

# Statement of Environmental Objectives



for  
airborne preliminary surveys and airborne geophysical  
operations  
in South Australia

**December 2011**

**Energy Resources Division**

Department for Manufacturing, Innovation, Trade, Resources and Energy

Level 6, 101 Grenfell Street, Adelaide

GPO Box 1264, Adelaide SA 5001

Phone National (08) 8463 3242

International +61 8 8463 3242

Fax National (08) 8463 3229

International +61 8 8463 3229

Email [pirsa.petroleum@sa.gov.au](mailto:pirsa.petroleum@sa.gov.au)

Website [www.petroleum.pir.sa.gov.au](http://www.petroleum.pir.sa.gov.au)

## CONTENTS

Purpose.....	4
Scope.....	4
Definition.....	4
Environmental objectives and assessment criteria .....	4
Environmental objectives.....	4
Assessment criteria .....	5
Mitigation strategies.....	5
Reporting .....	5
References .....	6

## TABLES

Table 1: Environmental objectives and assessment criteria.....	7
--	---

## PURPOSE

Any airborne preliminary survey and airborne geophysical operation flown at heights less than 500 metres is deemed to be a regulated activity under the *Petroleum and Geothermal Energy Act 2000* (the Act) and therefore requires an approved Statement of Environmental Objectives (SEO) to be in place. Once the SEO is approved it must be reviewed at least once every five years. If, as a result of a review, the Minister considers the SEO should be revised, the Minister will undertake the revision (or cause the revision to be undertaken by the licensee) and then submit the statement for consideration under the Act.

As airborne preliminary surveys and airborne geophysical operations are generally short term, small scale and low impact, it is considered that the preparation of an SEO for each survey would result in unnecessary expense and delays both for proponents and regulators. DMITRE is therefore of the opinion that an SEO that applies to the whole State would streamline the approval process required for the activity.

This document has been prepared to fulfil the requirements of Sections 99 and 100, of the South Australian *Petroleum and Geothermal Energy Act 2000* (The Act) and Regulations 12 and 13 of the *Petroleum and Geothermal Energy Regulations 2000*.

## Scope

DMITRE has developed a fit for purpose SEO that can be applied to most airborne preliminary surveys and airborne geophysical operations conducted by proponents and their contractors within the State such as:

- Aeromagnetic surveys;
- Electromagnetic surveys;
- Airborne geochemical surveys;
- Radiometric surveys;
- Gravimetric surveys; and
- Low-level aerial photographic/video imagery surveys.

The intent of this SEO is to outline the environmental objectives to which these activities must conform and the criteria upon which the achievement of these objectives will be assessed. These objectives were developed from an environmental impact assessment developed in the Environmental Impact Report (DMITRE 2011) prepared for this regulated activity. This SEO is limited to the State of South Australia.

## Definition

In the Act, environment is broadly defined to include its natural, social, cultural and economic aspects. The environmental objectives outlined in this SEO incorporate these aspects.

This SEO relates to airborne preliminary surveys and airborne geophysical operations undertaken by using light piston-engine driven aircraft.

## ENVIRONMENTAL OBJECTIVES AND ASSESSMENT CRITERIA

### Environmental objectives

The objectives of the Petroleum and Geothermal Energy Act 2000 include:

- To minimise environmental damage from the activities involved for petroleum and other resources; and
- To protect the public from risks inherent in regulated activities.

The overarching aim of the SEO is to manage any impact of airborne preliminary surveys and airborne geophysical operations on the biological or cultural features of a region or on any other land users.

Potential environmental hazards and consequences associated with airborne preliminary surveys and airborne geophysical operations have been identified in the EIR (DMITRE2011) Environmental objectives in regard to these potential hazards are listed below.

1. To minimise disturbance to landowners/managers.
2. To minimise disturbance to stock.
3. To prevent disturbance to native fauna.
4. To minimise the impact of the environment of waste handling and disposal.

### **Assessment criteria**

The criteria for measuring the achievement of the above environmental objectives are outlined in Table 1. Each statement will be assessed as to whether it has been adhered to and comments on any variances will be recorded.

### **Mitigation strategies**

In addition to the defined assessment criteria outlined in Table 1, proponents shall implement the following general management procedures:

#### *Awareness program*

All personnel involved with airborne preliminary surveys and airborne geophysical operations will be provided with a copy of Table 1 of this SEO. Proponents shall ensure that all personnel are adequately aware of the relevant environmental objectives and impact mitigation strategies (as outlined in the EIR and assessment criteria).

#### *Implementation strategies*

Proponents and contractors shall develop site-specific mitigation strategies. In undertaking activities proponents need to be mindful of their obligations under relevant legislation including but not limited to:

- *Petroleum and Geothermal Energy Act 2000;*
- *Civil Aviation Act 1988;*
- *Environment Protection Act 1993;*
- *Aboriginal Heritage Act 1988;*
- *Native Vegetation Act 1991;*
- *National Parks and Wildlife Act 1972;* (Table 3); and
- *Environmental Protection and Biodiversity Conservation Act 1999* (Cwlth);.
- *Adelaide Dolphin Sanctuary Act 2005;* and
- *Marine Parks Act 2007.*

#### *Contractual obligations*

All contracts with companies undertaking airborne preliminary surveys and geophysical operations for the proponent shall include a requirement to:

- Operate in a manner consistent with the proponent's environmental policy; and
- To meet the assessment criteria outlined in this SEO.

## **REPORTING**

Section 100 (1)(d) of the Act requires an SEO to impose reporting obligations on a person carrying out regulated activities.

Regulation 12(2) requires an SEO to identify events that could arise from regulated activities that could cause a serious incident or reportable incident within the meaning of Section 85 of the Act. Section 85 of the Act defines a serious incident as an incident arising from activities conducted under a licence in which;

1. a person is seriously injured; or
2. an imminent risk to public health or safety arises; or
3. serious environmental damage occurs or an imminent risk of serious environmental damage arises.

Reportable incidents are incidents (other than a serious incident) arising activities conducted under a licence issued under the *Petroleum and Geothermal Energy Regulations 2000*

### *Reportable incidents*

Pursuant to Regulation 12(2) the incidents relevant to airborne preliminary survey and airborne geophysical activities as listed below are considered to be a reportable incident under Section 85 (1) of the Act:

- Unresolved complaint from a landowner/occupier/manager as a result of airborne preliminary survey or geophysical operations; and
- Any direct or indirect impact to Protected Areas under the Reserve System or other prescribed areas (e.g. the Woomera Prohibited Area) where petroleum and geothermal activities are prohibited.

## REFERENCES

The following documents were the primary sources used in the preparation of this Statement of Environmental Objectives.

Ecos Consulting (Aust) Pty Ltd (2001) *Primary Survey Licence – South Australian Environmental Impact Report*. Unpublished Report to PIRSA

Ecos Consulting (Aust) Pty Ltd (2001) *Primary Survey Licence – Statement of Environmental Objectives* Unpublished Report to PIRSA

PIRSA, 2006. *Statement of environment objectives for airborne geophysical operations in South Australia*

PIRSA, 2006. *Environmental impact report for airborne geophysical operations in South Australia*

DMITRE,2011. *Environmental impact report for airborne preliminary surveys and airborne geophysical operations in South Australia*. DMITRE, Adelaide, South Australia

**Table 1: Environmental objectives and assessment criteria**

Environmental objectives	Strategies to enable achievement of objectives	Assessment criteria	Comment
1. To minimise disturbance to landowners	<p>The project has a nominated person with specific responsibility of maintaining contact with all potentially affected landowner/managers.</p> <p>All reasonable landowner requirements are incorporated into management strategies/procedures.</p> <p>Landowner/managers are provided with information regarding the surveys including the location and duration of the survey.</p> <p>Landowner complaints are recorded and reported to the licensee.</p>	No unresolved reasonable complaints from the landowner	The strategies suggested achieving these objectives have been developed on the basis of current understanding of the risks of overflying properties at a low altitude (90 to 500 metres above ground level) by light piston-engine aircraft
2. To minimise disturbance to stock	<p>Landowner/managers are provided with adequate prior notice.</p> <p>Aircraft avoid overflying concentrations of livestock particularly at stockyards, trucking yards and watering-points.</p> <p>Landowner complaints are recorded.</p>	No unresolved reasonable complaints from the landowner	Low flying aircraft unsettles livestock. Not flying over concentrations of sheep and cattle etc in yards or watering points reduces the risk of interfering with stock.
3. To prevent disturbance to native fauna and avifauna	<p>Undertake identification of significant wetland areas (e.g .RAMSAR sites) in planning stage of the survey.</p> <p>Aircraft alters course to avoid any concentration of birds - particularly in wetland areas</p>	<p>No evidence of disturbance to native fauna or avifauna</p> <p>Areas or periods of aggregation/breeding have been avoided</p>	Low-flying aircraft may disturb native fauna. - Particularly nesting water birds. However impact is considered to be of negligible to low due to the limited time of exposure during in survey flights
4. To Minimise the impact on the environment of waste handling and disposal	<p>No litter that can be attributed to the survey is present in the survey area.</p> <p>Domestic wastes are disposed of in accordance with EPA licensing requirements.</p> <p>All fuel oil and chemicals are stored, handled and transported in accordance with appropriately e.g. EPA guidelines 080/07 Bunding and Spill M management, AS 1940 and Australian Dangerous Goods (ADG) Code.</p>	No fuel, oil or chemical spills.	Operators should dispose of any waste in an appropriate manner