

# **Goldfields Esperance Regional Planning Strategy**

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**Western Australian Planning Commission**

**A submission by the Environmental Protection Authority under  
Section 16(j) of the Environmental Protection Act**

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# 1. Introduction

## 1.1 Purpose

The primary purpose of this EPA report is to provide advice under Section 16(j) of the Environmental Protection (EP) Act. Section 16(j) empowers the EPA “to publish reports on environmental matters generally”. Because the EPA reports publicly its advice can be seen and considered by the public, industry, State and Local Government and other stakeholders.

## 1.2 Scope

The EP Act broadly defines the ‘environment’ as: “*subject to subsection (2) means living things, their physical, biological and social surroundings and interactions between all of these*”, subsection (2) states: “*For the purposes of the definition of ‘environment’ in subsection (1), the social surroundings of man are his aesthetic, cultural, economic and social surroundings to the extent that those surroundings directly affect or are affected by his physical or biological surroundings.*”.

With specific regard to the Goldfields Esperance Regional Planning Strategy (GERPS) the EPA’s advice is provided to:

- a) ensure environmental issues are adequately recognised and integrated into future planning in a sustainable way;
- b) identify the environmental matters, recommendations and proposed land uses which might need to be modified or amended prior to finalisation of the GERPS; and
- c) identify the environmental issues which will require further consideration and investigation at subsequent (lower) levels of planning (ie. region and town planning schemes, subregional and townsite structure planning, outline development planning, subdivision and development), so that the environment will be adequately protected.

## 1.3 Key Principles Guiding the EPA Advice

In considering the GERPS the EPA was guided by the following key principles.

### 1.3.1 Sustainability

“*We have not inherited the earth from our parents, we have borrowed it from our children.*” (World Conservation Strategy 1980). This advice is based on the philosophy of sustainable development where environmental, economic and social factors are considered in an integrated and holistic way. The EPA supports the concept of ecologically sustainable development (ESD), as set out in the National Strategy for Ecologically Sustainable Development (Commonwealth of Australia 1992), that is “*development that improves the total quality of life, both now and in the future, in a way that maintains the ecological processes on which life depends*”.

### 1.3.2 Biological Diversity

Biodiversity (genes, species and ecosystems) is essential to human well-being, it maintains all life on the planet and underpins the economy, particularly in Western Australia. The Commonwealth and all State governments have signed the *National Strategy for the Conservation of Australia’s Biological Diversity* (1996), which establishes the goal of protecting biological diversity and maintaining ecological processes and systems.

### **1.3.3 Interdependence**

Ecological processes are interconnected with physical and biological systems, food webs and natural cycles. Being interconnected and interrelated requires an understanding and appreciation that impacting or managing one part of the environment may impact on one or a number of other parts. Research has demonstrated that these interrelated and interdependent systems can be finely balanced.

### **1.3.4 Precautionary Principle**

The precautionary principle provides a means of considering environmental impacts and making decisions in a cautious way, where a high value element of the environment might be affected, and there is a lack of knowledge, or insufficient knowledge, or certainty about potential impacts and management of impacts and cumulative effects.

## **1.4 Limitations of the EPA's advice**

This report does not constitute a formal assessment under Part IV of the EP Act. It is an assessment under Section 16(j) of the EP Act which does not lead to the setting of legally binding environmental conditions. In compiling this report, the EPA has considered the information in GERPS, specialist advice from the Department of Environmental Protection (DEP) and other government agencies. The EPA will consider future proposals against the advice set out in this report, when determining the level of environmental assessment, under Section 38 and 48A of the EP Act.

## **2. Background and Context**

The GERPS is one of a number of regional plans which have been prepared by the Western Australian Planning Commission (WAPC). The WAPC has indicated a commitment to strategic regional planning in country areas, and the introduction of statutory region schemes, like the Peel Region Scheme, where appropriate.

The Government has advocated support for the development and growth of regions. Emphasis has been placed on the diversification and continuing extraction and use of natural resources as a means to maintain growth.

The Goldfields/Esperance region presents the full spectrum of landuses, including mining, industry, ports, rail, air and road transport, urban expansion, waste disposal, public utilities, broad acre farming, pastoral uses, fishing, aquaculture, tourism and conservation. The region is as large as many countries which may imply a degree of flexibility (room to move) with regard to balancing and allocating uses. However, the region and more particularly the centres of Kalgoorlie/Boulder and Esperance have significant constraints, some of which are environmental. For example, land degradation, biodiversity protection and sulphur dioxide (SO<sub>2</sub>) in Kalgoorlie/Boulder.

The region will continue to be a major economic centre. This means further expansion and development of residential, industrial and commercial land is likely, with requirements for additional social and physical infrastructure. Population growth and expansion of the resource, industrial, agricultural and service sectors is forecast.

The EPA recognises that despite the size of the region, planning may be a challenging prospect, in view of various constraints, anticipated growth and number of competing landuses. The EPA also recognises that the GERPS is a high order planning document and as such presents a mechanism and opportunity to address, raise or discuss:

- a) the existing environmental issues/problems in the region which have arisen since European settlement;
- b) the potential for further environmental impacts resulting from the anticipated growth and development of the region; and

- c) how the planning system, government and the community, might respond (or has been responding) to these environmental issues.

The EPA does not believe that the GERPS should, in itself, be a mechanism to address and solve environmental issues, current or potential. Rather it can provide an opportunity and framework to address, integrate and coordinate the suite of land use planning, environmental and social issues in the region.

Formation of a regional planning coordinating committee, technical working group(s), sub-region plans and studies, technical investigations, scheme reviews, structure planning or local planning strategies all provide an opportunity to follow through and interconnect issues raised and founded in the GERPS.

Initiatives such as the Salinity Action Plan or water resource investigations should be drawn into a planning and development context, established by the GERPS. To that extent the EPA supports the need and purpose for GERPS and commends the WAPC in taking the initiative to prepare the Strategy.

### **3. Key Environmental Considerations**

#### **3.1 General**

##### **3.1.1 Integration and Coordination**

The Strategy establishes a number of purposes (Section 1.4, pg.3 and 4), including:

- *“Provide an integrated decision-making approach to facilitate the sustainable development of the region, providing a balance between the social, physical and economic components of the region.”; and*
- *“A regional planning strategy should form the basis for cooperative action to be taken by State and local government on how land use should be allocated”.*

In relation to the existing environmental problems in the region the Strategy makes a number of points, including:

- *“The protection of the environment is the responsibility of the Environmental Protection Authority” (Section 2.2, pg.2).*
- *“Where severe salinity problems are evident in agriculture areas, the Western Australian Salinity Action Plan (AgWA, CALM, DEP, WRC, 1996) can assist in alleviating the problem”.*
- *“The responsibility for nature conservation rests with the Department of Conservation and Land Management (CALM) ...”*
- *“Remediation of rangeland degradation is ongoing between Agriculture Western Australia and pastoralists.”*

The EPA provides overarching environmental advice as well as advice on specific projects. However, the EPA recognises and encourages the whole community, industry, State and Local Government in relation to their responsibility for environmental protection and this extends to all decision makers and proponents who are involved in the allocation, planning, use and management of land. The main role of the EPA is to provide environmental advice, it does not make decisions or control and manage land.

For the Strategy to ‘provide an integrated decision-making approach’ in relation to all issues including the environment, various responsibilities should be identified and brought together. The EPA, therefore, supports the formation of a high level regional planning coordinating committee and associated technical working group(s) as a essential mechanism to achieve



integrated decision making. These committee(s) should be well resourced and include adequate representation from environmental and natural resource management agencies.

### **3.1.2 Existing Issues and Problems**

Agriculture and mining forms the economic base of the region. It has also led to the most significant environmental problems, namely loss of biodiversity, inland waters and land degradation. These problems are very significant, for example, the 1998 State of the Environment Report states: *“Approximately 9% of Western Australia’s agricultural land is currently affected by salinity. The area of salt affected land could double within the next 15-25 years, and double again before a new equilibrium is reached.”*. Increasing salinity and rising water tables are likely to further compromise remnant vegetation, wetlands and ecosystems that remain.

In relation to the rest of Western Australia, the Esperance region is recognised as being acutely affected by salinity. The Salinity Action Plan, like the GERPS, can not, in itself, alleviate salinity, however, the EPA considers there is a need to review and question the tenure, use and management of land, where appropriate, and as such the Strategy should reflect this.

The Strategy highlights that: *“Land use practices should prevent land degradation and work should be aimed at rehabilitation of land already damaged by past poor management techniques.”* Though it could also highlight that, in some cases, the current use, tenure and management of land is inappropriate.

The Strategy recommends that the following plan/strategies be developed:

- a subregion land use plan;
- landcare plans; and
- an agriculture development strategy.

These initiatives are supported and could also include a sustainable agricultural study involving Agriculture WA, Pastoral Lands Board, Local Governments and DEP to review and assess:

- a) existing land tenure, use and management;
- b) the environmental impacts from agricultural landuses;
- c) assess the effectiveness of current initiatives and mechanisms (eg. the ability of the Salinity Action Plan to arrest or reverse salinisation in the region) to manage environmental impacts;
- d) assess the sustainability of current and possible agricultural landuses;
- e) make recommendations for change and reform, where appropriate.

Such a study should be undertaken as a priority, be adequately funded and could be coordinated by the regional planning coordinating committee.

### **3.1.3 Sustainability**

The future of the region and in turn people’s lifestyle is a function of the sustainable use and reuse of the environment. Tourism, agriculture, mining and fishing and availability of natural resources such as potable water underpins the economy. The vision statement (p 71) states *“The region will be based upon a diverse and vibrant economy, offering an attractive lifestyle with a range of services and recreational opportunities, while embracing environmental principles”*. Environmental principles are expanded to mean (pp71-72) *“environmentally sustainable principles”*, however these principles are not defined in the Strategy. Likewise terms such as *“economically sustainable”* and *“environmentally sustainable”* are not distinguished.

In the context of the GERPS, the EPA generally interprets 'sustainability' to mean making planning and development decisions to achieve improved environmental, social and economic outcomes on a continuing basis, rather than balancing one against the other. As such, the EPA recommends that a clear notion of sustainability, such as the National Strategy for ESD, should be defined and used throughout the GERPS.

### 3.1.4 Information Deficiencies

Section 9.6 (Monitoring and Review) indicates that further research is required in some areas and a number of information gaps exist. The EPA supports the proposition that available and up to date environmental information is essential in making sound decisions. As has been recognised in many regions of Western Australia, there are significant deficiencies in environmental information, particularly regarding ecosystems and trends over time; the Goldfields-Esperance region is no exception.

The EPA supports a review to identify and prioritise critical environmental information deficiencies. There will be a corresponding need to undertake and fund scientific studies, reviews and investigations to address these deficiencies. This information needs to be integrated into a GIS (geographic information system) database and will be essential in the formation of subregion plans, local planning strategies, local structure plans or town planning scheme reviews.

## 3.2 Conservation

Both the Kalgoorlie/Boulder and Esperance Structure Plans propose a landuse entitled "*Regional Open Space*" which may include conservation, active and passive recreation. There is also a landuse called "*Community and Recreation*" which includes a number of existing active recreation activities within areas of conservation significance. The Regional Land Use Plan (page 99) does not use the term 'Conservation', instead substitutes "CALM Estate". This does not explicitly recognise conservation values of these areas', though it is assumed; also it does not recognise that significant conservation values and areas occur outside the CALM estate.

The EPA considers this raises several issues:

1. Historically land which has not been developed or 'improved' is often regarded as having no landuse (eg. vacant Crown land) and sometimes without worth (useless). For example, much of the region is described (page 99) as "Unallocated Crown Land", this suggests it is waiting for allocation or use (highest and best). Importantly, this does not acknowledge that this land (and water) is currently being used by an abundant and diverse variety of plants and animals and therefore has conservation value.
2. Terms such as 'Open Space' seem generic, undefined and are often associated with park-land clearing, active recreation and turf.
3. Specific references to National Parks or CALM estate are seen as the means to identify conservation as a landuse. This has tended to polarise perceptions on what areas do or do not have conservation value and what is worth protecting and what is not. In reality the conservation (CALM) estate is often a function of pressure, limited scientific information and resources for acquisition and management, and represents only public land and a small portion of the region.

The EPA appreciates that initiatives intended to recognise conservation values outside the CALM estate, particularly on private land or leased land is resisted because it raises the issue of compensation and land acquisition, as some people may perceive that a more economically beneficial landuse is restricted or prevented.

Nevertheless, the EPA supports the inclusion of a 'Conservation', 'Environmental' or 'Wilderness' area, zone or reserve, which extends beyond the CALM Estate. This advice is not intended to restrict or prevent other uses, but to recognise that the majority of the region has conservation value and whether "Aboriginal Use", "Agriculture" or "Pastoral Lease", all



stakeholders should make every attempt to use and manage land in an environmentally responsible way. The EPA supports the proposition of multiple uses which are compatible and complementary with the protection of environmental values and conservation on private or leased land and the recognition of these values through statutory processes.

### **3.2.1 Flora and Fauna**

The Strategy has presented vegetation in the broadest context of the Beard (1979) Provinces. The EPA advises that a more detailed level of information is available. The Interim Biogeographical Regions of Australia (IBRA) set a framework for vegetation on a National basis. The IBRA regions in Western Australia are based on Beard (1979) but have been revised to bring them up to date with current knowledge and adjusted to fit a National Basis.

The EPA supports a more detailed sub regional assessment of native vegetation. However, much of the vegetation and biodiversity of the region has been cleared and/or degraded. Inherently this means most of the remnant vegetation is of high conservation value. The EPA therefore recommends that the Strategy should establish and support a general presumption against further clearing of remnant native vegetation. The EPA is preparing advice to the Minister for the Environment in relation to clearing of native vegetation. This advice will be published in the near future.

### **3.2.2 Environmental Setbacks (buffers)**

The EPA notes that GERPS is a high order broad planning document, however the Kalgoorlie/Boulder and Esperance Structure Plans contain definitive cadastral/town planning scheme boundaries, rather than broad brush notional landuses which might require further environmental and planning investigation. If further studies and information are required (*3.1.4 Information Deficiencies*), the EPA recommends that the relevant boundaries be more qualified or notional. For example:

- The setback between the coast and the urban area adjacent to Fisheries Road seems too narrow. (Esperance Structure Plan)
- The setback between Fisheries Road and Woody Lake is very unlikely to allow long term protection and management of the Ramsar lake(s). The EPA considers that further subdivision should not occur below 2 hectares and if appropriate land use controls or scheme provisions do not exist to manage fertiliser use, irrigation, effluent disposal, stock control, drainage and clearing, these should be introduced. (Esperance Structure Plan)
- The potential for flooding and inundation of the area between the Ramsar lakes and Fisheries Road is high and needs to be evaluated so that the appropriateness of the area for residential use can be determined. (Esperance Structure Plan)

### **3.2.3 Agriculture**

The Strategy supports the granting of incentives (eg. tax) for farmers/landowners to carry out land rehabilitation. The EPA supports this recommendation, however considers this should also be extended to the management of private land 'used' for the conservation of remnant vegetation, water courses or wetlands.

The Strategy indicates that pastoral land has potential for multiple land use activities, with proper management and should be encouraged, then goes on to say there are a number of possible landuses including cattle feed lots, agriculture, horticulture, fish farming, goat farming, plantations and forestry. The EPA believes these uses should be approached with considerable caution, as much of Western Australia's rangelands may not be able to sustain these uses. Any proposed development should undertake a detailed land capability/suitability assessment, demonstrate the land is capable of the intended use and other values (eg. conservation) are protected.

The EPA notes recent amendments to the Land Administration Act (1997) which empowers the Pastoral Lands Board (PLB) with the following functions:

- a) *to ensure that pastoral leases are managed on an ecologically sustainable basis;*
- b) *to develop policies to prevent the degradation of rangelands; and*
- c) *to develop policies to rehabilitate degraded or eroded rangelands and to restore their pastoral potential.*

In consideration of these functions, the EPA is concerned that the PLB has recently requested some lessors to re-stock and to maintain infrastructure in areas where pastoral activities may not be sustainable. The EPA would welcome the opportunity to be consulted and briefed by PLB regarding initiatives and progress toward implementing these functions.

### **3.2.4 Drainage Management**

The Kalgoorlie area is characterised by low rainfall, high summer temperatures and poorly drained soils. Infrequent extreme rainfall events causes surface flows and flooding which moves across the relatively flat landscape toward depressions to form ephemeral lakes. This water plays a vital role in sustaining all forms of life, breaking dormancy, stimulating growth and reproduction. Modification of the landscape (eg. railway lines, roads and mines) can interrupt and alter natural drainage lines. Surface water may also become contaminated from various landuses and discharges (eg. Kalgoorlie wastewater treatment plant) . The EPA recommends that infrastructure be aligned and constructed to maintain natural drainage features and discharges should be avoided and/or managed so that surface water quality is maintained or enhanced.

## **3.3 Pollution**

### **3.3.1 Sulphur Dioxide**

The EPA notes that SO<sub>2</sub> has been a significant environmental and health issue in Kalgoorlie. In recent times the level of SO<sub>2</sub> has reduced due to improvements by industry. The Environmental Protection Policy (EPP) for SO<sub>2</sub> in Kalgoorlie/Boulder is currently under review and is in draft form

Compliance has been required with the current EPP air quality standard of 700 µg/m<sup>3</sup> or approximately 0.25 ppm, with an allowed number of exceedences. Since January 1997 the number of allowed exceedences has been eight (8) per calendar year. A review of the data indicates that compliance with the 0.25 ppm was achieved in 1993 and has continued since.

The proposed standard for SO<sub>2</sub> in the draft EPP is 0.20 ppm (approximately equivalent to 570 µg/m<sup>3</sup>). This is the same as the National Environment Protection Measure (NEPM) for Ambient Air Quality. One exceedence of the NEPM standard per monitoring site each year is permitted.

The draft EPP standard of 0.20 ppm has been met at the Kalgoorlie Regional Hospital monitoring site since 1997. The draft EPP also proposes a progressive reduction in the number of days the standard could be exceeded. It allows 3 exceedences of the standard in 2000, two in 2001 and one thereafter, which is consistent with the NEPM standard. An examination of the most recent three years' data indicates that very few exceedences of either the proposed standard or limit have occurred since 1996.

It is the EPA's assumption and expectation that SO<sub>2</sub> levels in Kalgoorlie will be maintained below an accepted national standard. Under Part V of the Environmental Protection Act (works approval and licensing) reductions may be required to improve performance and achieve best practice management. The EPA does not currently believe that SO<sub>2</sub> is a significant environmental constraint. However, the EPA intends to include future residential land, identified in the Strategy, in the EPP boundary and additional monitoring stations covering these areas.

### **3.3.2 Odour**

The EPA understands that the Kalgoorlie and Esperance wastewater treatment plants are not current 'best practice', in terms of treatment capacity, final treatment quality, treated effluent disposal and odour control. Furthermore these plants do not have the capacity to accommodate the future population outlined in the Strategy, plus additional loads from the sewage infill program. The EPA supports the proposition that more suitable sites are investigated and the plants upgraded to 'best practice'.

### **3.3.3 Noise**

Noise is a significant issue associated with the airport, railway and mines in Kalgoorlie, and with port operations, transport corridors and power generation in Esperance.

The Esperance Port Authority has recently improved dust and noise control measures, as well as purchasing residential land most severely affected. Port activities must comply with relevant noise regulations and further expansion of the Port is currently subject to a Public Environmental Review (EPA assessment 1277). The EPA has an expectation that the Esperance Port Authority's Environmental Management Plan will also provide a mechanism to manage noise. Nevertheless, one of the most significant public concerns regarding noise and the Port is the transport corridors which pass through residential, tourist and commercial areas. The EPA is aware that an integrated service corridor planning study is being undertaken, which will be implemented by the Shire of Esperance. The EPA recommends that the integrated service corridor planning study resolves transport noise and that it be implemented as a matter of priority.

The EPA supports the recommendation to investigate a new site for the Kalgoorlie Airport. With regard to expansion of the existing airport and possible encroachment of urban development the EPA recommends that residential development below 20db (Australian Noise Exposure Forecast) ANEF is acceptable, 20 to 25db ANEF is conditional, which would require noise treatment of residences and memorials on titles, and above 25db ANEF is unacceptable. This position is consistent with Australian Standard 2021.

## **4. Summary of EPA Advice**

### **The EPA supports:**

- a) the formation of a high level regional planning coordinating committee and associated technical working committee as a essential mechanism to achieve integrated decision making. These committees should be well resourced and include adequate representation from environmental and natural resource management agencies;
- b) a 'Conservation', 'Wilderness' or 'Environmental' reserve, zone or area, which extends beyond the CALM Estate and is recognised through statutory processes;
- c) multiple uses which are compatible and complementary with protection of environmental values;
- d) conservation on private or leased land;
- e) a more detailed sub-regional assessment of native vegetation;
- f) the granting of incentives for farmers/landowners to carry out land rehabilitation and for the management of private land 'used' for the conservation of remnant vegetation, water courses or wetlands;
- g) the relocation and upgrading of wastewater treatment plants in Kalgoorlie and Esperance; and
- h) an investigation to identify a new site for Kalgoorlie Airport.

**The EPA recommends:**

- a) that a clear notion of sustainability should be defined and used throughout the Strategy;
- b) sustainable agricultural study involving Agriculture WA, Pastoral Lands Board, Local Governments and DEP to review and assess:
  - existing land tenure, use and management;
  - the environmental impacts from agricultural landuses;
  - assess the effectiveness of current initiatives and mechanisms (eg. the ability of the Salinity Action Plan to arrest or reverse salinisation in the region) to manage environmental impacts;
  - assess the sustainability of current and possible agricultural landuses;
  - make recommendations for change and reform, where appropriate.
- c) that a review should be undertaken to identify and prioritise critical environmental information deficiencies and funds allocated to address the deficiencies;
- d) that some boundaries should be more conditional or notional until further studies are undertaken;
- e) that the Strategy establish and support a general presumption against further clearing of remnant native vegetation;
- f) that intensive uses on rangelands should be approached with considerable caution and thoroughly assessed by the Pastoral Lands Board;
- g) that infrastructure should be aligned and constructed to maintain natural drainage features and discharges should be avoided and/or managed so that surface water quality is maintained or enhanced;
- h) that the Esperance integrated service corridor planning study resolves the issue of transport noise and that it be implemented as a matter of priority; and
- i) that residential development around Kalgoorlie airport below 20db (Australian Noise Exposure Forecast) ANEF is acceptable, 20 to 25db ANEF is conditional, would require noise treatment of residences and memorials on titles, and above 25db ANEF is unacceptable.