

# Preliminary Project Impact Assessment Executive Summary – Preliminary Technical Reports

The Preliminary Project Impact Assessment (PPIA) has been submitted to the Minister for Planning, as a supporting document to the EES Referral undertaken pursuant to the *Environment Effects Act 1978*. The information in the PPIA was developed through a comprehensive review of already available information and studies, together with fieldwork studies undertaken to date.

The PPIA will provide the Minister with background information to inform his decision on the required planning and environmental approvals for the Sugarloaf Pipeline Project.

The PPIA document will be continuously updated as further studies are undertaken in the fifteen key areas listed below.

The studies that have been conducted to date to determine the environmental, social, economic and cultural heritage effects of this project are:

## **1. Preliminary Hydrogeology Assessment**

This assessment takes a broad look at the interaction between the groundwater resources of the region and the potential impacts that the Sugarloaf Pipeline Project may have on the distribution of those resources. This review of the hydrogeology of the region was based on existing information and modelling. It also outlines methods to avoid or mitigate these potential impacts.

Based on the data available, the conclusion of this technical report is that the impacts that this project may have on groundwater distribution and availability are minimal, and that any impacts that may occur can be mitigated or avoided through engineering and construction practices. Current studies in the field are working to verify that this is the case and to help develop engineering and design strategies to avoid or mitigate potential impacts.

## **2. Preliminary Geomorphical Assessment**

Geomorphology refers to the study of the geology of a region, and how that region was formed in geological terms. The value of studying geomorphology is that by learning how the region was formed, potential impacts on the landscape from excavations and other works can be better understood and predicted. Some of the impacts that this study has helped to assess are the potential for landslides, soil erosion, and bank scour in creeks and waterways as well as ways to mitigate or avoid these impacts.

## **3. Preliminary Geotechnical Assessment**

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Geotechnical assessments help project engineers and designers assess the natural materials of a region, such as the soils, rocks, and natural geology. Scientists perform these studies by boring holes into the ground, and/or conducting seismic surveys to learn more about the layers of earth beneath the topsoil. Seismic surveys are performed by creating a vibration in an area, and using a seismograph to record the way those vibrations are transmitted down into and reflected back up through the earth's surface. (In this way, scientists are able to “see” underground and judge the nature of the layers beneath the surface, much like submarines use SONAR).

The geotechnical study has identified some key areas for consideration in the design process which will require engineering and construction controls to work within the existing landscape and create as few impacts as possible. The study also anticipates that impacts will be able to be mitigated by using engineering and design controls.

#### **4. Preliminary Land Contamination Assessment - (Preliminary Phase 1 – Environmental Site Assessment)**

This study has provided the baseline environmental data to help to better understand the environmental conditions existing within the pipeline corridors, and to identify areas where there may be existing sites of contamination. By identifying existing hazards, and discovering other areas of concern, this study will help the project team to choose a route which will avoid creating additional impacts.

Land contamination is not expected to be a significant issue for the project, with any issues expected to be localised (e.g. petrol stations), and such areas will be avoided when determining alignment wherever possible.

#### **5. Preliminary Hydrology Assessment**

This report studies the existing movement of water across the landscape, and includes fieldwork and the review of existing water resources information. This study identifies construction impacts on existing flows and water quality within the region, as well as ways to mitigate or avoid having these impacts in the first place.

#### **6. Preliminary Aquatic Ecology Assessment**

This report addresses the aquatic ecology components of the project, including wetlands, instream habitat, macroinvertebrates, water quality and fish within the waterways that would potentially be impacted by construction.

Additional fish and macroinvertebrate surveys are currently underway to fill existing data gaps. Data collected as part of the studies will be made available to other researchers and Landcare groups.

This report concludes that continual water quality monitoring, particularly turbidity, prior to and throughout the construction process, should be undertaken. Follow up

monitoring of the fish and macroinvertebrate communities post-construction will also enable any impacts of the construction process on these communities to be assessed.

## **7. Preliminary Flora and Fauna Assessment**

Studying the flora and fauna of the project area enables the development of the final pipeline alignment which will avoid as much significant flora and fauna as possible, while allowing for the best outcomes from an engineering perspective.

The initial phase of this study identified a total of 425 plant species, over 300 of which are native, and 54 significant fauna species. It recommends that the design of the pipeline should aim to avoid and/or minimise disturbance to areas of very high and high conservation significance as much as possible. Where such vegetation cannot be avoided, and vegetation removal will be off-set in accordance with the Victorian Vegetation Framework.

This study also concludes that the ecological issues that have been identified within the corridors are considered to be manageable through the development of suitable mitigation measures during the design process.

## **8. Preliminary Social Impact Assessment**

No matter what construction methods are chosen, or what the final pipeline alignment may be, there will be short-term impacts on local communities, social networks, and access to valued places within these communities, as well as the potential for long-term benefits to the region as a whole. In order to best understand these potential impacts, as well as assist in developing a pipeline alignment which is as sensitive as possible to the social needs of the communities along the corridor, a social impact assessment was undertaken.

The assessment is ongoing, and as more information is gathered in ongoing community meetings and social impacts workshops, the preliminary project impact assessment will be updated accordingly.

This study concludes that it is important to actively manage and mitigate social impacts of the project, and that clear and transparent consultation and communication with all interested sectors of the community is vital to the success of this project.

## **9. Preliminary Social-Economic and Tourism Impact**

This study of the social-economic and tourism landscape of the project study area will enable the construction and maintenance of the pipeline to be designed to suit the regional needs of these vital businesses. It recognises that due to the nature of the regional economy and the current social climate, any of the proposed alignments are likely to have direct and indirect economic and tourism impacts associated with the construction and operation of the pipeline.

This study concludes that consideration should be given to planning the construction program to take into account seasonal issues in order to minimise tourism, recreation, and agricultural impacts of the project.

## **10. Preliminary Cultural Heritage Impact**

This study identified a number of potential Indigenous Cultural Heritage sites through both desktop and field studies.

The study concludes that the number of indigenous sites that will be impacted can be minimised by selecting a pipeline alignment which avoids these sites.

Studies are ongoing, with further detailed field assessments being planned for mid-November 2007. It is then intended to complete the Cultural Heritage assessments by mid-January 2008 and to submit the Cultural Heritage Management Plan to Aboriginal Affairs Victoria.

## **11. Preliminary Construction Dust Assessment**

With any major earthworks type project, the construction and some maintenance of the Sugarloaf Pipeline will create dust impacts to areas in the construction corridor. The purpose of this assessment is to evaluate the potential for dust impacts and identify appropriate dust mitigation and management measures that, when adopted, will reduce to a minimum any incremental dust impacts at sensitive locations from the limited duration construction and maintenance activities. The study identifies the major sources of dust during construction and operation.

Construction of the pipeline will be a transient process, whilst construction activities pertaining to the pump stations and water storage area will be of a longer term. As such, any one location along the pipeline route will be exposed to construction operations for a fraction of the overall construction time.

This study concludes that dust impacts can be effectively mitigated through appropriate dust mitigation and management measures. A staged dust management plan will be prepared, and incorporated into the Environmental Management Plan.

## **12. Preliminary Acoustic Assessment**

This study has determined that some residents may be impacted by noise from construction works, both in the open rural environment and in the suburban areas of the townships of Yea, Glenburn and Yarra Glen. Impacts will vary depending on the size of each property. Construction would take place for at least 7–10 days dependent on the rate of construction work, followed by a period of reinstatement works (i.e. revegetation, levelling, etc.) which may take up to six weeks.

Residences located near the proposed pump station sites may be inconvenienced for a longer period of time when compared to pipeline construction, while the stations are being constructed. All construction work will be required to comply with the relevant EPA guidelines for construction

activities. This includes consideration of issues such as noise, hours of works and dust. Pump station operational noise must comply with EPA Guidelines.

### **13. Preliminary Visual and Landscape Impact Assessment**

A preliminary investigation has been undertaken to provide initial guidance on the general landscape character. This investigation will in turn assist with the identification of potential visual quality and exposure issues and sensitive zones for both the pipeline corridors and associated pump stations and water storage area.

### **14. Preliminary Traffic Impact Assessment**

The preliminary assessment of traffic issues identified key impacts and concluded that existing conditions in the area, including the Melba Highway, have sufficient capacity to accommodate the expected construction traffic, with an acknowledgement that large construction vehicles should not use Hunts Lane and other similar local roads with narrow carriageways, steep grades, and tight curves.

The assessment suggests that

- where possible, construction traffic will travel within the construction corridor rather than the adjoining road network
- the number of accesses from the road network to the construction corridor be minimised
- prior to construction, detailed Traffic Management Plans be prepared for all construction activities in accordance with the relevant Code and Australian Standard.

Traffic Management Plans will be subject to review by the relevant road traffic authority (Vic Roads or local Council) and an independent Road Safety Auditor at the design stage and when a Plan is first implemented.

### **15. Preliminary Greenhouse Gas Assessment**

This assessment estimated the quantity of greenhouse gas emissions associated with each of the project phases using a life cycle assessment process. This study also recommended management measures be put in place to reduce the greenhouse impact of the project, including: monitoring of emissions and energy consumption; use of energy-efficient vehicles, equipment, and plant; efficient planning of the work; generation of renewable energy; and the purchase of renewable energy; offsetting of emissions. It also recommended that the greenhouse gas emissions be re-evaluated once a detailed construction methodology and design are confirmed.

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