

# **CHAPTER 6:**

## **PLAN OF STUDY FOR EIA**

## FINAL SCOPING REPORT

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## CHAPTER 6: PLAN OF STUDY FOR EIA

### 6.1 Identification of Issues

The Plan of Study for EIA (PSEIA) sets out the process to be followed in the EIA phase and is shaped by the findings of the Scoping process. The EIA phase consists of three parallel and overlapping processes:

- Central assessment process involving the authorities where inputs are integrated and presented in documents that are submitted for approval by authorities (Sections 6.2 and 6.4)
- Public participation process whereby findings of the EIA phase are communicated and discussed with I&APs and responses are documented (Section 6.3)
- Specialist studies that provide additional information required to address the issues raised in the Scoping phase (Sections 6.5 and 6.6).

### 6.2 Overview of approach to preparing the EIA Report and EMP

The results of the specialist studies and other relevant project information will be summarized and integrated into the Draft EIA Report. The Draft EIA Report will be released for a 40-day I&AP and authority review period, as outlined in Sections 6.3 and 6.4. All I&APs on the project database will be notified in writing of the release of the Draft EIA Report for review. It is proposed that during this review period a public meeting is held, as well as focus group meetings with key I&APs. The purpose of these meetings will be to provide an overview of the outcome and recommendations from the specialist studies, as well as provide opportunity for comment. Comments raised, through written correspondence (emails, comments, forms) and at meetings (public meeting and focus group meetings) will be captured in a Comments and Responses Trail for inclusion in the Final EIA Report. Comments raised will be responded to by the EIA team and/or the applicant. These responses will indicate how the issue has been dealt with in the EIA process. Should the comment received fall beyond the scope of this EIA, clear reasoning will be provided. All comments received will be attached as an appendix to the Final EIA Report.

The Draft EIA Report will include a draft Environmental Management Plan (EMP), which will be prepared in compliance with the relevant regulations. This EMP will be based broadly on the environmental management philosophy presented in the ISO 14001 standard, which embodies an approach of continual improvement. Actions in the EMP will

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be drawn primarily from the management actions in the specialist studies for the construction and operational phases of the project. If the project components are decommissioned or re-developed, this will need to be done in accordance with the relevant environmental standards and clean-up/remediation requirements applicable at the time.

## 6.3 Public Participation Process

The key steps in the public participation process for the EIA phase are described below. As mentioned in Chapter 4, the newspaper advertisements and letters to I&APs will also contain information about the AEL application for the proposed project. This approach will be confirmed with the DEDEAT through their review of the PSEIA. The participation process for the Scoping Process is described in Chapter 4 of this report.

### *Task 1: Review of Draft EIA Report and EMP*

The first stage in the process will entail the release of a Draft EIA Report for a 40-day public and authority review period. Relevant organs of state and I&APs will be informed of the review process in the following manner:

- Advertisements placed in one local and one regional newspaper,
- Letter 4 to all I&APs (including authorities), with notification of the 40-day public review period for the Draft EIA, and invitation to attend the public meeting (this letter will include the summary of the Draft EIA Report and a Comment Form);
- Public Meeting on the Draft EIA Report, where key findings of the EIA report will be communicated and I&APs will have the opportunity to provide comments and engage with the EIA team and project proponent;
- Focus Group Meeting(s) with I&APs, if requested;
- Meeting(s) with key authorities involved in decision-making for this EIA.

The Draft EIA Report and EMP will be made available and distributed through the following mechanisms to ensure access to information on the project and to communicate the outcome of specialist studies:

- Copies of the report will be placed at the main library in Port Elizabeth (Govan Mbeki Ave) and in the Motherwell library;
- Relevant organs of state and key I&APs will be provided with a hard copy or CD version of the report;
- Report will be placed on the project website: [www.publicprocess.co.za](http://www.publicprocess.co.za)

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## ***Task 2: Comments and Responses Trail***

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A key component of the EIA process is documenting and responding to the comments received from I&APs and the authorities. The following comments on the Draft EIA Report and EMP will be documented:

- Written and email comments (e.g. letters and completed comment forms);
- Comments made at public meetings;
- Comments made at focus group meetings;
- Telephonic communication with CSIR contact person;
- One on one meetings with key authorities and/or I&APs; and
- Comments from/issues raised at ELC meetings.

The comments received will be compiled into a Comments and Responses Trail for inclusion in the Final EIA Report. The Comments and Responses Trail will indicate the nature of the comment, when and who raised the comment. The comments received will be considered by the EIA team and appropriate responses provided by the relevant member of the team and/or specialist. The response provided will indicate how the comment received has been considered in the Final EIA Report, in the project design or EMP for the project.

## ***Task 3: Compilation of Final EIA Report for submission to Authorities***

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The Final EIA Report, including the Comments and Responses Trail and EMP, will be submitted to the authorities for decision making. Letter 5 will be sent to all I&APs on the project database notifying them of the submission of the final report. I&APs will be given a reasonable period to comment on the changes to the EIA Report. These comments will be sent directly to the competent authority.

The Final EIA Report will be distributed as follows:

- Copies of the report will be placed at the main library in Port Elizabeth (Govan Mbeki Ave) and in the Motherwell library;
- Relevant organs of state and key I&APs will be provided with a hard copy or CD version of the report;
- Report will be placed on the project website: [www.publicprocess.co.za](http://www.publicprocess.co.za)

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## ***Task 4: Environmental Authorisation and Appeal Period***

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All I&APs on the project database will be notified of the issuing of the Environmental Authorisation and the Appeal period. The following process will be followed for the distribution of Environmental Authorisation and notification of appeal period:

- Copies of the Environmental Authorisation will be placed at the main library in Port Elizabeth (Govan Mbeki Ave) and in the Motherwell library.
- Letter 6 will be sent to all I&APs (including organs of state), with a copy of the Environmental Authorisation and information on the Appeal Period.
- Environmental Authorisation to be placed on the project website: [www.publicprocess.co.za](http://www.publicprocess.co.za)

All I&APs on the project database will be notified of the outcome of the appeal period, this notification will be included in Letter 7 to I&APs.

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## **6.4 Authority Consultation during the EIA phase**

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Authority consultation is integrated into the public consultation process, with additional one-on-one meetings held with the lead authorities where necessary. It is proposed that the competent authority (DEDEAT), as well as other lead authorities be consulted at various stages during the EIA process. This consultation will primarily take place through the quarterly meetings of the Coega Environmental Liaison Committee (ELC), which includes the lead authorities mandated to issue environmental authorisations and licences/permits. The authority consultation process for the Scoping Process is outlined in Chapter 4 of this report. Table 6.1 (Page 6-7) indicates the proposed consultation schedule for the EIA phase.

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**Table 6.1: Authority consultation schedule for the EIA phase**

Stage in EIA Phase	Form of Consultation (including provisional dates)
SCOPING PHASE	CSIR presented the Draft Scoping Report to authorities at the Coega ELC meeting in February 2012 for comment.
SPECIALIST STUDIES PHASE	CSIR to present draft findings from the specialist studies to the Coega ELC meeting in August 2012 for comment.
REVIEW OF DRAFT EIA REPORT AND DRAFT EMP	<p>Review of draft reports: Authorities, together with other stakeholders, will have the opportunity to review the Draft EIA and EMP reports during the 40-day review period and to attend the public meeting. If requested, CSIR can present the Draft EIA and EMP reports to the authorities at a dedicated authority meeting during this review period.</p> <p>Site visit: Offer a site visit for authorities, as and when required. We suggest that, if required, this take place at the same time of the public meeting for the Draft EIA and EMP reports.</p>
FINAL EIA REPORT PHASE	Meetings with dedicated departments, if requested by DEDEAT, with jurisdiction over particular aspects of the project (e.g. Local Authority) and potentially including relevant specialists will be undertaken once the final EIA report has been submitted.

## **6.5 Approach to Specialist Studies and Impact Assessment**

This section outlines the assessment methodology and legal context for specialist studies.

### **6.5.1 Generic Terms of Reference for the assessment of impacts**

The identification of potential impacts should include impacts that may occur during the construction and operational phases of the activity. The assessment of impacts is to include direct, indirect as well as cumulative impacts.

In order to identify potential impacts (both positive and negative) it is important that the nature of the proposed activity is well understood so that the impacts associated with the activity can be understood. The process of identification and assessment of impacts will include:

- Determine the current environmental conditions in sufficient detail so that there is a baseline against which impacts can be identified and measured.
- Determine future changes to the environment that will occur if the activity does not proceed.
- An understanding of the activity in sufficient detail to understand its consequences; and



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- The identification of significant impacts which are likely to occur if the activity is undertaken.

As per DEA *Guideline 5: Assessment of Alternatives and Impacts* the following methodology is to be applied to the prediction and assessment of impacts. Potential impacts should be rated in terms of the direct, indirect and cumulative:

- **Direct impacts** are impacts that are caused directly by the activity and generally occur at the same time and at the place of the activity. These impacts are usually associated with the construction, operation or maintenance of an activity and are generally obvious and quantifiable.
- **Indirect impacts** of an activity are indirect or induced changes that may occur as a result of the activity. These types of impacts include all the potential impacts that do not manifest immediately when the activity is undertaken or which occur at a different place as a result of the activity.
- **Cumulative impacts** are impacts that result from the incremental impact of the proposed activity on a common resource when added to the impacts of other past, present or reasonably foreseeable future activities. Cumulative impacts can occur from the collective impacts of individual minor actions over a period of time and can include both direct and indirect impacts.
- **Spatial extent** – The size of the area that will be affected by the impact:
  - Site specific
  - Local (<2 km from site)
  - Regional (within 30 km of site)
  - National.
- **Intensity** – The anticipated severity of the impact:
  - High (severe alteration of natural systems, patterns or processes)
  - Medium (notable alteration of natural systems, patterns or processes)
  - Low (negligible alteration of natural systems, patterns or processes).
- **Duration** – The timeframe during which the impact will be experienced:
  - Temporary (less than 1 year)
  - Short term (1 to 6 years)
  - Medium term (6 to 15 years)
  - Long term (the impact will only cease after the operational life of the activity)
  - Permanent (mitigation will not occur in such a way or in such a time span that the impact can be considered transient).

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**Using the criteria above, the impacts will further be assessed in terms of the following:**

**Probability** – The probability of the impact occurring:

- Improbable (little or no chance of occurring)
- Probable (<50% chance of occurring)
- Highly probable (50 – 90% chance of occurring)
- Definite (>90% chance of occurring).

**Significance** – Will the impact cause a notable alteration of the environment?

- Low to very low (the impact may result in minor alterations of the environment and can be easily avoided by implementing appropriate mitigation measures, and will not have an influence on decision-making)
- Medium (the impact will result in moderate alteration of the environment and can be reduced or avoided by implementing the appropriate mitigation measures, and will only have an influence on the decision-making if not mitigated)
- High (the impacts will result in major alteration to the environment even with the implementation on the appropriate mitigation measures and will have an influence on decision-making).

**Status** - Whether the impact on the overall environment (social, biophysical and economic) will be:

- Positive - environment overall will benefit from the impact
- Negative - environment overall will be adversely affected by the impact
- Neutral - environment overall will not be affected.

**Confidence** – The degree of confidence in predictions based on available information and specialist knowledge:

- Low
- Medium
- High.

Impacts will then be collated into an EMP and these will include the following:

- Management actions and monitoring of the impacts.
- Identifying negative impacts and prescribing mitigation measures to avoid or reduce negative impacts.
- Positive impacts will be identified and enhanced where possible.

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Table 6.2 below is to be used by specialists for the rating of impacts.

Table 6.2: Table for rating of impacts							
Direct Impacts							
Mitigation	Spatial Extent	Intensity	Duration	Probability	Significance & Status		Confidence
					Without Mitigation	With Mitigation	
<b>Avifauna: Impact of the pipeline on the marine avifauna</b>							
Include best practice in pipeline routing as well as deterring mechanisms for birds.	Site	Medium	Permanent	High	Medium	Low	High

Other aspects to be taken into consideration in the assessment of impact significance are:

- Impacts will be evaluated for the construction and operation phases of the development. The assessment of impacts for the decommissioning phase will be brief, as there is limited understanding at this stage of what this might entail. The relevant rehabilitation guidelines and legal requirements applicable at the time will need to be applied.
- The impact evaluation will, where possible, take into consideration the cumulative effects associated with this and other facilities/projects which are either developed or in the process of being developed in the local area.
- The impact assessment will attempt to quantify the magnitude of potential impacts (direct and cumulative effects) and outline the rationale used. Where appropriate, national standards are to be used as a measure of the level of impact.

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## 6.6 Specific Issues to be addressed in Specialist Studies

Based on an evaluation of issues to date, the Specialist Studies indicated in Table 6.3 below are proposed as part of the EIA phase:

**Table 6.3: Specialist Studies and Proposed Specialists**

Specialist Study	Proposed Specialist
Oil Spill Contingency Plan Review	Alison Dehrman – Peak Practice
Marine Ecology Assessment	Dr. Robin Carter – Lwandle Technologies
Terrestrial Ecology	Jamie Pote – Private
Risk Assessment	Michael Oberholzer – RisCom
Air Quality Assessment	Benton Pillay – Umoya-Nilu Consulting
Integrated Water Management Study	Philip De Souza – Emanti Management
Traffic Impact Assessment	Roy Bowman – SSI Engineers and Environmental Consultants
Heritage Impact Assessment: Archaeology	Dr. Johan Binneman – Eastern Cape Heritage Consultants
Heritage Impact Assessment: Palaeontology	Dr. John Almond – Natura Viva

The Terms of Reference (TOR) for the specialist studies will essentially consist of the generic assessment requirements and the specific issues identified for each study. These issues have been identified through the baseline studies, I&AP and authority consultation, as well as input from the proposed specialists based on their experience. As part of the review of the Draft and Final Scoping Reports, specialists are to propose any additional issues for inclusion in the specialist studies.

### 6.6.1 Oil Spill Contingency Plan Review

The specialist study will include the following:

- A review of the Oil Spill Contingency Plans for the Port of Ngqura, and supporting documents.
- A review and analysis of the alignment of the Port of Ngqura's Oil Spill Contingency Plans with the South African National Spill Contingency Plan for the Prevention and Combating of Pollution from Ships and Offshore Installations and the Local Coastal Oil Spill Contingency Plan for Dias Zone.
- A determination of the increased risk posed by the proposed Bulk Liquid Storage and Handling Facility in terms of oil spills into the marine environment at the Port of Ngqura.

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- An assessment of the impact of accidents and spills in the Coega IDZ and in the Port of Ngqura for all phases of the development.
- An assessment of the maximum capacity of the Spill Contingency Plan, equipment and resources available to deal with the increased risk from the proposed Bulk Liquid Storage and Handling Facility.
- Recommendations for the improvement of the contingency arrangements to take account of the proposed development, such as:
  - Roles and responsibilities of key personnel involved in a response action;
  - Geographical boundaries and areas of jurisdiction;
  - Interface between the plans; and
  - Incident organisation and control arrangements etc.
- Conduct field work in the Port of Ngqura and its facilities assess the current state of the physical environment and to identify possible areas of concern and make recommendations to rectify these concerns.
- Suggestions on the practical changes to ensure alignment with the international best practice and where necessary, to address the possible risks identified.

## **6.6.2 Marine Ecology Assessment**

The specialist study will include the following:

- A review of the proposed project description to clearly define the environmental risks (in terms of storm water flows and other potential discharges) for the marine ecology in the receiving water bodies.
- Compile a description of the marine ecology of the affected water bodies.
- A desktop review of available information that can support and inform the specialist study i.e. potential impacts on avifauna.
- Identification and classification of the issues and potential impacts related to marine ecology for the construction and operational phases of the proposed project, which are to be considered in combination with any additional relevant issues that may be raised through the public consultation process.
- Identification of management actions, monitoring requirements and mitigation measures to avoid or reduce negative impacts; and to enhance positive benefits of the project on the marine ecology.

## **6.6.3 Terrestrial Ecology**

The specialist study will include the following:

- Conduct field work to locate and describe the terrestrial vegetation within the study area, focusing mainly on the impact footprint(s) for the site(s).

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- Determination of the species present and the localities within each vegetation type.
- Determine whether the study area falls entirely or partially within the distribution range of species listed as Vulnerable, Endangered, Critically Endangered, Protected, IUCN Red Listed or Endemic.
- Establish and describe the current state of the vegetation on site supported by relevant photographs.
- Identify and describe the conservation value and conservation planning frameworks relevant to the proposed Bulk Liquid Storage and Handling Facility site for the represented vegetation units.
- Describe the areas in which indigenous vegetation has been transformed.
- Assess the disturbance or loss of saltpan habitat as a result of the proposed project. Source and obtain relevant information and data relating to the loss of saltpan habitat (such as waterbird counts).
- Identify and determine the invasive alien species present, as well as their distribution within the study area and recommend appropriate management actions.
- Identify and record the position of unusually large tree specimens, where applicable, in the study area.
- Compile and produce a detailed vegetation sensitivity map of the site, including mapping of the disturbance and transformation on site.
- Identification and rating of the issues and potential impacts related to the terrestrial ecology for the construction and operational phases of the proposed project, which are to be considered in combination with any additional relevant issues that may be raised through the public consultation process.
- Outline mitigation measures and additional management guidelines.
- Provide recommendations for the Environmental Management Plan relating to the terrestrial ecology, including generic rehabilitation and revegetation guidelines.

## 6.6.4 Risk Assessment

The specialist study will include the following:

- Conduct a risk assessment for the proposed Bulk Liquid Storage and Handling Facility, showing the impacts for the operation phase of the project onto the nearby onsite and offsite facilities (including only land based incidents).
- Develop accidental spills and fire scenarios for the proposed project, and determine the consequences for each of these scenarios or incidents, such as thermal radiation, overpressure and toxic effects etc. This information may contribute to updating the site evacuation plans.
- Provide recommendations put forward subsequent to the incident at the Buncefield Oil Storage Depot in England. Outline the operational safety requirements for the proposed facility.

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- Where possible, determine the Maximum Individual Risk (MIR), based on the amount of information made available.
- Collate the data, and identify possible limitations and rank the risks in order to highlight possible risk reduction programmes.
- Describe potential impacts of the proposed development on the other major hazard installations in the area, as well as on the public and any other installations in the area that are affected by these installations.

In relation to the scope of work highlighted above, the impacts of vessels carrying cargo will not be covered in the risk assessment for this EIA. This will be investigated by OTGC at a later stage, when studies for Pollution Prevention in line with OTGC standards take place.

It is important to note that a full Major Hazard Installation (MHI) risk assessment will not form part of this specialist study. An MHI risk assessment falls under the requirements of the Occupational Health and Safety Act, Act 85 of 1993. An MHI risk assessment cannot be carried out for a development or activity that has not yet commenced. As a result, a full MHI risk assessment will be carried out subsequent to the Environmental Authorisation being issued, however prior to the commencement of construction. However, the need for an MHI is well understood and it will be incorporated into the EMP requirements for the proposed project accordingly. Refer to Appendix K for information relating to the requirements of an MHI which will form the basis of the MHI assessment that will be undertaken in the future.

### **6.6.5 Air Quality Assessment**

The specialist study will include the following:

- Describe the baseline air quality.
- Describe the sources of emissions and compile an emissions inventory for the proposed Bulk Liquid Storage and Handling Facility.
- Undertake dispersion modelling for the key pollutants identified during the compilation of the emissions inventory. The modelling will include predictions of annual average, 24-hour or 1-hour concentrations, according to the time averaging periods in which the standards and guidelines are set.
- Create a map to present the predicted ambient concentrations, illustrating the isopleths on a base map of the Coega IDZ.
- Discuss the predictions in terms of existing South African air quality standards or international guidelines, such as the World Health Organisation (WHO).
- Assess the air quality impacts (direct, indirect, and cumulative) during the construction and operational phases of the project.
- Acquire the necessary information required for the AEL Application Form.



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- Complete and submit the AEL Application form to the AEL Authority, NMBM. Facilitate the AEL application process in order to fulfil the requirements of NEM: AQA, including correspondence with the AEL Authority to ensure that the application is granted.

### **6.6.6 Integrated Water Management Study**

The specialist study will include the following:

#### For water use:

- Describe and quantify the water quality and quantity requirements for different uses (e.g. construction, domestic, etc.).
- Review the existing water use permit, identify the source of any potable or recycled water required for the project, and confirm availability within the region for the provision of these water requirements. This should also take into account the CDC's proposed Return Effluent Scheme.
- Highlight any potential sources of conflict that might arise regarding water availability and supply to the proposed project.
- Assess the predicted quality of source water for the proposed project against design requirements for the project, including a discussion of the implications thereof.
- Briefly describe the onsite water treatment facilities, if any.

#### Wastewater and Stormwater:

- Identify and quantify all wastewater streams (e.g. sewage) and stormwater.
- Review the handling methods of the proposed bulk fluids that will be stored on site, in order to minimize onsite spillages and concomitant water pollution.
- Review the spill contingency plan and management actions that are implemented in response to an undesired event (e.g. spillage, underground leakages, seepage).
- Identify potential sources of environmental concern (e.g. erosion), sources of contamination, constituents of concern and their expected concentrations (if possible), and an assessment of the impacts thereof.
- Describe the proposed wastewater/stormwater disposal approach and identify the points of discharge for different wastewater/stormwater streams.
- Discuss the potential constraints (e.g. legislative, environmental or practical) associated with wastewater/stormwater disposal.
- Describe the onsite wastewater treatment facilities (if any) and stormwater protection facilities/features (e.g. bunding, oil/water separators, etc.).
- Determine a preliminary water balance and identify the manners in which the integrated water management and water conservation be promoted.
- Describe the affected environment and identify the key issues during the construction and operations phases.



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- If necessary, develop scenarios and during the construction and operational phases of the project.
- Recommend measures and management actions to mitigate potentially negative impacts.
- Specify the potential impact as well as potential cumulative impact of the development.

### **6.6.7 Traffic Impact Assessment**

The specialist study will include the following:

- Review the current traffic master plan for the IDZ and the NMBM.
- Conduct a high level review of the current situation.
- Acquire relevant information in order to quantify and assess the traffic impacts. This information may include:
  - the size and proposed transport routes of the labour force expected to be employed during the construction phase,
  - the location from which equipment and materials will be acquired during construction phase,
  - the proposed routing for abnormal loads during construction,
  - existing traffic flows on the roads in the vicinity, and
  - the proposed transportation routes for road tankers transporting the bulk liquids from the tank farm to the domestic market, as well as within the NMBM, during the operation phase.
- Undertake traffic counts at affected intersections during relevant time periods.
- Quantify the traffic and transport aspects in terms of volume, frequency, size and weight (for abnormal loads) according to the information collected.
- Analyse the road network in terms of capacity, suitability and clearance requirements that will be affected by the transport of labour, equipment, materials and bulk liquids to and from the tank farm during both the construction and operational phases.
- Assessment of the road design in terms of the suitability and capability to withstand the weight of tankers and provision for easy access of emergency vehicles in the surrounding IDZ and regions.
- Recommend measures to mitigate the impact of abnormal loads and increased traffic volumes, as well as recommendations for accommodating increased traffic volumes.
- Assess the traffic impacts (direct, indirect, and cumulative) during construction and operational phases of the project.
- Highlight legal and other requirements for handling and transportation of hazardous cargo (road tankers).
- Determine the need for road upgrades on the traffic network.
- Compile a Traffic Impact Assessment Report containing the results of the impact analysis.

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- Compile a Traffic Management Plan containing mitigation measures and monitoring actions required during construction and operational phases of the project. This should also include recommendations for the most suitable time and route for the road tankers to transport bulk liquids out of the tank farm.

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## 6.6.8 Heritage Impact Assessment

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### 6.6.8.1 Archaeology

The specialist study will include the following:

- Undertake a desktop study on the archaeology of the study area.
- Conduct a detailed field work study in the study area to survey the archaeological features.
- Describe the type and location of known archaeological features in the study area.
- Evaluate the potential for occurrence of archaeological features within the study area.
- Specify the potential impacts as well as potential cumulative impacts of the construction and operational phases of the development on the archaeological features and sites.
- Provide management actions (mitigation) for inclusion in the EMP for the construction of the proposed Bulk Liquid Storage and Handling Facility.
- Provide an outline of additional management guidelines.

### 6.6.8.2 Palaeontology

The specialist study will include the following:

- Undertake a desktop study on the fossil heritage of the study area based on a review of all relevant palaeontological and geological literature (geological maps, previous reports), location and examination of fossil collections from the study area (e.g. museums), and information relating to the proposed development.
- Carry out a detailed field examination of representative natural and artificial exposures of potentially fossil-bearing sediments (rock outcrops, quarries, road cuts etc) within or in the region of the development area.
- Record observed fossils and associated sedimentological features of palaeontological relevance (photos, maps, aerial or satellite images, gps co-ordinates, stratigraphic columns).
- Carry out judicious sampling of fossil material, where warranted.
- Undertake curation of any fossil material collected in an approved repository (usually a museum or geological survey collection).
- Collect photography and provisional identification of fossils.
- Analyse stratigraphy, age and depositional setting of fossil-bearing units.

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- Specify the potential impacts as well as potential cumulative impacts of the construction and operational phases of the development on the palaeontological heritage within the study area.
- Compile an illustrated, fully-referenced review of palaeontological heritage within study area based on desktop study and new data from fieldwork and analysis.
- Identify and rank the highlights and sensitivities to development of fossil heritage within study area.
- Provide specific recommendations for further palaeontological mitigation (if any).
- Provide recommendations and suggestions regarding fossil heritage management on site, including conservation measures as well as promotion of local fossil heritage (e.g. for public education, schools).