direction of Basrah/Zubair towards Freezone
B2	Traffic travelling from Umm Qasr towards Freezone
C1	Traffic travelling from Freezone in the direction of Basrah/Zubair
C2	Traffic travelling from Umm Qasr in the direction of Basrah/Zubair

9.5.4 Field Survey Location

The location of the survey was at a junction of the access road from the Khor Al-Zubair Freezone and Highway 26. The co-ordinates of the location are detailed in *Table 9.2* and the approximate location of the traffic survey point in *Figure 9.3*.

Table 9.2: Survey Location	
Latitude, Longitude	**Easting, Northing**
30° 9'52.90"N, 47°49'45.47"E	772472E, 3340429N

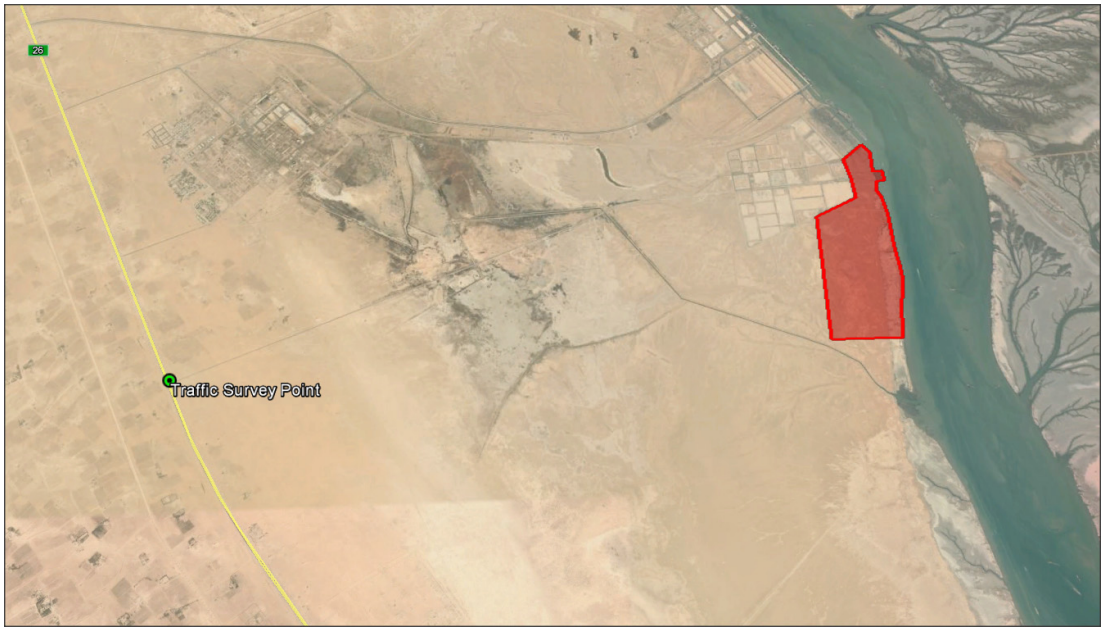

Figure 9.3: *Location of the traffic survey point*

Google Earth Imaging with the permission of Google – Licensed to Earth and Marine Environmental Consultants Limited

9.5.5 Field Survey Period

The survey was undertaken over a three day period, 27th – 29th August 2014.

9.5.6 Weather Conditions

During the traffic survey the weather conditions were considered to be favourable with relatively low wind speeds and good visibility.

9.5.7 Survey Results and Analysis

The results of the traffic surveys were recorded manually on the traffic survey tally sheets. The data from the traffic counts has been inputted to Microsoft Excel spreadsheets to allow for analysis of the information.

Table 9.3: Total Number of Vehicles per Route

Total Number	A1	A2	B1	B2	C1	C2
Vehicles	2,480	108	84	147	120	2,190
Car	1,534	26	40	25	35	1,266

Table 9.3: Total Number of Vehicles per Route						
Total Number	**A1**	**A2**	**B1**	**B2**	**C1**	**C2**
Bus	344	9	11	9	14	359
Truck	401	22	17	10	28	369
Petrol Tanker	201	51	16	104	43	196

Unsurprisingly, Routes A1 and C2, the main highway between Basrah/Zubair and Umm Qasr, were the two routes with the highest number of vehicles. Route B1, from Basrah/Zubair towards the Freezone, was observed to have the lowest number of vehicles (eighty four) during the survey period.

Overall, cars were the dominant vehicle type, accounting for 57% of all vehicles observed, however, for routes A2, B2 and C1, petrol tankers were recorded more than any other vehicle type. These are the vehicles accessing the present port facilities for fuel loading. At times several hundred tankers can be seen queuing on the access road to the port.

Route A1 was found to have the highest number of vehicles for a single one hour increment with 293 vehicles noted between 08:00 – 08:59. For C2, the same time period was also noted to have the highest number of vehicles. With regards to A1 and C2, the busiest routes, the data indicates that a peak in traffic activity between 07:00 – 09:00 and then again in the evening between 17:00 – 18:00.

Tankers are prohibited from travelling on highways outside of the hours of 4pm to 4am, so their activity in terms of road travel is concentrated through the evening and hours of darkness. Outside of these times the vehicles will be seen queueing.

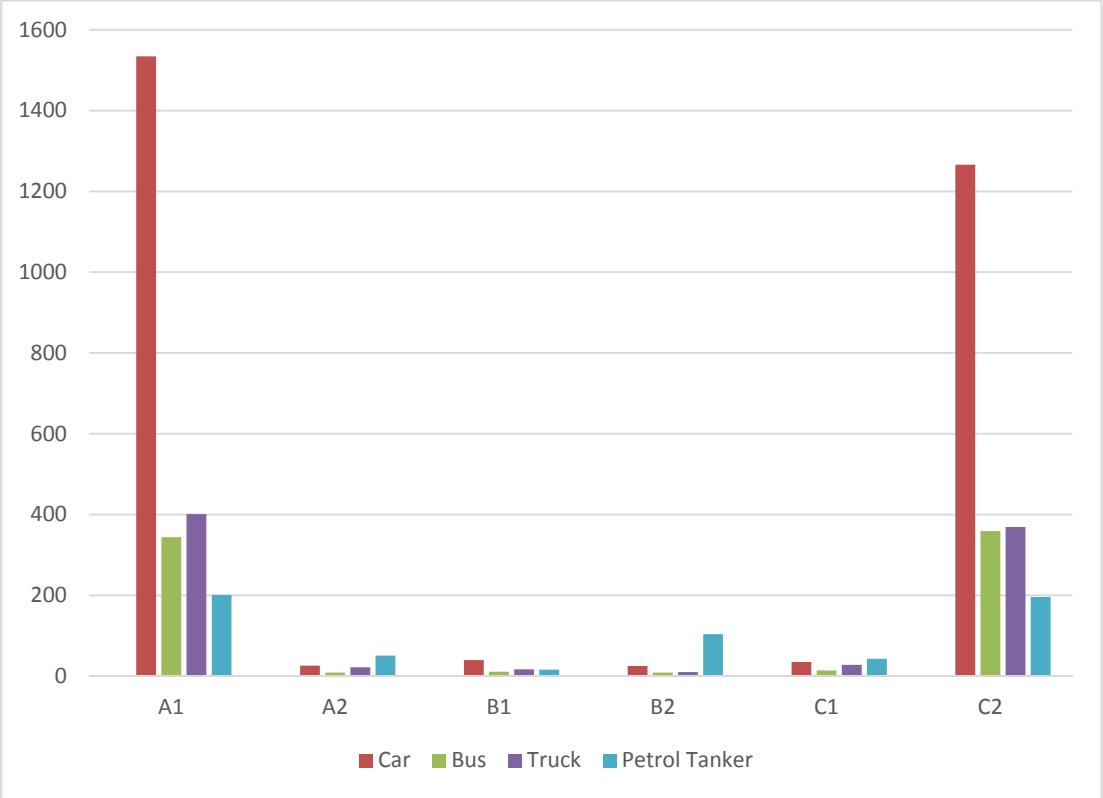

Figure 9.4: *Vehicle breakdown per route*

Figure 9.4 above clearly identifies the predominant route with total tanker numbers in excess of 200. The project is unlikely to lead to an increase in tanker numbers in the short to medium turn as the site is simply providing alternative facilities to those that already exist. In the longer term, however, as the facility develops and becomes both an import and export hub, tanker numbers may increase over those presently observed.

The future implementation of regenerated rail freight infrastructure may have a counter balancing effect and reduce HGV numbers, however, there are no definitive plans for this yet and the port has no rail related connections planned at present.

9.6 Marine Traffic

9.6.1 Introduction

Under a separate contract EAME has been monitoring marine traffic in the Terminal area for WTPS (as a precursor to this ESIA). This was undertaken to give an indication of the nature and volume of shipping traffic passing through or close to the planned terminal operations. This section provides a summary of the marine traffic information obtained to date.

9.6.2 Field Survey Methodology

The marine traffic survey was undertaken for a three month period between December 2013 and March 2014. This primarily involved the installation of AIS receivers at both Khor Al-Zubair and Umm Qasr Ports and liaison with shipping data obtained from shipping agents.

The data from the AIS receivers was plotted on UK Hydrographic Office Chartlet Number 1228 (Umm Qasr, Az Zubayr and Approaches, 2006).

9.6.3 AIS Data

Figure 9.5 overleaf shows the combined vessel tracks over the three month period. Each black line represents a vessel transit as recorded via the AIS system.

The plots appear to indicate that the vessels utilising the Khor Al-Zubair tend to use the middle and the eastern side of the channel rather than the western side. A total 57 vessels were picked up by AIS receivers under the survey period, however, it is likely that a number of these vessels docked more than once.

Photograph 9.5: *Tugs manoeuvring a tanker into a berth*

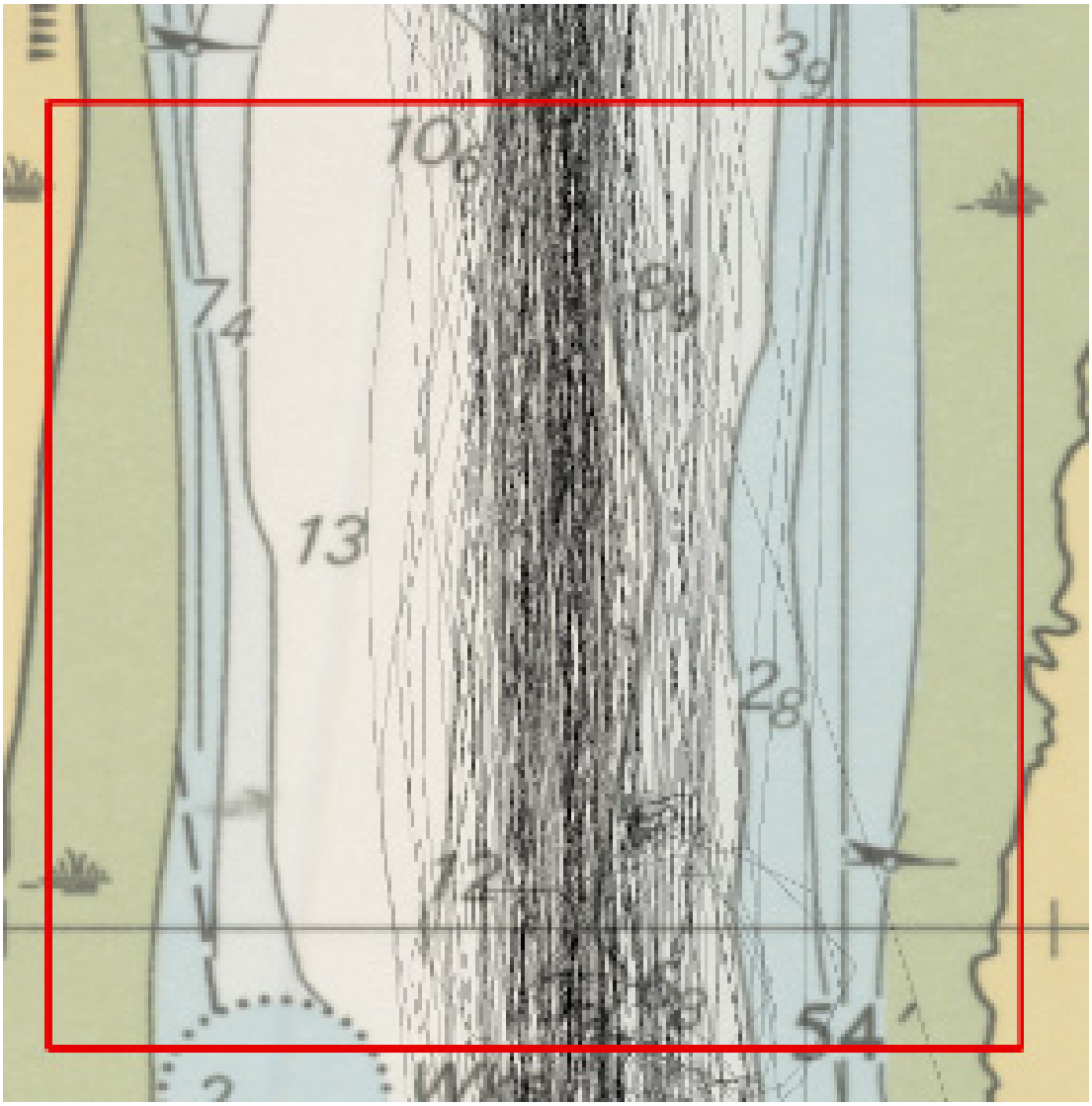

Figure 9.5: *Three month combined AIS tracks (red box denotes the approximate area of the around the proposed DWB)*

9.6.4 Shipping Agent Data

Over the survey period, the shipping agent data indicated that a total of 145 vessels docked at Berths 1 - 11, including 60 cargo vessels, 27 oil products tankers, 40 oil/chemical tankers, 13 crude oil tankers, 1 pontoon, 1 offshore deck cargo barge and 2 unknown. Out of a total of 145 vessels that docked at Berths 1 – 11, 92 individual vessels were noted, with 14 vessels docking three separate times during the monitoring period.

The data indicated that Berth 1 was utilised by the Pontoon Fatima-1, throughout the survey period, and that Berth 5 was described as a service berth. Berth 7 was the most utilised berth with 29 vessels berthing during the survey period, with the exception of Berth 1, Berth 2 was the least used with just eight vessels docking at this location.

Berths 9, 10 and 11 were utilised just for petroleum products, with all the vessels docking at Berth 9 had a cargo of gas oil. Berth 10 was noted to either be gasoline or '*loading fuel/IOTC Parcel*' as a cargo, while the vessels docking at Berth 11 was either noted to have a cargo of either kerosene or gas oil. The remaining berths were used for a mixture of commodities. The most frequent commodity over the survey period was gas oil with 36 vessels docking with such a cargo.

Noor-2 was located at Berth 7 for 60 days, the longest berthing period during the survey period. Berth 2 was found to have the highest mean berthing period (21 days) with Berth 9 the shortest mean (4 days, with the exception of Berth 1).

The mean vessel length during the survey period was 135.2m, with crude oil tankers the largest mean size (182.5m). The vessel with the largest length was the Ance (196m) which docked twice during the survey period, the smallest length vessel was the Tian Wang Xing, 20m in length. Berths 9 and 11 had the highest mean vessel length with 185.6m and 184.2m, respectively, Berth 6 was noted to have the lowest mean vessel length at 91.3m.

The mean vessel draught during the survey period was 8.56m, the vessel with the deepest draught was the High Jupiter with a draught of 13.16m. Corresponding to the mean vessel lengths, the highest mean draught was noted at Berths 9 (185.6m) and 11 (184.2m) and the lowest mean draught was observed at Berth 6 (6.2m).

During the monitoring period, the vessel with the largest cargo was the crude oil tanker Tess with 21,359 metric tonnes (mt) of gas oil. Berth 11 had the highest mean cargo quantity, 17,944mt, closely followed by Berth 9 (17516mt) while Berth 6 was noted to have the lowest mean cargo quantity (2,383mt). With regards to cargoes, the most frequent cargo over the survey period was gas oil with 36 vessels docking with such a cargo.

The marine traffic survey report should be consulted for fuller details.

9.7 Summary and Conclusions

The project site and surrounding area is unoccupied by communities or used for any cultural or social activities and as such there are no land based communities or populations that can be directly impacted by the development proposals from a land take perspective. In that respect the impacts of the proposed development are **negligible**.

The project site and activities will coincide with the local fishing community that presently uses the land area for deploying nets or which engages in drift netting in the main channel. These activities are peripatetic and the locations will vary. Given the low numbers of fishermen engaged in these activities, the large expanse of water available to them (all under similar conditions) and the fact that they can operate from numerous alternative locations, the impact of the proposals on this community is **low**.

The main road traffic intersection that will be affected by vehicles accessing the berth facility is already affected by large volumes of heavy goods vehicles (tankers) accessing the present facilities. These will be re-directed to the new facilities but the overall impact at the traffic intersection is unlikely to be significantly altered in the short to medium term. Over the longer term there is expected to be a general increase in commercial (HGV) traffic on the main road associated with the creation of new facilities and expansion of port facilities along the west bank of the Khor Al-Zubair over coming years. It is also expected over this time frame that the road infrastructure and traffic management procedures will be improved to allow them to better accommodate these traffic increases. There is also an expectation that the rail freight systems will be regenerated. Consequently, overall the impact on road traffic is expected to be **Neutral** (no significant change).

The berth will also enable the import and export of a range of petroleum products which will involve marine traffic being active in the project area. However, this is not necessarily substantially more traffic than would otherwise occur initially. It will however attend a new modern run facility designed to handle such materials effectively rather than the current KZP facilities which are older and more difficult to operate and manage. Over time, however, the new facility is likely to lead to an increase in marine traffic (assuming now similar facilities are developed). The overall impact on marine traffic is thus considered to be **Low to Moderate**. The level of marine traffic in the channel is, however, low and congestion and risk of marine collision is low at present.

The final consideration is employment. At present no people are employed on the site as there are no activities taking place there. The development works will, in addition to provide economic benefits from the procurement of goods and materials, employ construction workers, logistics personnel, consultants, engineers, surveyors and security staff associated with the construction programme. Furthermore, the completed development will require a range of staff for technical, maintenance, security, logistics, administration and management functions. The development will thus provide both short term and long-term employment and trainings and skills development opportunities and in that respect the impact is **Positive**.