

**COMMISSIONER OF SOIL AND LAND CONSERVATION
AGRICULTURE WESTERN AUSTRALIA
SOUTH PERTH WA 6151**

SOIL AND LAND CONSERVATION ACT: REGULATION 4

**NOTICE OF INTENTION TO CLEAR LAND (NOIC)
FITZROY LOCATION 268
ASSESSMENT REPORT**

NOTIFIED BY: OWEN FINGER

FILE: 036/03

SECTION A: BACKGROUND

1. Introduction and Summary

The lessees Owen and Marcia Finger have proposed to clear about 100 hectares on the above location (Debesa Station). This land is on the Wanganut land system which consists of typical Pindan soils which are stable in their nature and common across the region.

2. Notification Dates

The NOI was received on the 12 September 2003 by the Commissioner of Soil and Land Conservation. It was registered as 036/03. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED] for comment.

3. Property Inspection

[REDACTED] is familiar with the area and has conducted an on site inspection of the area on the 2nd December 2003. He was accompanied by Owen Finger.

4. Property Location

Debesa station is located about 80 kilometre south east of Derby on the Great Northern Highway.

4.1 Geographic Position

Nearest Town: Derby is 80 kilometres north west of Debesa

Nearest Road: Great Northern Highway runs east along the southern boundary of Debesa

Map Reference: Lat 17 deg 48 min S and Long 124 deg 13.8min E

AMG Reference: Zone 51K, 0612782 E and 8031477N

5. Local Government Area

Derby West Kimberley Shire

6. Contiguous Locations

Fitzroy Location 268. The proposed clearing of 100 hectares is east of the already cleared area adjacent to the Debesa homestead.

7. Clearing Proposal

The purpose of the proposed clearing of 100 hectares is for dryland hay production using Rhodes Grass *Chloris gayana*. This area will be parkland cleared with all large trees (greater than 300mm diameter) remaining. The hay will be cut before the onset of seeding so it is not anticipated that it would spread.

The proposed clearing of 100 hectares is east of the already cleared area adjacent to the Debesa homestead.

8. Property Description

8.1 Landform

The site is on flat to undulating country that has slopes of less than 1%. There is very little overland flow due to the porous nature of the soils and the flat topography.

8.2 Position in Landscape

The area to be cleared is mid slope with a gentle rise of less than 0.5%. Elevation is around 100metres.

8.3 Geology

The site is located on Wanganut land system, which is very common in the West Kimberley region. The deep sands are relic sand dunes from times when the Great Sandy Desert extended to this region. These sands are underlain with ancient rock formations such as sandstones of the Canning basin

8.4 Soils

The Wanganut land system is characterised by low lying sand plains with through going drainage. The soils are commonly deep red sands (commonly referred to as Pindan) to yellowish sandy soils. On the proposed site the soils are typical pindans. It is made up of fine textured sands with a fair percentage of clays. Soils are typically neutral to slightly acid. (pH 6-7). Horticulture in the Broome area is based on this land system.

8.5 Vegetation

The vegetation is an open woodland with an *Acacia eriopoda* shrub layer known locally as pindan. Species in the upper story include bloodwood *Corymbia cadophora* and *C. dampieri*, *Bauhinia cunninghamii*, Boab *Adansonia gregorii*, Kurrajong *Brachychiton diversifolius*, and Stinkwood *Gyrocarpus americanus*. Grasses include Ribbongrass *Chrysopogon fallax*, Annual Sorghum *Sorghum stipodeum*, and various *Aristida* species.

8.6 Climate

The climate is tropical semi arid with most rainfall falling between December and March from monsoons and cyclonic influences. There is a large variation in annual rainfall. Debesa has an annual rainfall of around 600mm.

SECTION B: ASSESSMENT

9. On site Degradation Hazards

None

10. Off site Degradation Hazards

None. The area is not prone to salinity increases or any consistent change in water tables.

11. Clearing Effect on Degradation

12. Exposure and disturbance of top soil could result in some localised soil erosion from high rainfall events if this occurs prior to plant establishment. There has been no erosion on the 10 hectares used for horticulture. As there are no distinct water channels the soil should not move off the site.

12. Application of Guidelines

12.1 Land Degradation Hazards

Nil

12.2 Subcatchment

There is about 50 hectares that has been cleared in the past adjacent to the Debesa homestead and about 10 hectares being used for horticulture. The clearing should not significantly alter the functioning of the catchment due to the small area and the high infiltration rates of Pindan soils. There are no clearly defined creeklines in the immediate vicinity of the proposed clearing.

13. Suitability of Land for Proposed Use

The Wanganut Land system is classified as having low potential for pastoral activities due to its limited carrying capacity (eg 2-4 cattle units per km²). Pindan soils in the region are used for horticulture and are also being trialed for silviculture. The land use plan for the old Waterbank Station, located to the North of Broome, identified Pindan soils in this region as having potential for more intensive forms of agriculture.(DOLA, 2000)

14. Evaluation of Native Vegetation

1.	Regional Processes	
Item	Principle - native vegetation should be retained if:	Yes/No/Partly
1.1 Water	the clearance of native vegetation is likely to cause deterioration in surface and groundwater catchments which result in increases in salinity and eutrophication.	No

	Horticultural blocks based on this land system around Broome have not had any of these problems	
1.2 Soil	the clearance of vegetation is likely to contribute to soil erosion, waterlogging or flooding. Pindan is a sandy soil providing good drainage	No
1.3 Corridors and Buffers	the land provides a corridor or stepping stone between areas of conservation land or the land provides a buffer or is an inlier to areas reserved for conservation. Most of the surrounding land is uncleared	No
1.4 Aesthetics and Cultural	the land provides high landscape values, has special physiographic features, aboriginal sites or heritage value. This land system is common throughout the area.	No

2.	Representation	
Item	Principle - native vegetation should be retained if:	Yes/No/Partly
2.1.1 Flora	it contains or is likely to contain threatened flora or flora of special interest.	No
2.1.2 Plant communities	it contains or is likely to contain threatened plant communities.	No
2.1.3 Diversity	it contains areas of very high species richness.	No
2.1.4 Wetlands	it contains wetlands of significance. Minor claypans exist on Debesa and hold water for several weeks after the wet, but there are no permanent surface waters.	No
2.1.5 Local representation	within a 15 kilometre radius of the remnant there is less than 20% of the original cover of any plant community on the land represented by: (i) viable occurrences in NPNCA National Parks or Nature Reserves. (ii) Viable occurrences in the Crown Land or Remnant Vegetation Protection Scheme Covenants.	No
2.1.6 Regional representation	it includes vegetation communities not well conserved in the region compared with the original cover as represented in the Interim Biographical Representation in Australia (IBRA).	No

2.2.1 Wildlife	it contains or is likely to contain rare fauna.	No
2.2.2 Habitats	it has significance as habitat for wildlife or if a loss of diversity by clearing part of the land will adversely impact on fauna dependant on a mosaic of vegetation types.	No

3.	Viability	
Item	Principle - survival of natural values over the next 50 years	Yes/No/Partly
3.1 Area	Large areas have higher conservation values, the maximum possible area of a remnant should be retained. Groups of small remnant can support fauna able to move between remnants and threatened species.	NA
3.2 Shape	Very narrow areas of retained vegetation are less likely to be viable and of reduced value as corridors.	NA
3.3 Intactness	Remnants with little or no intact vegetation are unlikely to be viable.	NA
3.4 Diseases and Pests	The vegetation should be free of major diseases and pests such as Dieback. Disease free vegetation is more important for retention if similar vegetation communities in nearby reserves are diseased.	NA
3.5 Invasive plants	Presence of invasive plants capable of, or with potential to, disrupt ecosystem processes. The proposed hay <i>Chloris guyana</i> will be cut before the onset of seeding so there will be little risk of it spreading	No
3.6 Adjacent uses	Adjacent land uses impacting on the viability of the land must be considered.	NA

SECTION C: CONCLUSION

15. Vegetation to be Retained

All trees with a diameter greater than 300mm will be retained

16. Notes

This proposed clearing is for the production of hay based on summer rainfall not irrigation.

- Proponents should minimise the movement of weeds by using clean machinery and checking for any exotic weeds on a regular basis.

If the project ceases the site should be rehabilitated in a manner to encourage the regeneration of the native woodland. Pindan vegetation usually regenerates readily after disturbance.

18. References

Letter from Debesa


TECHNICAL OFFICER
AGRICULTURE WESTERN AUSTRALIA
DERBY
December 4, 2003