



up close and personal
banding anglesea's falcon chicks

alcoa anglesea

environment report

2008
october



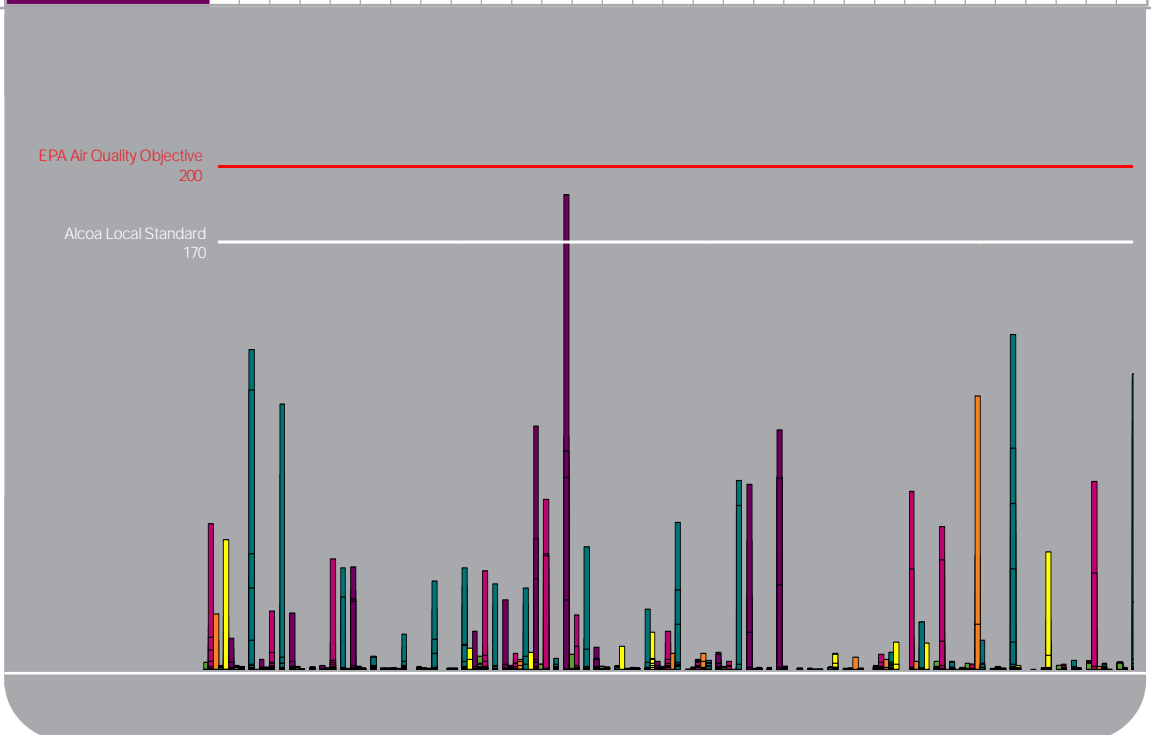
australia's aluminium

air

Air Monitoring	Average	Maximum
Stack Monitors		
Opacity g/m ³ 10-minute average	0.072	0.161
Stack SO ₂ kg/min 1-hour average Licence limit 100kg/min	66.40	82.45

Ambient Monitors	Average	Maximum
SO ₂ 1 hour ppb		
Community Centre	< 1	6
Primary School	2	75
Mt Ingoldsby	< 1	109
Scout Camp	5	133
Camp Wilkin	< 1	52
Camp Road	4	189

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	31
Community Centre	3	2	1	1	0	1	1	1	1	5	2	2	6	1	1	1	1	1	0	1	0	0	2	0	3	2	1	0	2	3	3
Primary School	58	1	23	0	44	0	1	0	0	39	6	67	22	1	1	15	4	3	1	0	0	0	6	71	57	2	0	0	2	75	1
Mt Ingoldsby	22	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	6	1	0	0	0	0	5	0	3	109	0	0	0	1	0
Scout Camp	1	127	105	1	40	5	14	35	40	34	33	5	49	2	24	58	4	75	1	0	1	0	7	19	3	12	133	1	4	2	118
Camp Wilkin	52	0	0	0	0	0	0	0	-	0	8	7	0	0	0	9	15	0	0	0	0	0	6	0	11	10	0	0	2	47	1
Camp Road	13	4	23	2	41	0	0	0	15	28	97	189	9	0	3	-	-	-	-	-	-	0	0	7	73	95	-	-	-	0	1



water



Water Storage

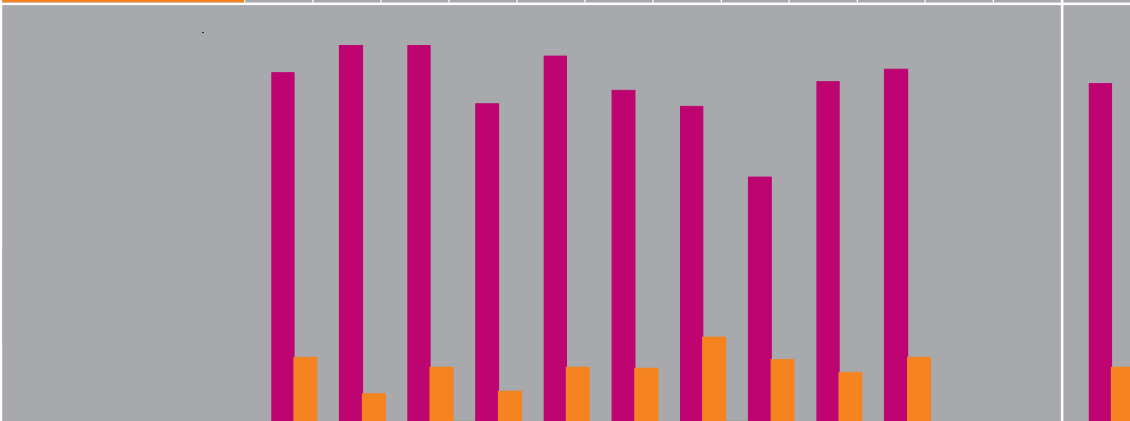
Barwon Water storage levels for the Geelong system at 28.7% capacity. Stage 4 Water Restrictions - Daylight Savings are now in force until April 5, 2009. Garden watering limited to 7PM-8PM twice weekly.

Water Discharge	October	Total
ML		
Ashponds (SP1)	136	1383
Mine (SP4)	0	0.12

Water Monitoring 14/10/2008	SP1 Ashpond		SP4 Mine		SP3 Final	
	EPA limit	Lab Result	EPA limit	Lab Result	EPA limit	Lab Result
pH	4-10	8.3	3-9	no	5-9	7.3
Susp. Solids	100	< 4	100	discharge	30	< 4
Colour	50	5	50	at	50	5
Aluminium	10.00	< 0.01	10	time	5.50	0.03
Iron	10.00	0.18	20	of	4.00	< 0.05
Zinc	0.40	< 0.01	2.0	sampling	0.30	< 0.01

WATER WATER USAGE PER MONTH (ML)

Date	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	TOTAL
Town Water	1.4	0.9	0.9	2.2	1.0	0.9	1.7	2.2	1.0	1.3			13.5
Bore Water	279	304	305	254	292	265	252	196	272	282			2701
Mine Water	53	24	45	26	45	44	69	51	41	53			451



peregrine falcons



We are proud to announce Alcoa Anglesea's three falcon chicks for 2008; Midnight, Rocket and Stan.

For the fifth year in a row, Peregrine Falcons have returned to the purpose-built nesting box on top of the Alcoa Anglesea water tower.

After less than 50% of the eggs hatching in 2006 and 2007, it was a welcome sight to have all three eggs successfully hatch this year and see three bundles of white fluff eagerly waiting for us as we approached the nest box.

Not so eager to see us were the protective parents, Sheila and Havoc. They certainly made their presence known during the expedition up to retrieve the chicks. The visit was quick as both were relentless in their swooping (and striking) behaviour. Chin straps are no longer optional!

Volunteers from the Victorian Peregrine Project completed the health assessment and banding of the chicks. At this age, weight and wing length measurements are used to determine the sex of

the chicks with males typically one-third smaller than females. This year we have three healthy boys with Midnight, Rocket and Stan weighing in at 590, 575 and 560g respectively. With no distinguishable size difference between the three, the unique code combination on the two-tone aluminium band on their right leg is the only definitive way to tell who's who.

Grade 2 students for the Anglesea Primary School were on the ground to witness the measurement, health check and banding of the three male chicks. Three students - Myee, Klara and Emily - had their suggestions for the chicks' names chosen from the class list.

The webcam at www.alcoa.com/falcons continues to broadcast images from the Peregrine Falcon nest box at Alcoa Anglesea over the internet. Weekly highlights are posted on the website showing the adventures of Midnight, Rocket and Stan as they prepare to leave the nest for the wider world.

PLANTS OF THE ANGLESEA HEATH

COMMON AOTUS (*Aotus ericoides*)

Aotus..derived from the Greek word meaning 'earless' with the pea flowers missing earlike bracteoles
ericoides...heath-like

Size: 0.5-1.5m H x 0.5-1.5m W
Habitat: tea tree heath
Distribution: endemic to eastern Australia
Form: fast-growing bushy upright shrub
Foliage: slender hairy light green leaves to 20mm long
Flowers: clusters of small yellow and red pea flowers
a very showy plant when in bloom
August to December

Did you know? The species was first formally described in 1803 in Jardin de la Malmaison and was assigned the name *Pultenaea ericoides*. In 1832, the species was transferred into the genus *Aotus*

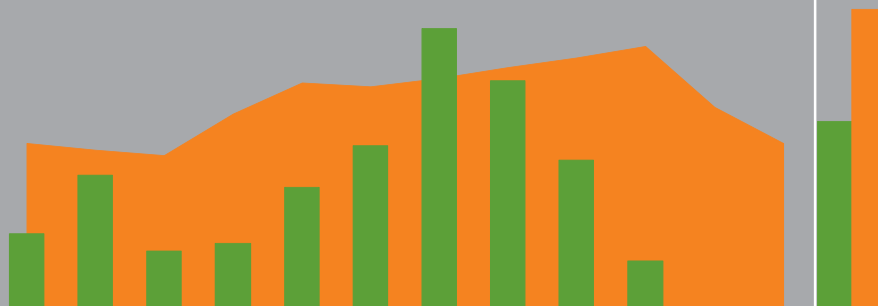
COMMON AOTUS



LAND

RAINFALL (mm)

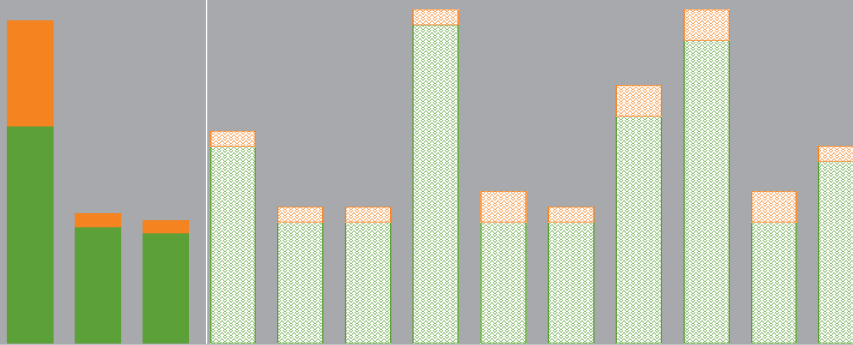
Month	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	TOTAL
2008 Rainfall	19.8	35.8	15.2	17.3	32.5	43.8	75.8	61.6	40.0	12.4			354.2
1968-2007 Average	44.5	42.7	41.1	52.5	61.0	59.9	62.2	65.3	67.7	70.9			567.7



WATER

TOWN WATER USE (ML)

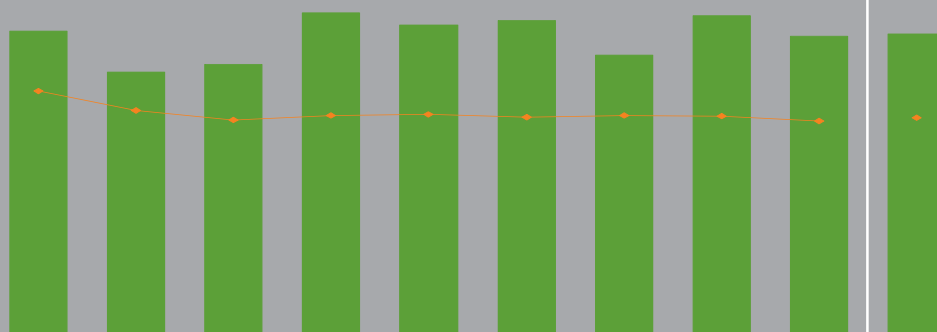
	2000	2007	2008	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Process	23.9	12.8	12.1	1.3	0.8	0.8	2.1	0.8	0.8	1.5	2.0	0.8	1.2		
Amenity	11.6	1.5	1.4	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.1		



AIR

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

	1990	2000	2001	2002	2003	2004	2005	2006	2007	2008
GHG Mt	1.42	1.23	1.27	1.50	1.45	1.47	1.31	1.49	1.40	1.41
GHG t/MWh	1.34	1.24	1.19	1.21	1.21	1.20	1.21	1.20	1.18	1.20



environmental improvement

Environmental Management Targets	October	2008 YTD	Forecast	2008 Target
Reportable Environmental Incidents	0	0	0	0
Monthly EHS ASAT Audit Completion (%)	100	100	100	90
Air Emission Targets	October	2008 YTD	Forecast	2008 Target
Ambient SO ₂ (no. readings > 200ppb)	0	0	0	0
Stack SO ₂ (no. hrs > 100kg/min)	0	0	0	0
SO ₂ Load Reductions (lost MWh)	1890	19010	22812	N/A
GHG Efficiency (t CO ₂ e/MWh)	1.20	1.20	1.20	1.20
Opacity (10 min av > 0.25g/m ³ normal operation)	0	0	0	0
Water Targets	October	2008 YTD	Forecast	2008 Target
Town Water (ML)	1.3	13.4	16.1	14.2
Bore Water (ML)	282	2701	3241	2370
Waste Targets	October	2008 YTD	Forecast	2008 Target
Waste to Landfill (t)	0.0	4.5	5.4	8.0
Solid Prescribed Waste to Landfill (t)	0.0	0.0	0.0	0.0
Mine Rehabilitation Targets	October	2008 YTD	Forecast	2008 Target
2008 Area to Clear (ha)		0.0		0.0
2008 Area to Rehabilitate (ha)		0.0		0.0
2007 Mine Rehabilitation Species Richness (%)		N/A		100

OUR ENVIRONMENT AND OUR EMPLOYEE

Hey Peter, the Peregrine Falcons sure have taking a liking to staff from the Control Room?

They certainly have! What started off a couple of years ago with employees getting a gentle fright as a falcon swooped by, has escalated in the last two years with Sheila fiercely defending her territory with repeated strikes to hard hats!

A new solution has been trialled this year, is it working?

The solution was to install an avenue of flags that would provide cover for employees to freely walk under whilst providing a visual obstacle that the Peregrines will avoid. The east side of the 7th floor facing the nest box was considered the most exposed so was chosen for the trial. The flags are working well at this location. However the flags aren't everywhere so employees are still vulnerable on other parts of the Station.

So what will happen now?

Operators from the control room are marking on a map where the swooping and strikes are occurring. Hopefully this will lead to the identification of hot-spots where we can look at either extending the flags or investigating other options to protect our employees.

...PETER McKENDRICK

