

**Clearing of approximately 300 hectares
of native vegetation for livestock grazing,
Lot 92 Coolinup Road, Shire of Esperance**

Mr John Darlow

**Report and recommendations
of the Environmental Protection Authority**

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Summary and recommendations

This report provides the Environmental Protection Authority's (EPA's) advice to the Minister for the Environment and Heritage on the proposal by Mr John Darlow to clear approximately 300 hectares (ha) of native vegetation for grazing of livestock on Lot 92 Coolinup Road, located approximately 50 kilometres east-northeast of Esperance, in the Shire of Esperance.

Following consideration by the Inter Agency Working Group under the *Memorandum of Understanding for the protection of remnant vegetation on private land in the agricultural region of Western Australia* (Agriculture WA, 1997) the proposal was referred to the EPA by the Commissioner of Soil and Land Conservation for consideration of possible environmental impacts.

As the proposal appeared unlikely to meet the EPA's environmental objectives, the Authority set the level of assessment for the proposal at Proposal Unlikely to be Environmentally Acceptable (PUEA) in October 2002. At that time a brief statement of the reasons for the PUEA level of assessment was made publicly available as set out in the EPA's Administrative Procedures for Environmental Impact Assessment.

No appeals were received on the level of assessment. This report is the next stage in the assessment process, which is the EPA's report to the Minister for the Environment on the proposal, pursuant to Section 44 of the *Environmental Protection Act 1986*.

Relevant environmental factors

It is the EPA's opinion that 'biodiversity' is the environmental factor relevant to the proposal, which requires detailed evaluation in this report.

Conclusion

This proposal is for clearing of native vegetation within the agricultural area of Western Australia. As indicated in the EPA's Position Statement No. 2 on protection of native vegetation, large-scale clearing of native vegetation has already lead to unacceptable impacts on biodiversity and the environment generally. Accordingly, from an environmental perspective any further clearing of native vegetation for agricultural purposes within this area cannot be supported.

The proposal as put forward by the proponent cannot be demonstrated to meet the EPA's objectives for biodiversity. As a consequence, the EPA considers the proposal by Mr Darlow to clear approximately 300 ha of native vegetation within portion of Neridup Location 16, Lot 92 Coolinup Road, for the purpose of livestock grazing is environmentally unacceptable and on the basis of available information, should not proceed.

Recommendations

The EPA submits the following recommendations to the Minister for the Environment and Heritage:

1. That the Minister notes that the proposal being assessed is for the clearing of approximately 300 ha of native vegetation for livestock grazing on Lot 92 Coolinup Road, Neridup Location 16, Shire of Esperance.
2. That the Minister considers the report on the relevant environmental factor as set out in Section 3 of this report.
3. That the Minister notes that the EPA has concluded, based on available information, that the proposal as put forward by the proponent cannot be demonstrated to meet the EPA's objective in relation to 'biodiversity'.
4. That the Minister notes that the EPA has not included in this Bulletin "conditions and procedures to which the proposal should be subject, if implemented" because the EPA holds the view that the proposal should not be implemented.

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1. Introduction and background

This report provides the advice and recommendations of the Environmental Protection Authority (EPA) to the Minister for the Environment and Heritage on the environmental factors relevant to the proposal by Mr John Darlow (the proponent and landowner) to clear approximately 300 hectares (ha) of native vegetation within Lot 92 Coolinup Road, approximately 50 kilometres (km) east-northeast of Esperance (Figure 1). The stated purpose of the clearing is for grazing of livestock. Section 2 discusses the proposal further.

Under the *Soil and Land Conservation Act 1950*, any landholder wishing to clear greater than 1 ha of native vegetation is required to notify the Commissioner of Soil and Land Conservation (the Commissioner). The Commissioner then decides whether to object to the clearing depending on whether or not land degradation is likely to occur and may issue a Soil Conservation Notice to prevent clearing taking place.

The proponent notified the Commissioner of his intention to clear the subject land on 16 May 2002. The Commissioner was of the opinion that the potential land degradation hazards of wind erosion and waterlogging could be addressed with appropriate management strategies.

However, the Level 3 Inter-Agency Working Group operating in accordance with the *Memorandum of Understanding for the Protection of Native Vegetation on Private Land* (Agriculture WA, 1997) was concerned about potential impacts on rare flora and impacts on poorly represented vegetation communities. Hence the proposal was referred to the EPA by the Commissioner for consideration of potential environmental impacts of the proposal.

As the proposal appeared unlikely to meet the EPA's environmental objectives, the level of assessment was set at Proposal Unlikely to be Environmentally Acceptable (PUEA). At that time, a brief statement of the reasons for the PUEA level of assessment was made publicly available, as set out in EPA's Administrative Procedures for Environmental Impact Assessment. The EPA's statement of reasons is provided as Appendix 2 of this report.

Section 44 of the *Environmental Protection Act 1986* requires the EPA to report to the Minister for the Environment and Heritage on the environmental factors relevant to the proposal and on the conditions and procedures to which the proposal should be subject, if implemented. In addition, the EPA may make recommendations as it sees fit.

Accordingly, Section 3 discusses environmental factors relevant to the proposal and Section 4 presents the EPA's conclusions and recommendations. References are listed in Appendix 1.

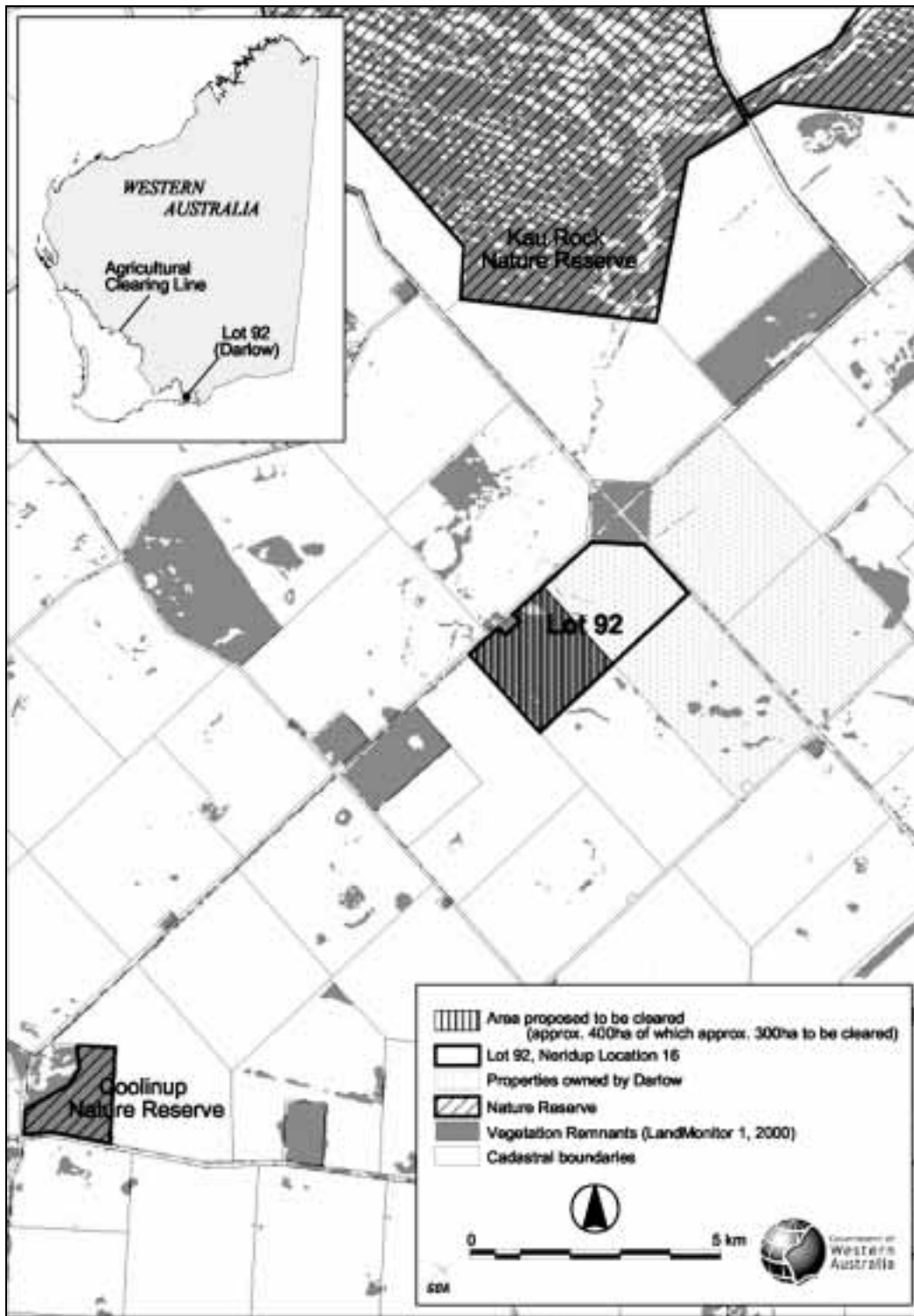


Figure 1: Location of the proposal

2. The proposal

The proposal is for the clearing of approximately 300 ha of native vegetation within portion of Neridup Location 16, Lot 92 Coolinup Road, for the purpose of livestock grazing.

Mr Darlow purchased the subject portion of Lot 92 for the purpose of pasturing and livestock grazing. Lot 92 is managed with adjoining locations Neridup Locations 93, 213 and 214 (Figure 1) and these properties are approximately 95% cleared.

The proponent intends to leave vegetation buffers near low-lying areas and depressions, retain windbreaks, and proposes not to clear the light yellow deep sands (associated with sand dunes) that occur throughout the area. Therefore, in the area of approximately 400 ha shown in Figure 1, approximately 300 ha is proposed to be cleared.

Table 1: Summary of key proposal characteristics

Element	Description
Total area of property	400 ha
Approximate area of property uncleared	400 ha (100%)
Approximate area to be cleared	300 ha (75%)
Approximate area of vegetation to remain if the proposal was implemented	100 ha (25%)
Purpose of proposed clearing	Pasturing and livestock grazing
Mapped description of the types of vegetation of whole property, according to the National Land and Water Resources Audit (also showing percentage of total vegetation on the property)	295 ha Shrublands; banksia scrub-heath on sandplain in the Esperance Plains Region [#6048] (71%) 61 ha Shrublands; tallerack mallee-heath [#47] (15%) 49 ha Shrublands; mallee scrub, black marlock [#516] (12%) 9 ha Shrublands; mallee scrub, black marlock & Forrest's marlock [#1516] (2%)
Percentage remaining of pre-European extent of mapped NLWRA vegetation associations, compared to original area (also showing current extent in hectares) (Shepherd et al., 2001)	15% Shrublands; banksia scrub-heath on sandplain in the Esperance Plains Region (20,728 ha) 36% Shrublands; tallerack mallee-heath (455,429 ha) 43% Shrublands; mallee scrub, black marlock (666,416 ha) 44% Shrublands; mallee scrub, black marlock & Forrest's marlock (66,206 ha)
Percentage of pre-European extent of vegetation associations that are in IUCN Class I-IV Reserves. (Calculated from data from Shepherd, et al., 2001)	1% Shrublands; banksia scrub-heath on sandplain in the Esperance Plains Region 19% Shrublands; tallerack mallee-heath 16% Shrublands; mallee scrub, black marlock 18% Shrublands; mallee scrub, black marlock & Forrest's marlock

3. Relevant environmental factor

It is the EPA's opinion that 'biodiversity' is the environmental factor relevant to the proposal, which requires detailed evaluation in this report.

3.1 Biodiversity

Objective

To avoid adverse impacts on biological diversity, comprising the different plants and animals and the ecosystems they form, at the levels of genetic diversity, species diversity and ecosystem diversity.

Description

a) *EPA Position Statement No. 2*

It is now well recognised that broad-scale land clearing and consequential salinity have had a dramatic adverse effect on biodiversity in the agricultural area through the direct loss of vegetation communities and plant species, and the associated loss of mammals, birds, and other animals which depend upon large enough areas of healthy bush for food and shelter. These impacts have been reported in both the State and Commonwealth *State of the Environment* reporting (Government of Western Australia, 1998; Commonwealth of Australia, 1996).

In response to impacts on biological diversity and nature conservation, as well as land and water degradation, the State and Commonwealth Governments have over recent years developed and implemented various policy positions and programs to provide a strategic context for the protection of remnant vegetation.

A recent development in Government Policy on protection of native vegetation is the agreed document entitled *National Objectives and Targets for Biodiversity Conservation Stemming from the National Strategy for the Conservation of Australia's biodiversity 2001 - 2005* (Commonwealth of Australia, 2001). Within this document, the Commonwealth Government and the majority of the States, including Western Australia, have agreed to pursue the target of ensuring that all jurisdictions have clearing controls in place that will have the effect of reducing the net national rate of land clearance to zero.

The EPA has assessed a number of land clearing proposals over recent years. Based on the issues arising from information presented during these assessments, the strategic framework provided by government policy positions and programs, and general scientific information which has become available on the potential cumulative impacts of broad-scale clearing on the environment, the EPA has developed Position Statement No. 2 regarding *Environmental Protection of Native Vegetation in Western Australia* (EPA, 2000).

This proposal involves clearing for agricultural purposes within the agricultural area of Western Australia, as defined by the map presented as Figure 1 of the EPA's *Position Statement No. 2: Environmental Protection of Native Vegetation in Western Australia* (EPA, 2000). The EPA's position with respect to clearing of native vegetation for agricultural purposes within this area is that any further reduction in native vegetation through clearing for agriculture cannot be supported.

b) *EPA Position Statement No. 3*

The EPA's Position Statement No. 3 on *Terrestrial Biological Surveys as an Element of Biodiversity Protection* (EPA, 2002) discusses the principles that the EPA will use when assessing proposals which may impact on biodiversity values.

An overarching principle is that the EPA expects proponents to demonstrate in their proposals that all reasonable measures have been undertaken to avoid impacts on biodiversity. Where some impact on biodiversity cannot be avoided, it is for the proponent to demonstrate that the impact will not result in unacceptable loss.

Given that the assessment of this proposal has been undertaken at the PUEA level of assessment, the proponent has not undertaken a site-specific survey on the proposed clearing area within Lot 92 to demonstrate that the proposal will not impact unacceptably on the conservation of biodiversity.

c) *Vegetation and biodiversity significance*

No site-specific surveys of the vegetation on Lot 92 have been carried out. However, based on work carried out for the National Land and Water Resources Audit, the majority of the vegetation can be described as *Shrublands; banksia scrub-heath on sandplain in the Esperance Plains Region* (Shepherd et al., 2002) (see Table 1 for other vegetation associations on Lot 92).

Analysis of the estimated pre-European extent of *Shrublands; banksia scrub-heath on sandplain in the Esperance Plains Region* compared to that currently remaining, indicates that approximately 15% of the pre-European extent now remains, and that only 1% of the pre-European extent is retained within secure conservation reserves (Shepherd, et al., 2001).

EPA's Position Statement No. 2 identified a 30% threshold level for vegetation types, beyond which species extinction is believed to occur at an exponential rate (EPA, 2000). That is, species loss appears to accelerate exponentially when there is less than 30% of the pre-European extent of the vegetation type remaining.

Other vegetation associations proposed to be cleared (Table 1) appear to have greater than 30% of the pre-European extent remaining (36%-44%), with approximately 16%-19% in secure conservation reserves (Shepherd, et al., 2001). The EPA notes that the mapping of vegetation associations is of a broad nature and that little information is known at the association or plant community level, regarding the type and condition of the vegetation proposed to be cleared, or vegetation in the general region. It is possible that these estimates may suggest a greater amount of vegetation remains than is actually there. It is therefore not possible to reach a definitive

conclusion as to whether or not any of the plant communities occurring on Lot 92 are adequately represented in the region.

Any further clearing of the *Shrublands; banksia scrub-heath on sandplain in the Esperance Plains Region* vegetation association may have irreversible consequences for the conservation of biodiversity, as this is already below the 30% threshold.

d) *Significant flora*

The EPA notes that no specific surveys have been carried out which would identify the presence of significant flora within the area of native vegetation proposed to be cleared. However, geographic database information made available by the Department of Conservation and Land Management indicates that priority flora has been identified within the local area (within 15 km of the property boundaries). It is possible that populations of significant flora occur within the vegetation proposed to be cleared and accordingly, the proposal appears to have potential to impact on significant (rare, threatened or poorly known) flora species.

The EPA is unable to establish whether the proposal will impact significantly on significant flora species from available information. Given the possibility that significant flora may be present within the clearing area, the EPA is of the view that the proposal could not be judged to meet the EPA objectives for biodiversity conservation unless the presence or absence of significant flora species is established by investigations carried out or sponsored by the proponent.

e) *Local and Regional context*

Approximately half of the proposal area is located within the Coolinup Catchment, which is a small internally drained catchment of 11,100 ha (Gee & Simons, 1997). This catchment is mostly cleared, retaining only 5-10% of remnant vegetation and drains to a Conservation category wetland, Perk's Lake. It is possible that the clearing of native vegetation in this overcleared catchment would have the off-site effect of increasing seepage of water to the watertable, raising groundwater levels and consequently increasing the risk of secondary salinity.

It is likely that the proposal area provides a valuable role as a 'stepping stone' for ecological connectivity between areas of conservation land. It is located 25 km north of Cape Le Grand National Park, 10 km northeast of Coolinup Nature Reserve and 5 km south of Kau Rock Nature Reserve (Figure 1). The 400 ha proposal area is one of the largest remnants between these areas of conservation estate. Clearing of approximately 300 ha of this remnant would greatly reduce the amount of intact and viable bushland remnants available between the National Park and Nature Reserves within this area.

Assessment

The area considered for assessment of this factor is portion of Neridup Location 16, Lot 92 Coolinup Road, which occurs within the agricultural clearing area as described in Position Statement No. 2 (EPA, 2000).

On the basis of the information discussed above, the EPA has formed the view that the proposal has the potential to significantly affect biodiversity, as:

- the EPA's position as outlined in Position Statement No. 2 is that any further reduction in native vegetation through clearing for agricultural purposes within the agricultural area, cannot be supported;
- the majority of the vegetation to be cleared is the *Shrublands; banksia scrub-heath on sandplain in the Esperance Plains Region* vegetation association, which has only 15% of the pre-European extent remaining, with only 1% in secure conservation reserves. This is below the EPA's 30% threshold level and any further clearing may have irreversible consequences for the conservation of biodiversity;
- it is possible that clearing within the Coolinup Catchment could lead to secondary salinity of the Conservation category wetland Perk's Lake;
- the property provides an important 'stepping stone' for ecological connectivity between areas of conservation estate; and
- it has not been established whether significant flora will be impacted. Given that priority flora is known to occur in the vicinity of the proposed clearing area, it would appear possible that clearing would impact on populations of significant flora.

Accordingly, it is the EPA's opinion based on available information that the proposal as presented cannot be demonstrated to meet the EPA's environmental objectives.

4. Conclusions and Recommendations

This proposal is for clearing of native vegetation within the agricultural area of Western Australia. As indicated in the EPA's Position Statement No. 2 on protection of native vegetation, large-scale clearing of native vegetation has already lead to unacceptable impacts on biodiversity and the environment generally. Accordingly, from an environmental perspective any further clearing of native vegetation for agricultural purposes within this area cannot be supported.

The proposal as put forward by the proponent cannot be demonstrated to meet the EPA's objectives for biodiversity. As a consequence, the EPA considers the proposal by Mr Darlow to clear approximately 300 ha of native vegetation within portion of Neridup Location 16, Lot 92 Coolinup Road, for the purpose of livestock grazing is environmentally unacceptable and on the basis of available information, should not proceed.

The EPA submits the following recommendations to the Minister for the Environment and Heritage:

1. That the Minister notes that the proposal being assessed is for the clearing of approximately 300 ha of native vegetation for livestock grazing on Lot 92 Coolinup Road, Neridup Location 16, Shire of Esperance.
2. That the Minister considers the report on the relevant environmental factor as set out in Section 3 of this report.
3. That the Minister notes that the EPA has concluded, based on available information, that the proposal as put forward by the proponent cannot be demonstrated to meet the EPA's objective in relation to 'biodiversity'.
4. That the Minister notes that the EPA has not included in this Bulletin "conditions and procedures to which the proposal should be subject, if implemented" because the EPA holds the view that the proposal should not be implemented.

Appendix 1

References

- Agriculture Western Australia (1997) *Memorandum of Understanding between the Commissioner for Soil and Land Conservation, Environmental Protection Authority, Department of Environmental Protection, Agriculture Western Australia, Department of Conservation and Land Management and the Water and Rivers Commission for the protection of remnant vegetation on private land in the agricultural region of Western Australia*. Agriculture Western Australia: Perth, WA.
- Commonwealth of Australia (1996) *Australia: State of the Environment 1996*. Department of Environment Sport and the Territories. CSIRO Publishing.
- Commonwealth of Australia (2001) *National Objectives and Targets for Biodiversity Conservation (2001-2005)*. Environment Australia, Canberra.
- Environmental Protection Authority (2000) *Environmental Protection of Native Vegetation in Western Australia, Clearing of native vegetation with particular reference to the agricultural area. Position Statement No. 2*. Environmental Protection Authority, Government of Western Australia.
- Environmental Protection Authority (2002) *Terrestrial Biological Surveys as an Element of Biodiversity Protection. Position Statement No. 3*. Environmental Protection Authority, Government of Western Australia.
- Gee, S.T. and Simons, J.A. (1997) *Catchments of the Esperance Region of Western Australia. Technical Report 165*. Department of Agriculture, Western Australia, South Perth.
- Government of Western Australia (1998) *Environment Western Australia 1998 - State of Environment Report*. Western Australian Government, Perth, Western Australia.
- Shepherd, D.P., Beeston, G.R., and Hopkins, A.J.M. (2001) *Native Vegetation in Western Australia. Technical Report 249*. Department of Agriculture, Western Australia, South Perth.

Appendix 2

Statement of Reasons for PUEA level of assessment

Environmental Protection Authority

Statement of Reasons for Level of Assessment

Proposal Unlikely to be Environmentally Acceptable

- Proposal:** Clearing of approximately 300 hectares of native vegetation for pasturing and livestock grazing
- Location:** Portion of Neridup Location 16, Lot 92, approximately 65 kilometres east of Esperance, Shire of Esperance
- Proponent:** J & D Darlow
- Date:** 10 October 2002

Description of proposal and location

The proponent and landowners J & D Darlow, propose to clear approximately 300 hectares (ha) of native vegetation on their farming property to provide land for pasturing and livestock (cattle) grazing. The property (portion of Neridup Location 16, Lot 92) is located on the corner of Eld and Coolinup Roads, approximately 65 kilometres east of Esperance, within the Shire of Esperance (Figure 1).

The proponent intends to leave vegetation buffers near low-lying areas and depressions, retain windbreaks, and proposes not to clear the light yellow deep sands (associated with sand dunes) that occurs throughout the area. Therefore, in the area of approximately 400 hectares shown in Figure 1, approximately 300 hectares is proposed to be cleared.

Following consideration by the Inter Agency Working Group under the *'Memorandum of Understanding (MOU) for the protection of remnant vegetation on private land in the agricultural region of Western Australia,'* (Agriculture WA, 1997) the proposal was referred to the Environmental Protection Authority (EPA) by the Office of the Commissioner of Soil and Land Conservation in view of potential impacts on rare flora and impacts on poorly represented vegetation communities.

EPA Position Statement No. 2

This proposal involves clearing for agricultural purposes within the agricultural area of Western Australia, as defined by the map presented as Figure 1 of the EPA's *Position Statement No. 2: Environmental Protection of Native Vegetation in Western Australia* (EPA, 2000). The EPA's position with respect to clearing of native vegetation for agricultural purposes within this area is that any further reduction in native vegetation through clearing for agriculture cannot be supported.

Vegetation description and biodiversity significance

No site-specific surveys have been carried out for the vegetation of Lot 92, Neridup Location 16. However, based on broad scale regional mapping of vegetation by Beard, the vegetation is described as '*Shrublands; scrub-heath*', '*Mosaic: Shrublands; tallerack mallee-heath*' and '*Mosaic: Shrublands; mallee scrub; black marlock*'.

Estimates of the remaining extent of woody vegetation cover of these vegetation types overall, and occurring within conservation reserves, as a proportion of their estimated original extent, is detailed in Table 1. These estimates were obtained through computer overlay and analysis of digital datasets of the 1996 AGWEST 'Woody Vegetation Cover' mapping, Beard vegetation types and the Department of Conservation and Land Management managed conservation estate using a Geographic Information System (GIS).

The estimates indicate that all three vegetation types are overcleared (extent reduced to below 30% of pre-European extent) and are poorly represented in conservation reserves.

EPA's *Position Statement No. 2* identified a 30% threshold level for vegetation types, beyond which species extinction is believed to occur at an exponential rate (EPA, 2000). Any further clearing may have irreversible consequences for the conservation of biodiversity.

Conclusion

The EPA considers that the proposal to clear approximately 300 ha of native vegetation on portion of Neridup Location 16, Lot 92 to provide land for pasturing and livestock grazing cannot be made environmentally acceptable. The proposal does not meet the EPA's objectives for conservation of biodiversity, as detailed in the EPA's *Position Statement No. 2 on Environmental Protection of Native Vegetation*. It is considered that the proposal is likely to further reduce the extent of viable and intact native vegetation within affected vegetation types which are already below the 30% threshold, below which species loss is believed to occur at an exponential rate.

Reasons for Level of Assessment of 'Proposal Unlikely to be Environmentally Acceptable (PUEA)'

1. The proposal does not meet the EPA's objectives for conservation of biodiversity as detailed in the EPA's *Position Statement No. 2 on Environmental Protection of Native Vegetation*.
2. The proposal is likely to further reduce the extent of viable and intact native vegetation within affected vegetation types which are below the 30% threshold, below which species loss is believed to occur at an exponential rate.

References

Agriculture Western Australia (1997) *Memorandum of Understanding between the Commissioner for Soil and Land Conservation, Environmental Protection Authority, Department of Environmental Protection, Agriculture Western Australia, Department of Conservation and Land Management and the Water and Rivers Commission for the protection of remnant vegetation on private land in the agricultural region of Western Australia*. Agriculture Western Australia: Perth, WA.

Environmental Protection Authority (2000) *Environmental Protection of Native Vegetation in Western Australia, Clearing of native vegetation with particular reference to the agricultural area. Position Statement No. 2*. Environmental Protection Authority, Government of Western Australia.

Table 1: Summary of key proposal characteristics

Clearing of approximately 300 hectares of native vegetation for pasturing and livestock grazing, Portion of Neridup Location 16, Lot 92, approximately 65 kilometres east of Esperance, Shire of Esperance - Darlow

Element	Description
Approximate area to be cleared	300 hectares
Purpose of proposed clearing	Pasturing and livestock (cattle) grazing
Mapped description of the type/s of vegetation proposed to be cleared, according to GIS mapping of Beard vegetation types.	Shrublands; scrub-heath Mosaic: Shrublands; tallerack mallee-heath Mosaic: Shrublands; mallee scrub; black marlock
Total representation in (IUCN Category I to IV) secure conservation reserves of vegetation type/s proposed to be cleared, according to Hopkins <i>et al.</i> (1996).	Shrublands; scrub-heath (8% of pre-European extent) Mosaic: Shrublands; tallerack mallee-heath (0% of pre-European extent) Mosaic: Shrublands; mallee scrub; black marlock (13% of pre-European extent)
Total mapped extent of Beard vegetation type supporting woody vegetation (of any condition).	Shrublands; scrub-heath (21% of pre-European extent) Mosaic: Shrublands; tallerack mallee-heath (16% of pre-European extent) Mosaic: Shrublands; mallee scrub; black marlock (26% of pre-European extent)

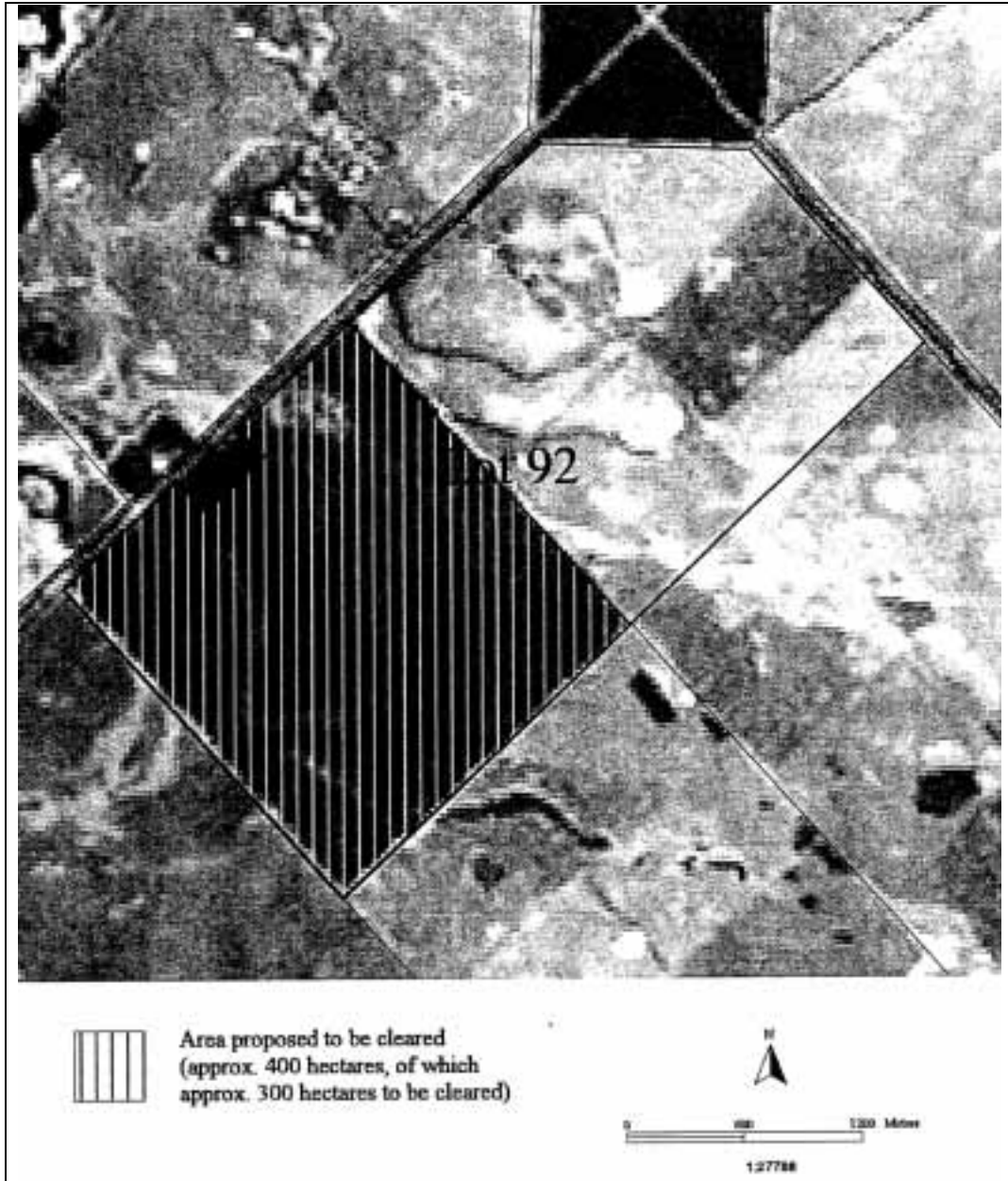


Figure 1: Portion of Neridup Location 16, Lot 92 (Darlow)