

SPECTRAL NOISE DISTRIBUTION

Bracknell (Eglon~~1~~)
 (Green Rises Rd / Elphinstone Rd)
 GR984887 Liffey 1:25000

14/3/2007

1 minute Leq's starting 04:00am

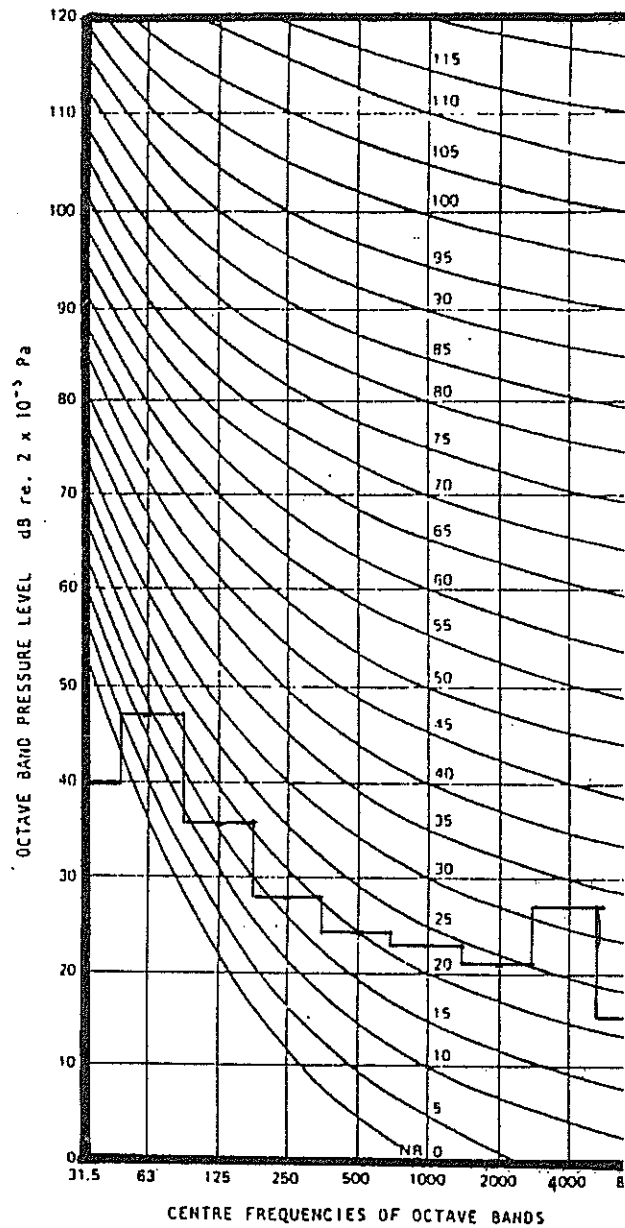
31.9 dB(A)

48.3 dB(C)

53.2 dB(Lin)

Notes

no cars passed by
 peak at 63Hz - irrigation pumps
 peak at 4000Hz - crickets



STATISTICAL NOISE ANALYSIS

Location: Rosecarborough2 at gate Gezer#1

Survey Date: Montpeelyata 1:25000 GR603444

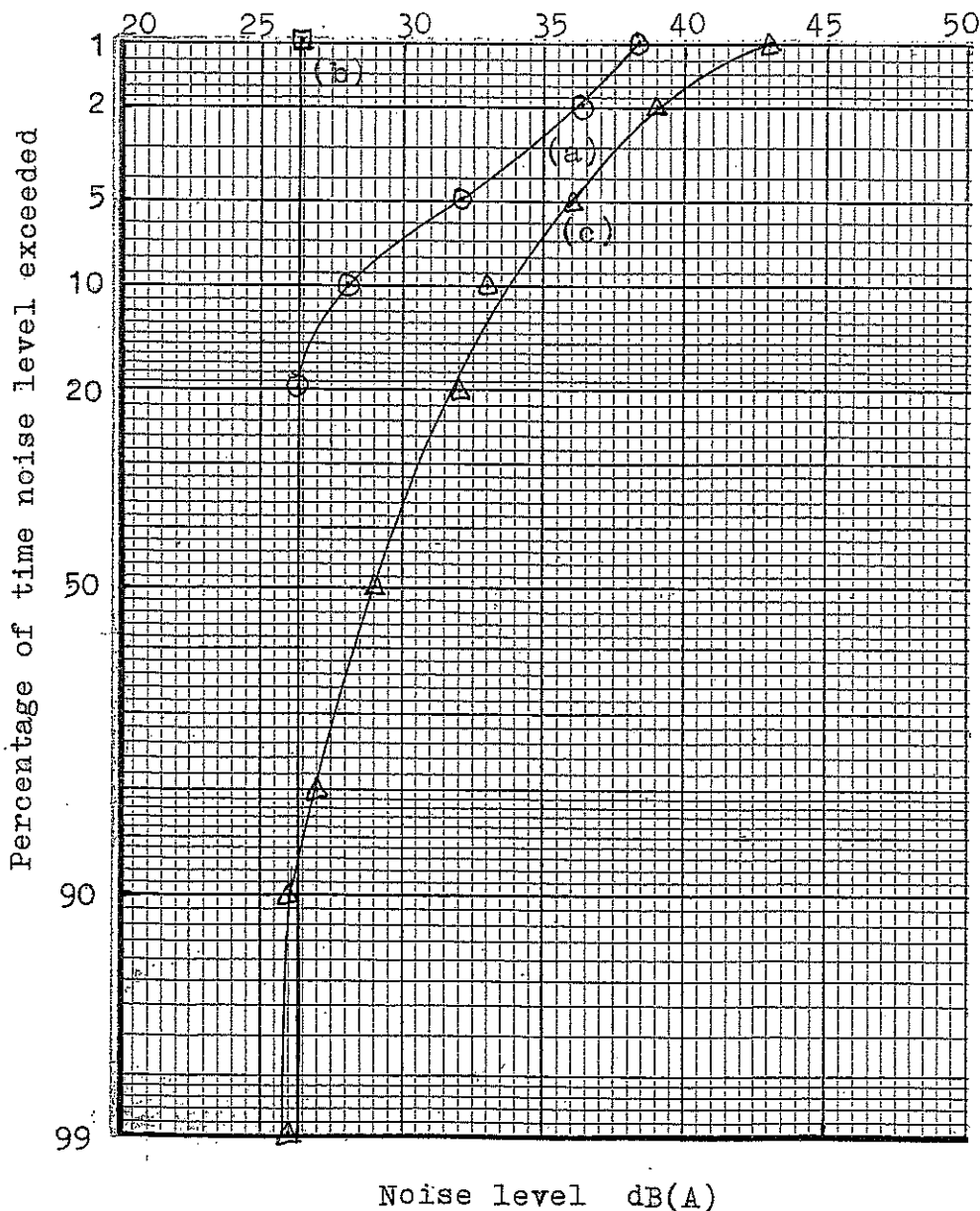
Eng/Tech: M.Lichon

14-15/3/2007

15/4/2007

dB(A)

Comments	Time	L ₁	L ₂	L ₅	L ₁₀	L ₂₀	L ₅₀	L ₉₀	L ₉₉	L _{eq}
(a) 14/3/07 1 truck 1 car	1930-1945	38.3	36.3	32.0	28.0	26.3	26.3	26.3	26.3	29.7
(b) 15/3/07	0015-0030	26.3	26.3	26.3	26.3	26.3	26.3	26.3	26.3	26.1
(Lower limit of instrument measurement)										
(c) 15/4/07 2 cars	1635-1701 (R)	43	39	36	33	32	29	26	26	...
								L80:27		



WEATHER:

	(a)	(b)	(c)
Temp. C	16	7.5	1
Press. hPa	1063	1064	-
Rel.Hum %	63	93	7
Wind speed m/s	0.1	0.0	0.5
Wind. Dir.	W	W	SV
Cloud	0/8	0/8	3/8

INSTRUMENTS:

B&K Stastical Noise
Analyser Type 4426
s/n 722799

B&K Calibrator Type
4230 s/n 1207368

Both laboratory
calibrated Dec 2006

(R) Rion with calibrator

Pearu Terts,
Consulting Engineer

SPECTRAL NOISE DISTRIBUTION

Roscarborough2 at gate, Gezer#1
GR603444 Montpeelyata 1:25000

14/3/07 (a)

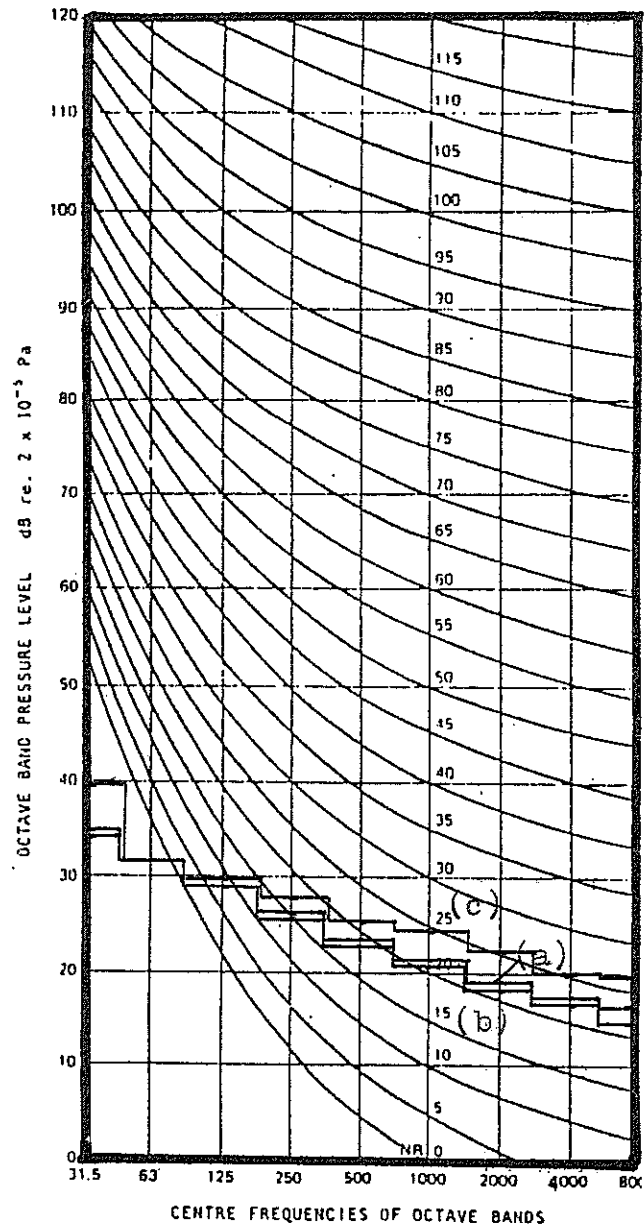
1 minute Leq's starting 20:00
26.7(5 minutes) dB(A)
37.5 dB(C)
44.4 dB(Lin)

15/3/07 (b)

1 minute Leq's starting 00:15
26.2 dB(A) (5 minute)
37.3 dB(C)
44.0 dB(Lin)

15/4/07 (c)

1 minute Leq's starting 16:15
31.4 dB(A)
41.4 dB(C)
64.8 dB(Lin)
17:05
27.4 dB(A)
36.7 dB(C)
45.2 dB(Lin)



STATISTICAL NOISE ANALYSIS

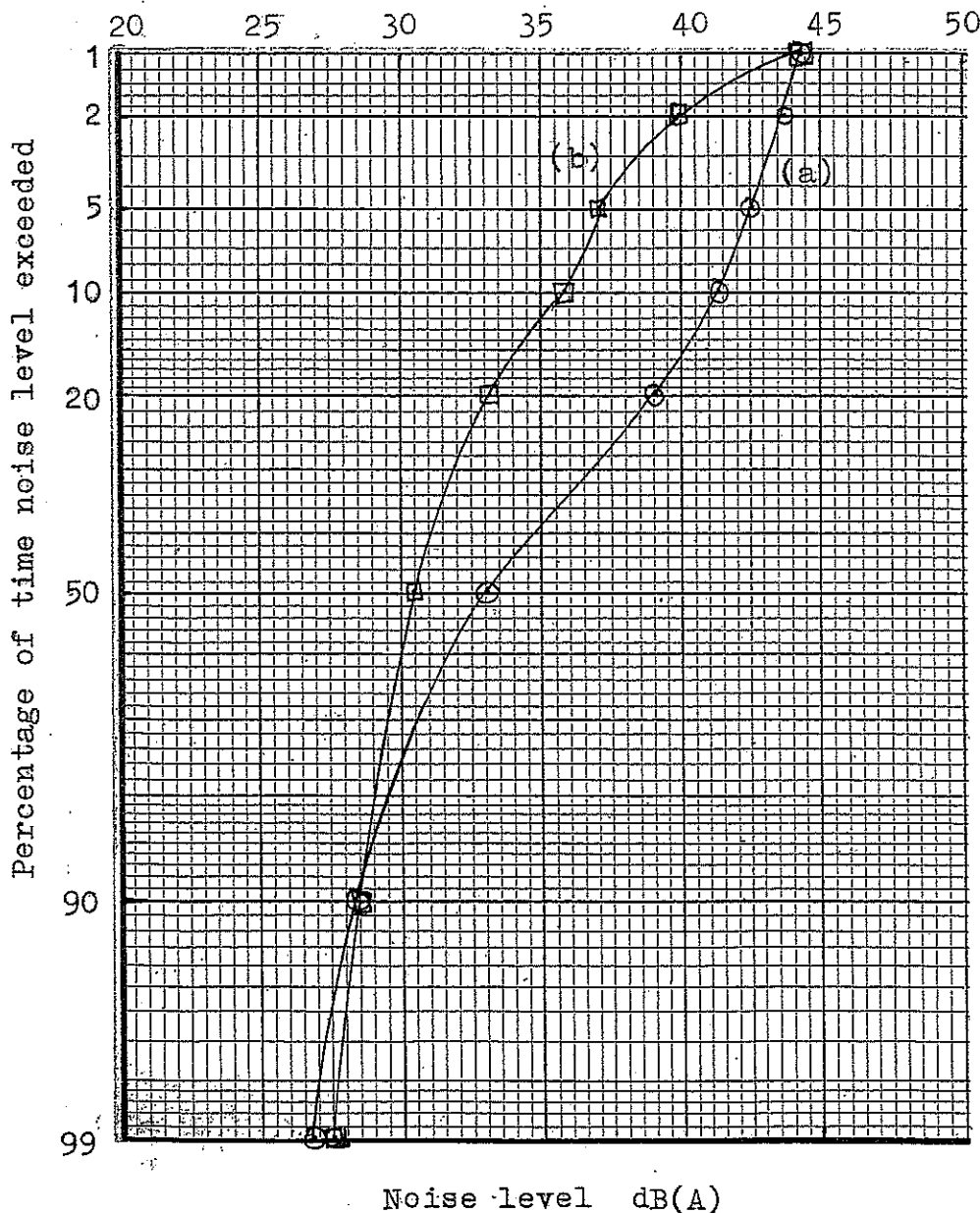
Location: Marlborough Hwy site 65m from road at gate

Survey Date: GR635465 Montpeelyata 1:25000

Eng/Tech: M. Lichon

1/2/07, 14/3/07 dB(A)

Comments	Time	L ₁	L ₂	L ₅	L ₁₀	L ₂₀	L ₅₀	L ₉₀	L ₉₉	L _{eq}
1/2/07(a)	1448-1503	44.3	43.8	42.5	41.3	39.0	33.0	28.3	26.8	36.6
14/3/07(b) lighter traffic	1645-1700	44.3	39.8	37.0	35.8	33.3	30.5	28.5	27.5	34.1



WEATHER:

		(a)	(b)
Temp.	C	20.5	24.5
Press.	hPa	1059	1052
Rel.Hum	%	38	32
Wind speed	m/s	1.1	1.0
Wind. Dir.		W	W
Cloud		1/8	0/8

INSTRUMENTS:

B&K Statistical Noise
Analyser Type 4426
B&K Calibrator Type
4230
s/n 722799, 1207368
Both laboratory
calibrated Dec 2006

Pearu Terts,
Consulting Engineer

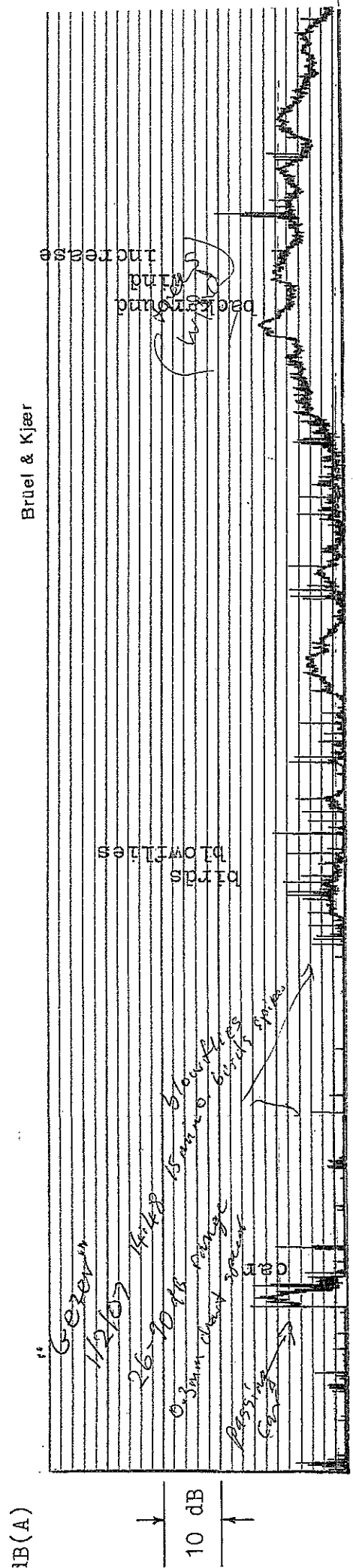
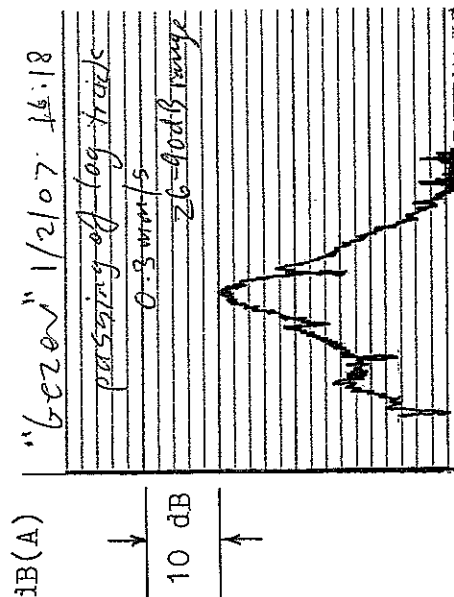
CHART RECORDINGS

Location: GR635465 Montpeelyata
1:25000 map

Marlborough Highway site at gate
65 metres from main road.

Main Trace: 1/2/2007 start at 1448 h
paper speed = 0.3 mm/s

Small trace: 1/2/2007 start 1618 h
paper speed = 0.3 mm/s
passing log truck



SPECTRAL NOISE DISTRIBUTION

Marlborough Hwy site 65m from rd at gate
GR635465 Montpeelyata 1:25000

1/2/2007 (a)

1 minute Leq's starting 1520

30.2 dB(A), 29.9 dB(A)

45.8 dB(C), 46.4 dB(C)

55.2 dB(Lin), 53.2 dB(Lin)

L_{max} car 1612; 55.6
car 1615; 49.7
car 1617; 51.4
log truck 1618; 66.4
car 1623; 50.7
goods truck 1637; 61.1
log truck 1639; 66.3
car 1642; 52.0

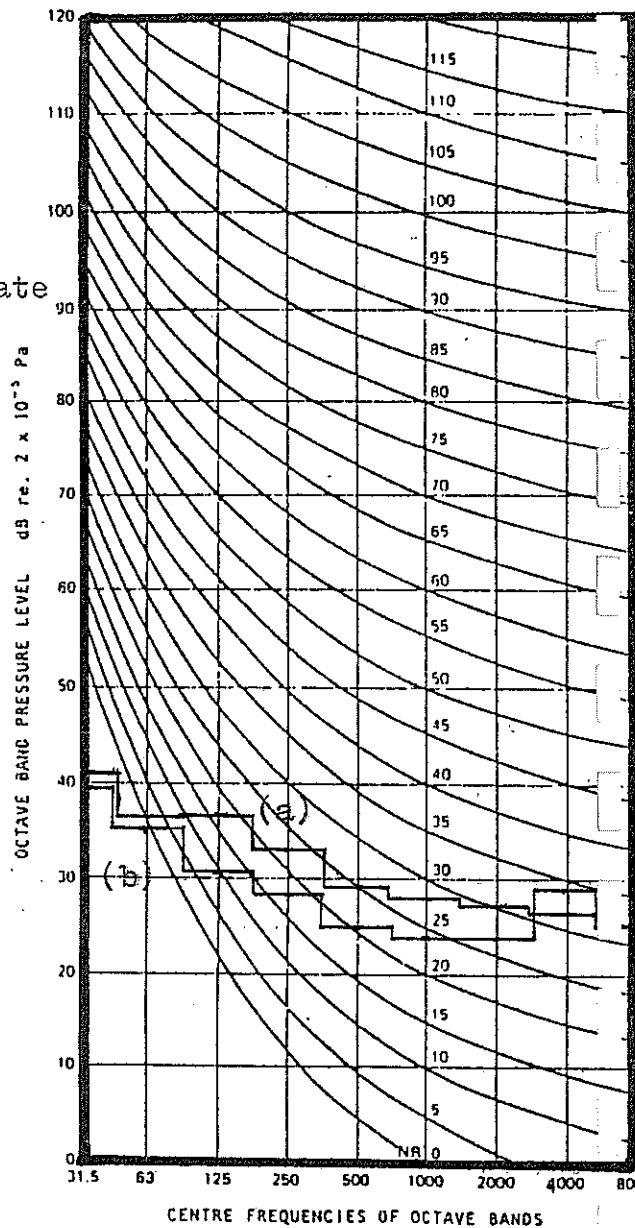
14/3/2007 (b)

1 minute Leq's starting 1655

32.3 dB(A) 5 minute

41.8 dB(C) 5 minute

52.8 dB(Lin) 5 minute



Calculated noise levels drill operating and not operating

inver. = inversion or unstable sunrise/sunset conditions

normal = normal calm atmospheric conditions,

Drill Rig operating

Based on page A 5

Drill Rig not
Operating

See page B 9

Drill Site	Distance nearest house (km)	L1	dB(A)				dB(A)			
			L10	L90	Leq	L1	L10	L90	Leq	
Hebron #1 (Tunbridge)	1.4	inver. 47	45	35.7	41.3	42.3	34.5	26	31.6	
	No	normal 36	32.5	26.2	29.7					
Line of sight										
Ballochmyle (Tunbridge)	1.3	inver. 47.6	45.6	36.3	41.3	57.3	46.3	26.3	44.3	
	No	normal 36.6	33.1	26.8	30.3					
Line of sight										
Lowers (Tunbridge)	2.6	inver. 41.6	39.6	30.3	35.9	43.3	38.0	29.3	35.7	
		normal 30.6	27.1	20.8	24.3					
Lacish #1 (Stockwell)	1.5	inver. 46.4	44.4	35.1	40.7	30.3	-	-	26.8	
		normal 35.4	31.9	25.6	29.1	46.8	41.8	35.5	39.6	
Eglon (Bracknell)	573	inver 49.7	47.7	38.4	44.0*	54.3	33.8	31.0	40.6	
		normal 38.7	35.2	28.9	32.4*					
* = includes noise barrier										
Gezer #1 (Bronte)	none					26.3	-	-	26.1	
Marlborough (Bronte)	none					38.3	32.8	27.3	30.8	

Noise Barriers
Bracknell, nearest house 573 m

Barrier height metres	Source height metres	Receiver height metres	Source-barrier metres	Barrier-receiver metres	Noise reduction dB(A)
5.1	5.1	1.8	15	558	-5
5.1	5.1	1.8	20	553	-5
5.1	4.8	1.8	15	558	-5.7
5.1	4.8	1.8	20	553	-5.6
5.1	3.6	1.8	20	553	-8.6
7.65	5.1	1.8	15	558	-11.1

Barrier height of two containers one on top of other = 5.1 m
 Barrier “ “ three containers on top of each other = 7.65 m



SENIOR CONSULTANT :
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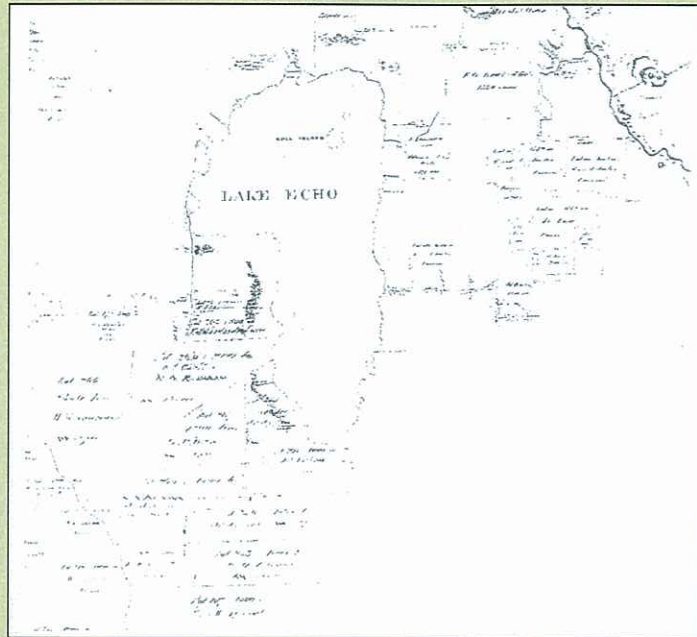
Phone: 03 62789598
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www.ARCTAS.com

DESKTOP HISTORIC CULTURAL HERITAGE ASSESSMENT

PROPOSED DRILL SITE
LAKE ECHO VICINITY

SOUTH CENTRAL HIGHLANDS



Prepared by Parry Kostoglou
ARCTAS Pty Ltd.

For Great South Land Minerals Ltd.
August 2008

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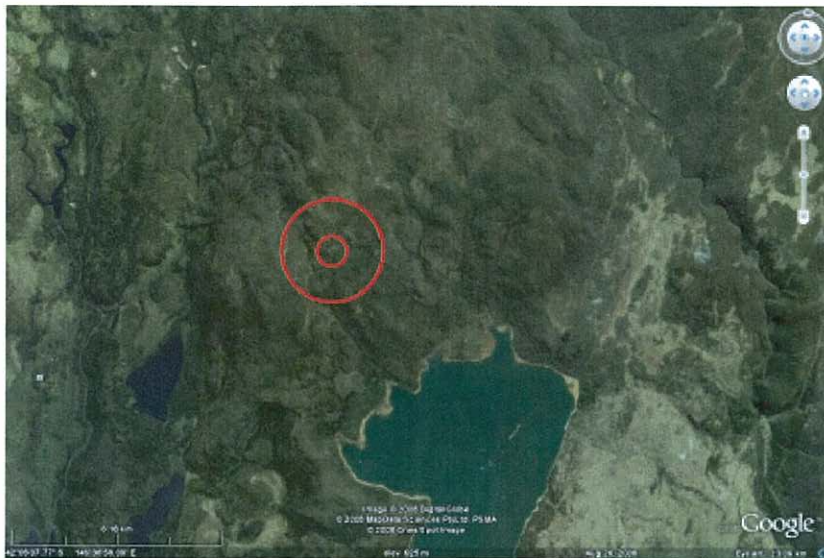
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1.0 BACKGROUND

As a part of its oil exploration program throughout the Tasmanian Midlands, Great South Lands Minerals Limited is currently seeking to undertake exploratory drilling in the Lake Echo vicinity in the Tasmanian south central highlands of Tasmania.

2.0 LOCATION AND EXTENT OF ASSESSMENT AREA

The current program requires drilling at a single locality approximately two kilometres north west of Lake Echo adjacent to Snarers Creek.



3.0 METHODOLOGY

This consultant reviewed relevant documentation held by the majority land manager (Forestry Tasmania).

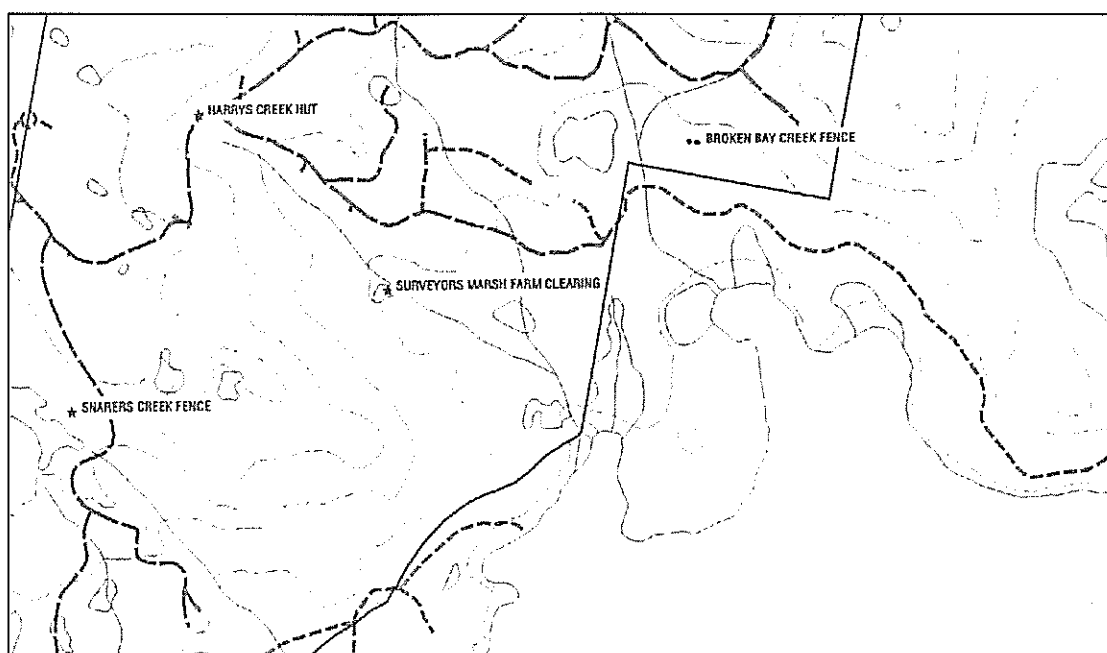
4.0 PREVIOUS WORK

The principal source of information for this area is a report titled 'An archaeological survey of historic sites in the South Central Highlands of Tasmania by Kostoglou undertaken for Forestry Tasmania in 2000. The location based information for this investigation was derived from extensive field work. Although this was expedited without the use of GPS

the grid co-ordinates for located sites are considered accurate to 25 metres.

5.0 SUMMARY OF RESULTS

Based on research conducted for this desktop based investigation, four sites are known to occur within proximity (1 kilometre) to the proposed impact area. Relevant location based information appears below while site summaries appear in Section 6.0 overleaf.



1:25,000 scale map of immediate area surrounding proposed impact zone showing known historic sites (from Kostoglou 2000)

Tabular summary of known sites (from Kostoglou 2000)				
Site Name	Grid ref.	Site type	Significance	Source
Harrys Creek hut	E 0466800 N 05338950	Pastoral	Medium Local	Kostoglou 2000
Surveyors Marsh farm clearing	E 0468000 N 5338100	Pastoral	Low Local	Kostoglou 2000
Snarers Creek fence	E 0466150 N 5337350	Pastoral	Low Local	Kostoglou 2000
Broken Bay Creek fence	E 469800 N 5338950	Pastoral	Medium Local	Kostoglou 2000

6.0 HISTORICAL CONTEXT

After its initial location by assistant surveyor Thomas Scott in 1823, the area surrounding Lake Echo was successively travelled by several colonial explorers throughout the following 25 or so years. During the early to mid 1850's this land was surveyed into large scale allotments over 500 acres which were only selectively taken up by a small number of large landholders. Associated improvements appear to have been lacklustre and the resident archaeological remains appear to date from the late 19th to early 20th century when these lots were further sub divided and leased by lessees who undertook assorted pastoral and hunting activities. Such marginal activities prevailed until the mid 20th century when selective logging associated with sawmilling was undertaken in the now vacant land. Since the 1970's the relevant Exclusive Forest Permits have been succeeded by large scale logging concessions granted to large scale corporate entities.

7.0 PREDICTIVE SUMMARY

Based on previous work the following predictive statements are considered applicable to the development area.

The resident historical archaeology consists of sites and features associated with small scale pastoral and hunting/snaring activities dating from the late 19th/early 20th centuries. These activities were often undertaken by the same individuals who moved sheep into the highlands vicinity seasonally and trapped game such as wallabies and possums for pelts to supplement their meagre incomes. The mid 20th century saw the incursion of selective timber harvesting and activities related to hydro electricity generation at nearby Lake Echo. The physical archaeological vestiges of such activities include:

- Assorted style timber fences (chock & log or post & rail)
- dry-stone walls erected as lease boundary markers
- dry-stone chimney butts
- dry-stone circular fireplaces
- Small single roomed timber huts

- Timber or dry-stone livestock corrals
- Logging roads and snig tracks

These sites and features have varying levels of cultural significance.

8.0 RECOMMENDATIONS

As a result of this assessment, it is recommended that the drilling program consisting of a single drill hole be allowed to proceed providing that:

- **The drill rig accesses the site on existing roading**
- **That the drilling and associated activities avoid any of the documented historic cultural sites and features described in this report.**
- **That the drilling and associated activities avoid any previously un-documented site and feature types alluded to in Section 7.0 of this report.**
- **That a field inspection of the proposed drill site be undertaken by a qualified archaeologist if any such remains are located prior to drilling.**

9.0 REFERENCES

Kostoglou, P. 2000. An archaeological survey of historic sites in the South Central Highlands of Tasmania. Forestry Tasmania.