what's new pussycat?

wild-life in the anglesea heath

alcoa anglesea

2007

environment report

september

ALCOA

australia's aluminium

air

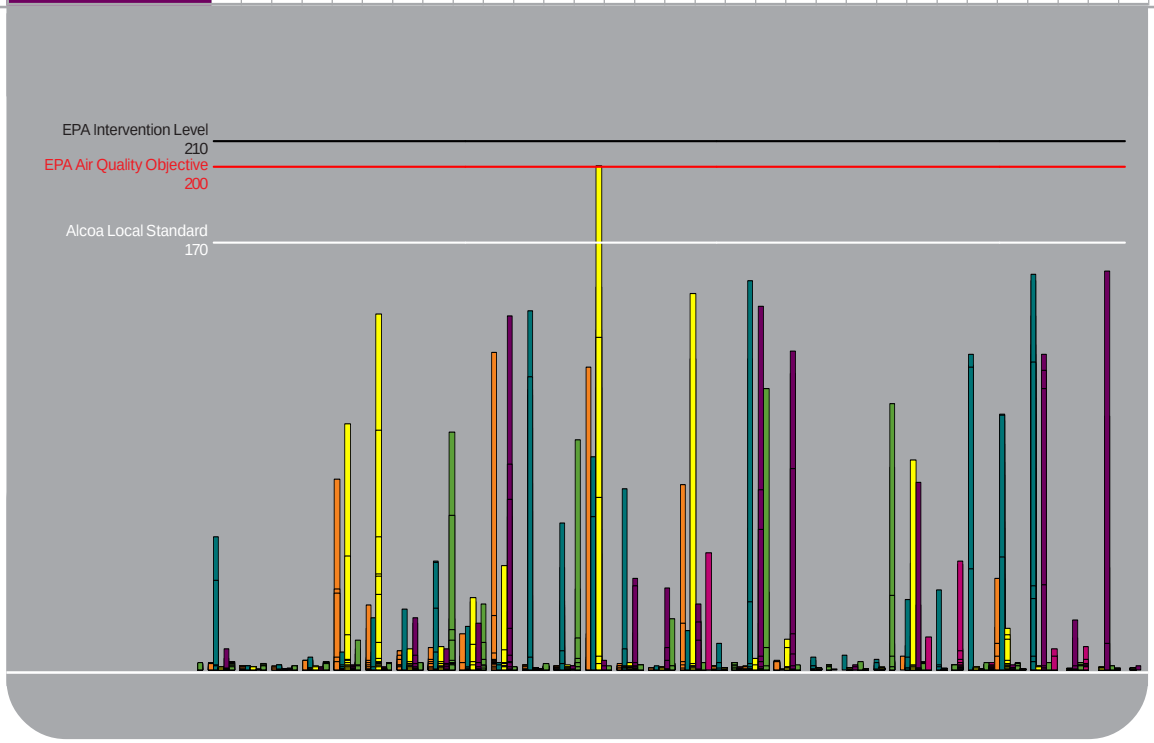
Air Monitoring Stack Monitors	Average	Maximum
Opacity g/m^3 10-minute average	0.060	0.271
Stack SO_2 kg/min 1-hour average **Licence limit** 100kg/min	63.87	79.95

Ambient Monitors SO_2 1 hour ppb	Average	Maximum
Community Centre	3	112
Primary School	4	142
Mt Ingoldsby	2	126
Scout Camp	10	157
Camp Wilkin	4	201
Camp Road	4	160

Ambient Monitors

SO_2 Maximum 1 hour averages (ppb)

Date	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Community Centre	3	4	3	2	3	12	3	3	95	26	1	3	91	2	2	20	3	3	112	2	2	3	106	3	2	3	3	3	3	2
Primary School	0	0	0	1	2	1	35	68	50	134	1	2	27	1	5	138	0	20	129	1	1	1	142	1	1	5	12	1	1	1
Mt Ingoldsby	3	2	2	4	76	26	8	9	14	126	2	2	121	3	1	74	2	2	4	0	0	0	6	0	0	36	0	0	0	0
Scout Camp	53	-	-	2	2	2	5	7	21	24	43	17	3	143	58	85	72	2	16	11	155	0	5	6	4	28	32	125	102	157
Camp Wilkin	1	1	1	2	98	142	9	10	29	42	1	2	201	3	1	150	1	5	12	1	1	1	84	1	1	17	2	1	1	1
Camp Road	8	0	1	1	2	1	21	9	19	141	0	2	4	37	33	26	0	145	127	0	2	0	74	0	0	2	125	20	159	2



water

Water Storage

Barwon Water storage levels for the Geelong system at 28.8% capacity. Stage 4 restrictions apply.

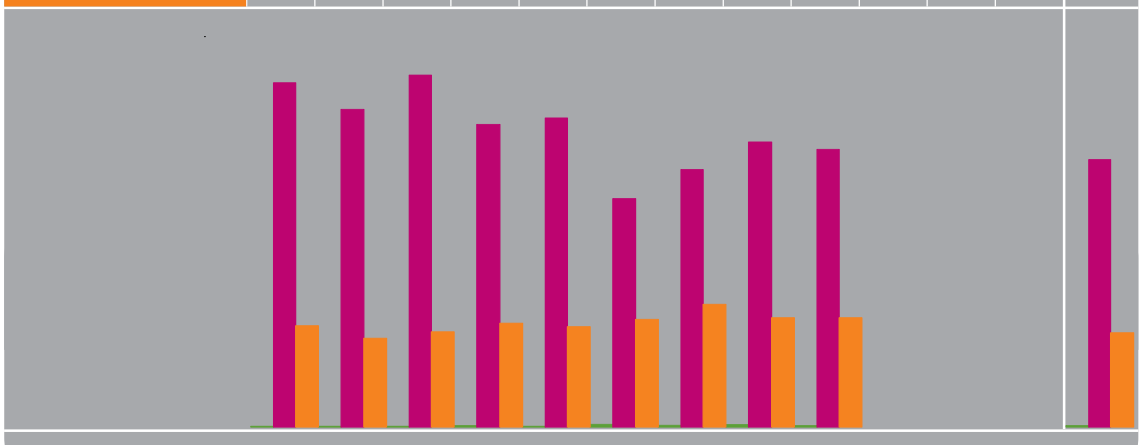
Water Discharge ML	September	Total
Ashponds (SP1)	113	1217
Mine (SP4)	0	0

Water Monitoring 18/09/2007	SP1 Ashpond		SP4* Mine		SP3 Final	
	EPA limit	Lab Result	EPA limit	Lab Result	EPA limit	Lab Result
pH	4-10	8.6	3-9	3.3	5-9	7.1
Susp. Solids	100	4	100	2	30	< 2
Colour	50	5	50	4	50	4
Aluminium	10.00	0.14	10.0	1.4	5.500	0.057
Iron	10.00	0.25	20.0	7.3	4.000	0.056
Zinc	0.400	0.016	2.000	0.080	0.300	0.020

* Although there was no formal discharge, a broken pipe did see a leakage of mine water at SP4 thus a full set of analysis was completed.

WATER WATER USAGE PER MONTH (ML)

Date	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	TOTAL
Town Water	0.7	0.7	0.9	1.1	0.9	2.3	1.7	1.9	1.4				**11.6**
Bore Water	274	253	280	241	246	182	205	227	221				**2129**
Mine Water	81	71	76	83	80	86	98	87	87				**749**



feral cats

Feral cats (*Felis catus*) probably became established in Australia soon after the arrival of the first Europeans. However, they may have arrived earlier via the trading routes from south-east Asia, shipwrecks or visits by European ships, especially on Australia's west coast.

Feral populations now occupy most parts of the mainland, Tasmania and some offshore islands.

Feral cats are believed to be responsible for the extinction or decline of native marsupials and birds in Australia. They have caused the extinction of several wildlife species on islands and contributed to the disappearance of many ground dwelling birds and mammals on the mainland. They are listed as a known or perceived threatening process for 58 native species under the *Environmental Protection and Biodiversity Conservation (EPBC) Act 1999*.

For management purposes, cats are divided into three categories — domestic, stray and feral — although individual cats may move between categories. Domestic cats are owned and cared for and stray cats are those found roaming cities, towns and some rural holdings. Feral cats, which survive without any human contact or assistance, are the main target of control programs.

Although many agencies and organisations commit significant resources to managing feral cats, there is little reliable information on the impacts of feral cats, or on the benefits of controlling feral cats.

This situation is at least partly due to uncertainty about the ability to accurately and precisely estimate the relative or absolute abundance of feral cats or the impact of control operations on populations. Feral cats may occur at very low densities in some habitats and a large proportion of the population may be averse to detection meaning there are few techniques for estimating the absolute abundance of feral cats. Other techinques that are used to assess fox and rabbit populations, such as spotlighting, are unlikely to detect anything with such discrete populations.

However a research project currently being conducted in the Anglesea Heath may change all that.

Researchers for the Department of Sustainability and Environment's Arthur Rylah Institute are evaluating the methods of estimating the abundance of feral cats with the aim of providing recommendations for a national monitoring protocol to estimate the absolute and relative abundance of feral cats.

The research is investigating current methods used to estimate the abundance of feral cats track counts (recording tracks of feral cats on sand plots) and capture (cage and/or leg traps) as well as new techniques such as motion/heat detection sensor cameras and hair collection devices for DNA-based analysis.

Sounds like the purrfect setup to find an Otway panther.....

ANIMALS OF THE ANGLESEA HEATH

FERAL CAT (*Felis catus*)

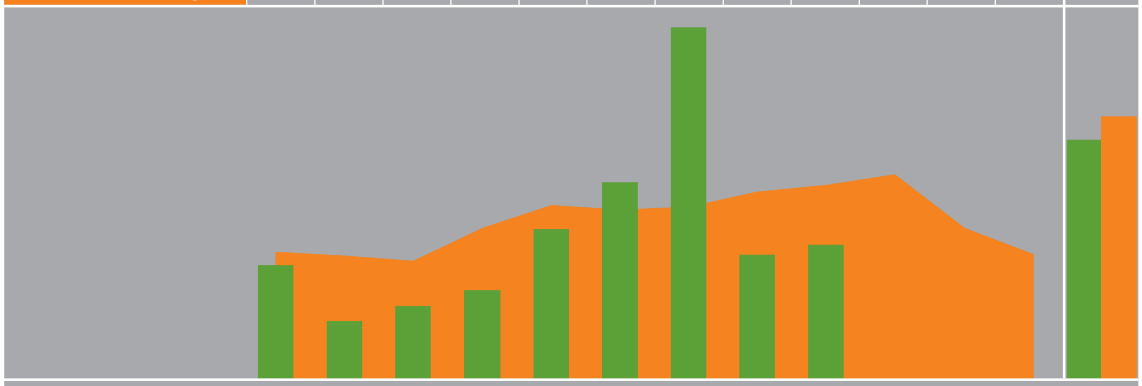
Size:	similar size to a typical suburban domestic cat with an average adult weight of 4.5kg
Description:	the most common coat colour of feral cats is striped tabby but blotched tabby and black are also common
Distribution:	feral cats are now found in most habitats on the mainland, Tasmania and many offshore islands, although not in the wettest rainforests
Food:	feral cats are carnivores and can survive with limited access to water; generally eat small mammals but also catch birds, reptiles, amphibians, insects and fish; in pastoral regions they feed largely on young rabbits but in other areas feral cats prey mainly on native animals; it is estimated feral cats kill on average ten wildlife items each week

FERAL CAT

LAND

RAINFALL (mm)

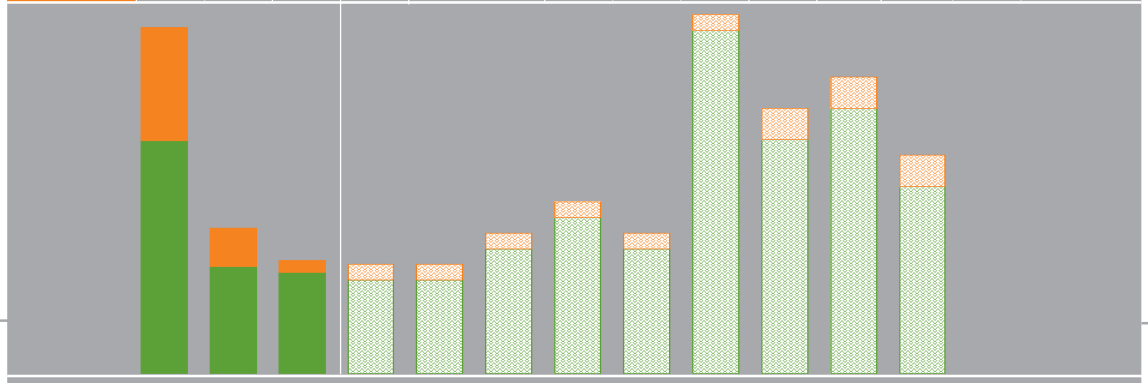
Month	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	TOTAL
2007 Rainfall	40.0	20.2	25.6	31.0	52.8	69.2	124.0	43.6	47.2				**453.6**
1968-2006 Average	44.6	43.3	41.5	53.1	61.2	59.6	60.6	65.8	68.3				**498.0**



WATER

TOWN WATER USE (ML)

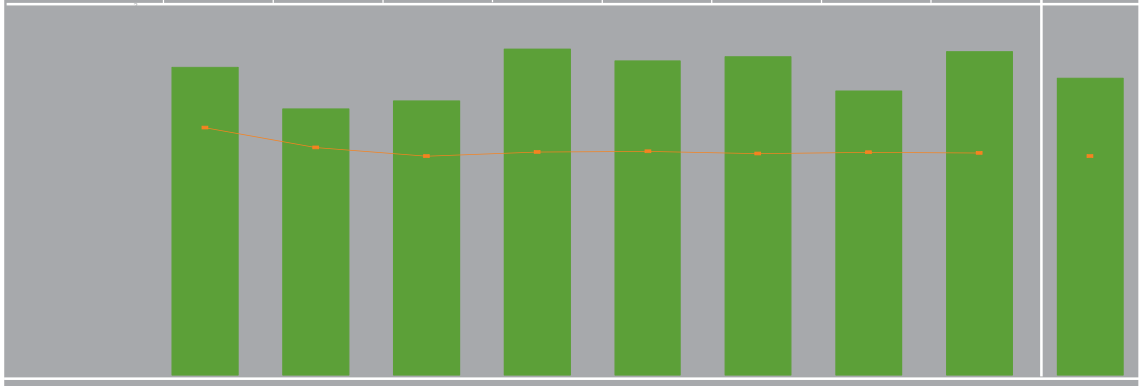
	2000	2006	2007	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Process	23.9	11.0	**10.4**	0.6	0.6	0.8	1.0	0.8	2.2	1.5	1.7	1.2			
Amenity	11.6	3.8	**1.2**	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2			



AIR

GREENHOUSE GAS (GHG) TOTAL (Mt) & GHG EMISSION EFFICENCY (t/MWh)

	1990	2000	2001	2002	2003	2004	2005	2006	2007
GHG Mt	1.42	1.23	1.27	1.50	1.45	1.47	1.31	1.49	**1.37**
◆ GHG t/MWh	1.34	1.24	1.19	1.21	1.21	1.20	1.21	1.20	**1.18**



environmental improvement

Environmental Management Targets	September	2007 Total	Forecast	2007 Target
Reportable Environmental Incidents	1	3*	4	0
Monthly EHS ASAT Audit Completion (%)	100	100	100	90

* The Alcoa Corporate Compliance Group have reviewed the SO2 incidents incurred since 2002, all incidents have now been reclassified from breaches of the Alcoa Local Standard to Non Compliance with Laws and Regulations.

Air Emission Targets	September	2007 Total	Forecast	2007 Target
Ambient SO_2 (no. readings > 210ppb)	1	3	4	0
Ambient SO_2 (no. readings > 200ppb)	1	4	5	0
Stack SO_2 (no. hrs > 100kg/min)	0	0	0	0
SO_2 Load Reductions (lost MWh)	7428	18532	24710	N/A
GHG Efficiency (t CO_2 e/MWh)	1.15	1.18	1.18	1.20
Opacity (10 min av > 0.25g/m^3 normal operation)	0	0	0	0

Water Targets	September	2007 Total	Forecast	2007 Target
Town Water (ML)	1.4	11.6	15.5	14.2
Bore Water (ML)	221	2130	2840	2667

Waste Targets	September	2007 Total	Forecast	2007 Target
Waste to Landfill (t)	0.0	0.0	0.0	9.0
Solid Prescribed Waste to Landfill (t)	0.0	0.0	0.0	0.0

Mine Rehabilitation Targets	2007 Total		2007 Target
2007 Area Cleared (ha)	2.9		3.5
2007 Area Rehabilitated (ha)	5.0		> 3.5
2005 Mine Rehabilitation Species Richness (%)	103		100

OUR ENVIRONMENT..OUR RESEARCH PARTNERS

Alan, what does the job of a Senior Scientist with ARI look like? My job involves initiating and leading research projects aimed at providing robust evidence that informs and supports the development of broader land management policy for DSE and a range of external clients. I am currently working on assessing methods for measuring changes in abundance of feral cats, the safe and effective use of aerial baiting for the control of wild dogs, and assessing the effectiveness of broad-scale fox control. I also provide advice to the Eastern Barred Bandicoot recovery team.

Out and about in the forests of Victoria....any panther sightings? Introduced feral predators are my area of expertise. I have seen a few strange things in the bush, but never anything like a panther. I suspect not many people have seen a panther in the wild, so it's hard to know what people have seen. I certainly think people believe they have seen a large cat-like creature, but belief and fact are two different things. Until somebody actually has one in the hand it will remain in the realms of big foot and the yeti.

We hope your enjoying your time in the Anglesea Heath? The heath is a fantastic place, it has a great diversity of flora and fauna and the general setting is certainly ideal for undertaking field work. We hope that our research will enable Parks Victoria and Alcoa to effectively manage the impact of feral cats.

...ALAN ROBLEY