



---

Proposed drill site - Lachish

**BOTANICAL SURVEY AND FAUNA HABITAT ASSESSMENT –  
reconnaissance survey and summary report**

25 June 2007

For GSI M

---

### Summary

An exploration drill hole is proposed for a site in the northern midlands of Tasmania. An area of 500 m radius around the proposed site was surveyed for flora and fauna values.

As the drill site is very limited in extent and sited in exotic pasture, there are no obvious impacts upon any natural values of significance. A stand of *Eucalyptus pauciflora* forest in the northern part of the study area has some potential to support threatened plant species and fauna species as indicated in the assessment below. Drilling should be excluded from the stand.

## **ACKNOWLEDGMENTS**

Fieldwork: David Ziegeler

Report preparation: Philip Barker and David Ziegeler

Mapping: Sue Jungalwalla

Client: GSLM

**Date of Survey:** 21st June 2007

**Method:** Botanical survey was carried out on foot. All perceivable habitats were covered. All areas containing at least some native vegetation were investigated and any variations within these were examined. Native species encountered were recorded. All native and introduced species that have naturalised were recorded. All environmental and 'declared'<sup>1</sup> weeds were considered.

Botanical nomenclature follows the current census of Tasmanian plants <sup>2</sup>.

**Purpose:** The survey was designed to assess the flora and fauna values of the Lachish drill site and a 500 m radius of it to document the values and to predict potential impacts and how these may relate to threatened flora, fauna and vegetation conservation legislation.

As well as native plant species, all non-native species have been recorded with emphasis on 'declared weeds' listed in the *Weed Management Act 1999* plus any environmental weeds.

**Limitations:** The survey was undertaken in early winter. There is likely to be some herb, grass, orchid and graminoid species present but because of being outside of their flowering season, were overlooked.

**Study Area:** The study area occurs in the Tasmania Northern Midlands bioregion. It is situated within the 500 mm to 600 mm annual rainfall zone with a dry subhumid cool climate. The site is situated on the North Midlands Plain and consists of gently undulating terrain with a varied geological makeup of Triassic sandstone, Cainozoic sedimentary deposits and Tertiary basalt.

---

<sup>1</sup> Tasmanian *Weed Management Act 1999*

<sup>2</sup> Buchanan (2002)

## Vegetation:

The larger part of the vegetation of the study area is exotic pasture and the lesser balance consists of native vegetation remnants in various environmental conditions depending mainly on the level of impacts of grazing, weed infestation and timber getting (Figure 1).

Two native vegetation communities persist within the route – these being as follows:-

### ***Eucalyptus pauciflora* forest and woodland not on dolerite substrates (DPO)**

This community covers about the northern third of the of the study area. It is dominated by the tree species cabbage gum *Eucalyptus pauciflora* with some white gum trees *E. viminalis*. The stand consists entirely of mature regrowth. It is floristically structurally relatively simple. There is a sparse small tree and tall shrub layer dominated by *Banksia marginata* over a moderately dense ground cover of bracken fern *Pteridium esculentum*. Grasses are frequent with *Ehrharta stipoides* being the most common species and *Austrodanthonia* species and *Poa* species also being frequent. The prostrate shrub *Hibbertia fascicularis* is also frequent.

**Lowland grassland complex (GCL)** This community occurs as one patch near the south west boundary of the study area which is portrayed as marsh by Tas Veg mapping. It consists of a mixture of the grasses *Austrodanthonia* sp., *Ehrharta stipoides* and *Poa labillardierei*. Exotic pastoral herbs such as *Acetosella vulgaris* and *Plantago coronopus* are also common also occur which may indicate that the site is exotic pasture regenerating back to native grassland.

**Table 1: Native vegetation communities in study area**

Equivalent described floristic community	Equivalent Mapped Community	State Wide Conservation Priority	Regional Conservation Priority <sup>3,4</sup>
<b><i>Cabbage gum (Eucalyptus pauciflora) ferny woodland</i></b>			
Grassy <i>E. pauciflora</i> forest and woodland DRY-grPAU	<i>Eucalyptus pauciflora</i> forest and woodland not on dolerite <b>DPO</b>	Not threatened and well reserved	Endangered
<b><i>Austrodanthonia sp., Ehrharta stipoides, Poa labillardierei grassland</i></b>			
Community not ascertained	Lowland grassland complex <b>GCL</b>	Not threatened but inadequately reserved	Not threatened but inadequately reserved

<sup>3</sup> Flinders Bioregion – IBRA 5 - CARSAG (2000) Forest conservation priorities for use outside of CARSAG and the RFA Private Land Reserve Program. An unpublished report to the RFA Private Land Reserve Program, Hobart.

<sup>4</sup> DPIWE 2003 Tasmanian Native Non-forest Conservation Priorities.

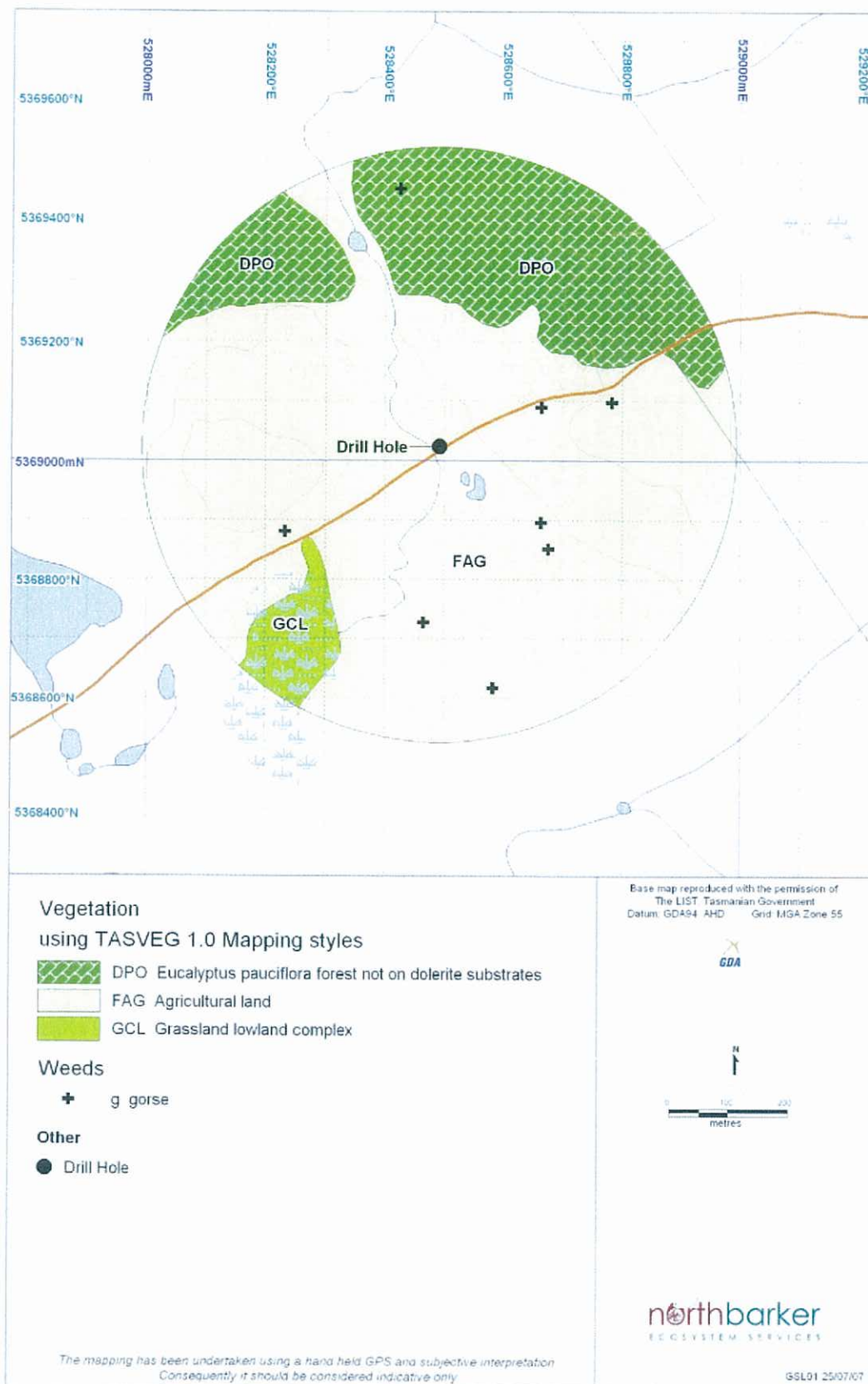


Figure 1 – Distribution of vegetation





**Exotic pasture dominates the area.**



**Eucalyptus pauciflora forest.**

### Threatened plant species:

No vascular plant species of National conservation significance, listed in the Commonwealth *Environment Protection & Biodiversity Conservation Act 1999* were recorded.

No vascular plant species of state conservation significance listed on the schedules of the *Tasmanian Threatened Species Protection Act 1995*.

**Table 2: Flora Species of Conservation Significance Previously Recorded in the Vicinity or Possibly Occurring in the native vegetation in the Study Area**

Species	Conservation Status <sup>5</sup>		Observations
	State	National	
<i>Amphibromus macrorhinus</i> Long-nosed swamp wallaby grass	Endangered	-	Occurs in water holes and low-lying wet areas. Marginal habitat present but species not observed.
<i>Aphelia pumilio</i> Dwarf aphelia	Rare		Occurs in wet grassland. Marginal habitat present but species not observed.
<i>Arthropodium strictum</i> Chocolate lily	Rare	-	Occurs in grassy woodland on fertile soils – may be present but not observed. More readily recorded in spring flowering season.
<i>Austrodanthonia popinensis</i> Roadside wallaby grass	Endangered	ENDANGERED	Occurs in dry grassland. Study area heavily grazed so species not observed if present. Outside of the core range for this species.
<i>Austrostipa nodosa</i> Knotty speargrass	Rare	-	Occurs in dry grassland and grassy woodland – may occur but only

<sup>5</sup> Tasmanian Threatened Species Protection Act 1995

Species	Conservation Status		Observations
	State	National	
			identifiable in summer months.
<i>Bolboschoenus caldwellii</i> Sea club-rush	Rare	-	Occurs in marshland. No suitable habitat present.
<i>Brachyscome sieberi</i> var. <i>gunnii</i> Sieber's daisy	Rare	-	Occurs in open forest. May be present but only likely to be recognised in flowering season.
<i>Caesia calliantha</i> Blue grass lily	Rare		Occurs in native grassy habitats. May be present but only likely to be recognised in flowering season.
<i>Caladenia anthracina</i> Black-tipped spider orchid	Endangered	ENDANGERED	Occurs in woodlands on sandy soil. May be present but only likely to be recognised in spring flowering season.
<i>Caladenia filamentosa</i> var. <i>filamentosa</i>	Rare	-	Occurs in heathy open forest and heathland. May be present but only likely to be recognised in spring flowering season.
<i>Centaurium spicatum</i> Australian centaury	Rare	-	Occurs in rocky/grassy habitat – low probability of being present.
<i>Colobanthus curtisiae</i> Curtis' colobanth	Rare	VULNERABLE	Occurs in dry grassy habitat. May be present but species not observed.
<i>Glycine latrobeana</i> Clover glycine	Vulnerable	VULNERABLE	Occurs in grassy habitat – may be present but species not observed.
<i>Leucopogon virgatus</i> var. <i>brevifolia</i> Short-leaf beard heath	Rare	-	Occurs in woodland. May be present but not observed.
<i>Myriophyllum integrifolium</i> Tiny water milfoil	Vulnerable	-	Occurs in swampy sites. Probably low possibility of being present.
<i>Puccinellia stricta</i> var. <i>perlaxa</i> Spreading saltmarsh grass	Rare	-	Occurs in salt marshes and saline flats – no suitable habitat present.
<i>Pultenaea humilis</i> Dwarf bush pea	Vulnerable	-	Occurs in dry gravelly soils in <i>E. amygdalina</i> forest – no suitable habitat present.
<i>Stenanthemum pimeleoides</i> Spreading stenanthemum	Vulnerable	ENDANGERED	Occurs in dry gravelly soils in open forest – no suitable habitat present.
<i>Viola cunninghamii</i> Cunningham's violet	Rare	-	Occurs in montane grasslands – local record in error.
<i>Wilsonia rotundifolia</i> Roundleaf wilsonia	Rare	-	Occurs in saltmarsh – no suitable habitat present.



### Introduced Plants:

Being partly agricultural land, exotic vascular plants are a significant part of the vegetation. The native vegetation types have largely retained their native floristic character.

One Declared Weed species which is listed under the *Weed Management Act 1999 Section 9*, occurs in the study area. This is Gorse (*Ulex europaeus*) which forms scattered infestations mainly in exotic pasture.

### Fauna Conservation Values:

The study area supports significant habitat or potentially significant habitat for two species of listed threatened fauna listed under the *Tasmanian Threatened Species Protection Act 1995* and the *Environmental Protection and Biodiversity Conservation Act 1999*. These species are eastern barred bandicoot (*Perameles gunnii*) and catadromus carabid beetle (*Catadromus lacordairei*). These and a number of other species recorded within 5000 m of the study area are discussed in the table below.

**Table 3: Fauna of conservation significance previously recorded within a 5 km radius of the study area or likely to occur**

Species	Conservation Status		Observations
	State	National	
<i>Perameles gunnii</i> Eastern-barred bandicoot	-	Vulnerable	Occurs in open forests, woodlands and pasture where substantial ground cover is present. May be present in study area.
<i>Aquila audax fleayi</i> Wedge-tailed eagle	Endangered	-	No suitable nesting habit present within study area of 1 km vicinity but site has some foraging potential.
<i>Pseudomoia pagensterii</i> Tussock skink	Endangered	-	Occurs in dry <i>Poa</i> grasslands. No suitable habitat present.
<i>Litoria raniformis</i> Green and gold frog	Vulnerable	-	Occur in weedy water-bodies. No suitable habitat present.
<i>Catadromus lacordairei</i> Catadroma carabid beetle	Rare	-	Occurs in dry woodlands. Local woodland habitat may be suitable.

### Comment of impact of proposed drill site:

As the drill site is very limited in extent and sited in exotic pasture, there are no obvious impacts upon any natural values of high significance which might occur in the study area. The stand of *Eucalyptus pauciflora* forest in the northern part of the study area has some potential to support the threatened plant species and fauna species as indicated in the table above. If drilling activity is relocated into this stand there is potential for impact.

<sup>6</sup> Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* including JAMBA, CAMBA and Migratory species; *Tasmanian Threatened Species Protection Act, 1995*

**Legislative Implications:**

The works as they are proposed appear to have no implications for commonwealth or state nature conservation legislation.

The works appear to offer no potential for the spread of the 'declared weed' species – gorse however quarantine measures such as wash-down of vehicles and machinery used in other sites is advisable to prevent the risk of weed spread to sites such as the current work site.

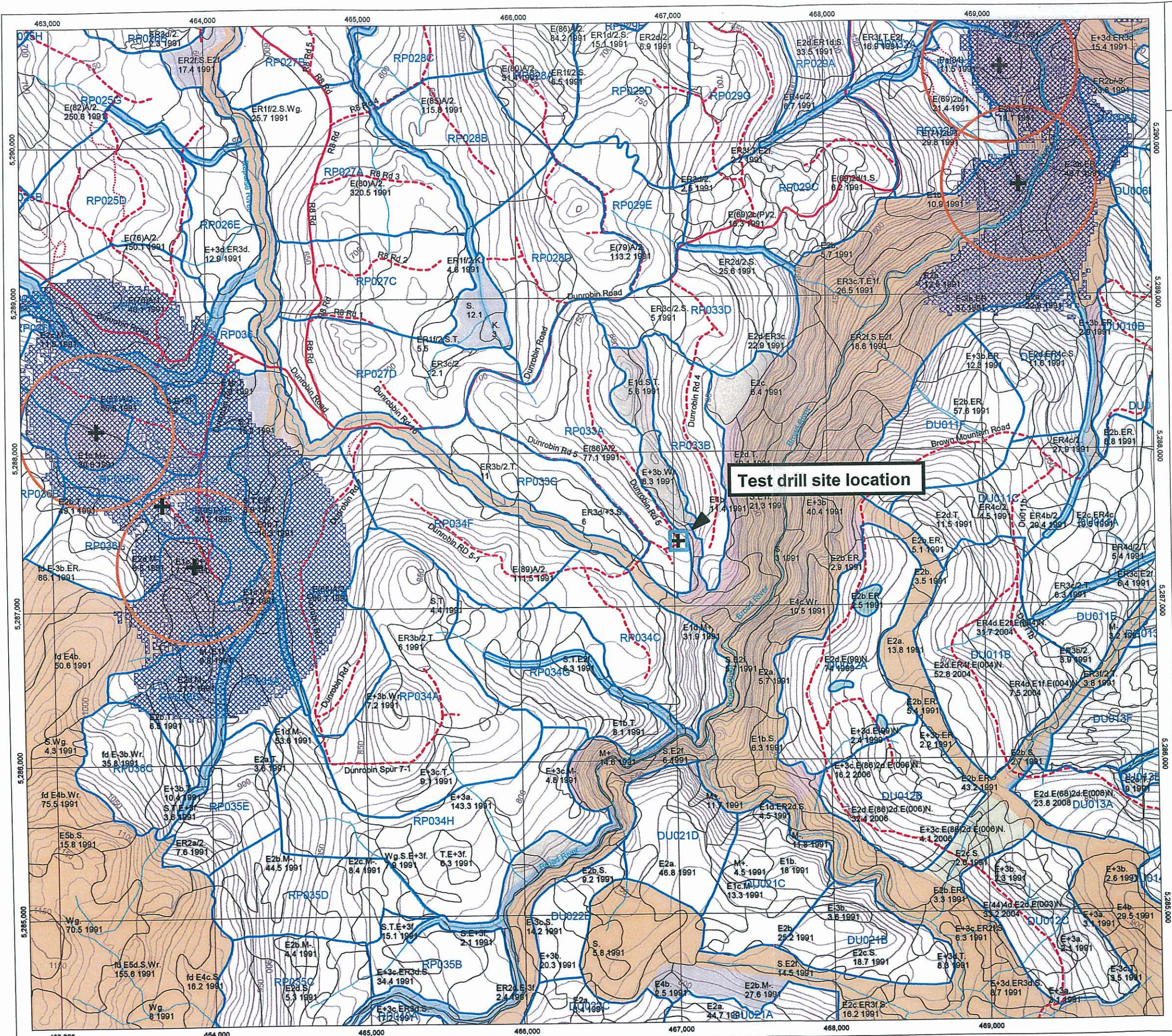
**References:**

- CARSAG (2003). Revision of CARSAG Forest Scores. Internal Memorandum from R. Knight to CARSAG 29<sup>th</sup> January 2003
- Commonwealth of Australia (1999). *Environment Protection and Biodiversity Conservation Act 1999. No. 91, 1999*
- Goff, F.G, Dawson, G.A. and Rochow, J.J. (1982). Site examination for threatened and endangered plant species. *Environmental Management* 6 (4) pp 307-316.
- Land Use Planning And Approvals Act* (1993). Tasmanian State Government, No.70 of 1993. Government Printer, Hobart, Tasmania
- North, A.J., Johnson, K., Ziegler, K., Duncan, F., Hopkins, K., Ziegeler, D., Watts, S. (1998). *Flora of Recommended Areas for Protection and Forest Reserves in Tasmania*. Forestry Tasmania / Forest Practices Board / Parks & Wildlife Service, Hobart.
- Threatened Species Protection Act 1995*. Tasmanian State Government, No.83 of 1995. Government Printer, Hobart, Tasmania
- Tasmanian State Government (1999). *Tasmanian Weed Management Act 1999. No. of 1999*. Government Printer, Hobart, Tasmania









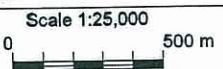
# GSLM Drill Site RP033A Eagle Nest Management

- drill text
- + RP033 Drill Site
  - + Threatened Fauna
  - Eagle 500m Buffer
  - Plan Coupe Base (Boundary)
  - Significant all weather 2 lane feeder road
  - Single lane all weather minor road
  - Single lane minor road
  - Pitype
  - 50 Metre Contour (25K)
  - 10 Metre Contour (25k)
  - Eagle 1km Line of Sight of Nests
  - Unloggable
  - Non commercial
  - Regen problems
  - Steep
  - Streamside reserve
  - Uneconomic
  - Wildlife habitat clump
  - Protection Informal Reserve

NOTE: Coordinates on this map are based on GDA04.

Any topographic data on this map has been supplied by DPWE.

Data is provided as a reference only and boundaries may not always be accurate.



Date: Tuesday, 29 July 2008

Plot identifier:

LOCATION MAP	
4430	4630
4429	4629
4428	4628
4427	4627
4426	4626

Prepared by: bsp

Prepared for:

