



## sheila and havoc's egg-cellent adventure

Our pair of peregrine falcons have a new house and 4 eggs to babysit

# alcoa anglesea

# 2009

environment report

august



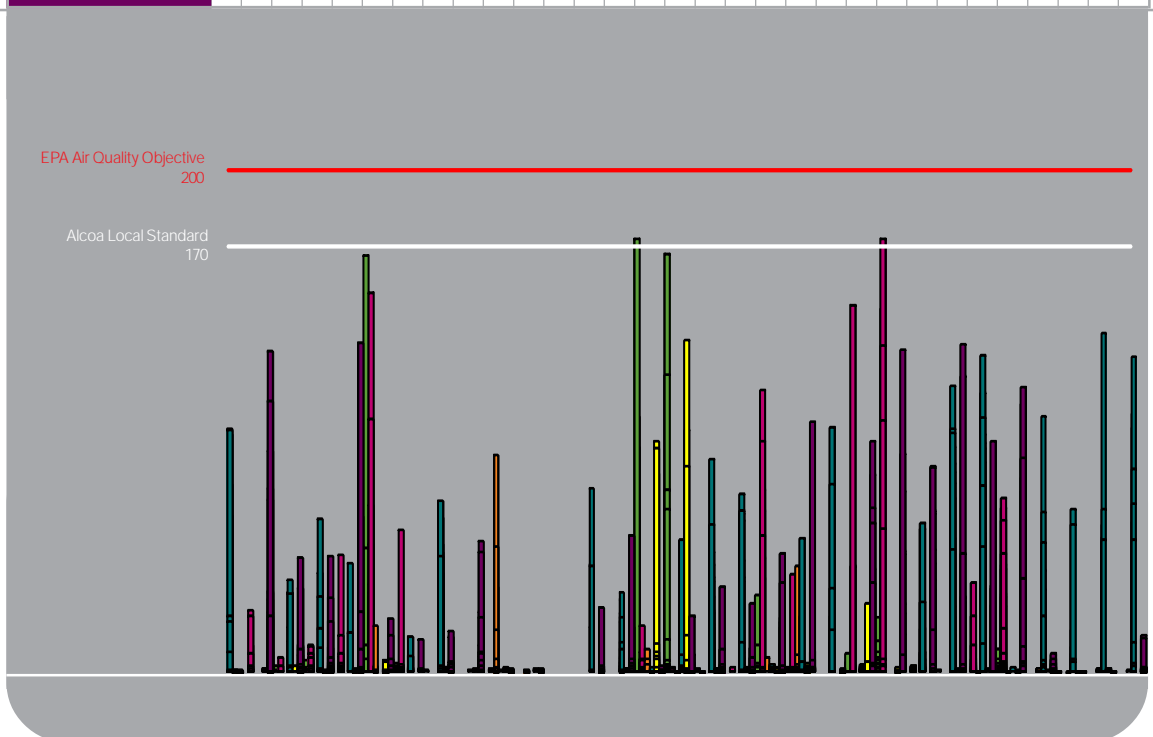
australia's aluminium

# air

Air Monitoring	Average	Maximum
Stack Monitors		
Opacity g/m <sup>3</sup> 10-minute average	0.057	0.200
Stack SO <sub>2</sub> kg/min 1-hour average <b>Licence limit</b> 100kg/min	59.41	72.90

Ambient Monitors	Average	Maximum
SO <sub>2</sub> 1 hour ppb		
Community Centre	3	173
Primary School	5	172
Mt Ingoldsby	1	86
Scout Camp	11	135
Camp Wilkin	1	133
Camp Road	7	131

Ambient Monitors																															
SO <sub>2</sub> 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	0	0	2	4	0	166	3	1	0	0	0	0	0	0	172	167	1	0	31	2	0	7	21	0	0	0	9	0	0	0	0
Primary School	0	24	5	10	47	151	56	0	2	1	0	0	0	0	18	2	0	2	112	39	0	146	172	2	0	36	69	0	0	0	0
Mt Ingoldsby	0	0	0	0	0	18	0	0	0	86	1	0	0	0	9	0	0	0	5	42	0	0	0	0	0	0	0	1	0	1	1
Scout Camp	97	0	37	61	43	0	14	68	1	1	0	0	73	32	2	52	85	71	3	53	98	3	0	59	114	126	2	102	65	135	126
Camp Wilkin	1	1	2	1	1	4	0	2	1	2	1	0	0	1	92	133	1	1	2	3	0	27	1	0	1	1	1	0	0	1	0
Camp Road	0	128	45	46	131	21	13	16	52	1	1	0	26	54	2	22	34	27	47	99	1	92	128	82	130	92	114	7	0	0	15



# water



## Water Storage

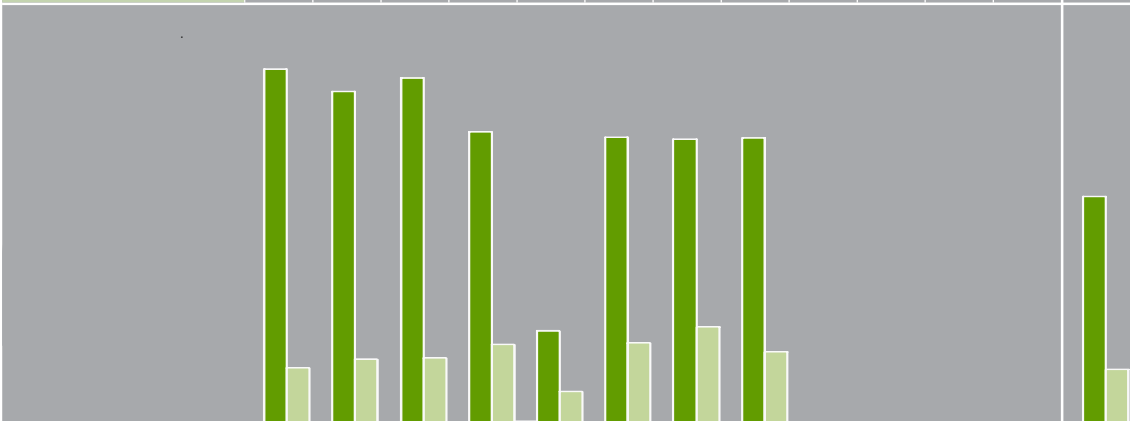
Barwon Water storage levels for the Geelong system at 28% capacity. Stage 4 restrictions apply with a Winter exemption to permit limited residential garden watering.

Water Discharge	August	Total
ML		
Ashponds (SP1)	136	1001
Mine (SP4)	0	0

Water Monitoring 13/08/2009	SP1 Ashpond		SP4 Mine		SP3 Final	
	EPA limit	Lab Result	EPA limit	Lab Result	EPA limit	Lab Result
pH	4-10	7.8	3-9	no	5-9	7.4
Susp. Solids	100	< 4	100	discharge	30	< 4
Colour	50	3	50	at	50	5
Aluminium	10	0.32	10	time	5.5	0.24
Iron	10	0.33	20	of	4.0	0.021
Zinc	0.4	<0.005	2.0	sampling	0.30	0.012

## WATER WATER USAGE PER MONTH (ML)

Date	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	TOTAL
Town Water	2.5	1.0	1.5	1.5	2.9	1.6	0.6	1.1					12.7
Bore Water	288	270	281	237	76	233	231	232					1848
Mine Water	46	53	54	65	27	66	79	59					449



## peregrine falcons are back!



Our Peregrine Falcon pair is back for 2009! Havoc and Sheila returned to Alcoa Anglesea in June, which was much earlier than last year. As usual, we will have a bird's eye view of all the action with the webcam live and online.

As you may notice from the photo, the falcons are no longer in the pink nest box. Last year Sheila increased the ferocity in which she defended her territory, including a number of strikes to our employees. One possible contributor to Sheila's bad mood was that the nest box faced directly toward the power station (north west). This may have been a source of aggravation for Sheila as she could see the people moving back and forth and felt her nest was threatened. So a new nest box has been installed on the north east side of the water tower facing away from the power station.

As yet, we have not had any reported swoopings. However, the greatest amount of swooping activity occurs from late Sept to early Dec when the chicks have hatched and the female is no longer tied to the nest. Stay tuned to see if our nest box relocation is a success!

Sheila laid her first egg on August 28 and another two on August 31. However, due to the large amount of time Sheila is spending in the nest box, it wasn't until Sept 7 that we discovered she has actually laid four eggs this year!

The incubation period will now begin, and Sheila will sit on her eggs for the next 33-35 days, rarely leaving them uncovered during this time. The hatching date is expected to be around the 30th September.

Last year Sheila laid four eggs, of which three hatched, giving us three males - Midnight, Rocket and Stan. Only time will tell what will happen with our four eggs this year.

In the meantime, stay tuned to the website ([www.alcoa.com/falcons](http://www.alcoa.com/falcons)) for further developments and the comings and goings of Sheila and Havoc.

### PLANT OF THE ANGLESEA HEATH

#### THICK LIP SPIDER ORCHID (*Caladenia cardiochila*)

**Caladenia**... From the Greek, *calos* (beautiful) and *adenos* (a gland) referring to the many calli on the labellum (modified petal) of most species of the genus

**cardiochila**... from the greek *kardio* (heart) and *cheilos* (lip) referring to the heart shaped labellum

Size:	stem to 30cm high
Habitat:	coastal scrub and heathland
Form:	erect herb
Foliage:	thick, hairy, linear-lanceolate leaf to 110mm long
Flowers:	single yellowish-green flower to 30mm across, each segment with a red-brown stripe broad heart shaped labellum with very dark red calli densely crowded in a central cluster August - October

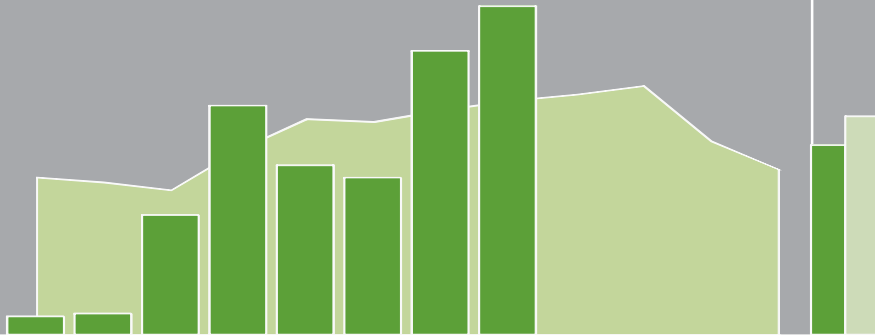
### CALADENIA CARDIOCHILA



LAND

RAINFALL (mm)

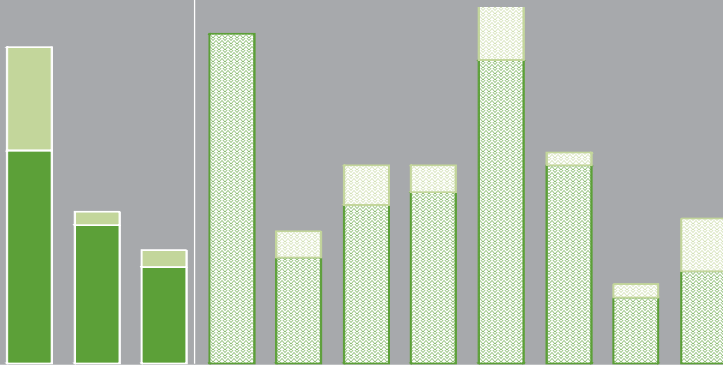
Month	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	TOTAL
2009 Rainfall	5.0	5.8	33.4	63.8	47.2	43.8	79.2	91.6					<b>369.8</b>
1968-2008 Average	43.9	42.5	40.4	51.6	60.2	59.5	62.6	65.2					<b>425.8</b>



WATER

TOWN WATER USE (ML)

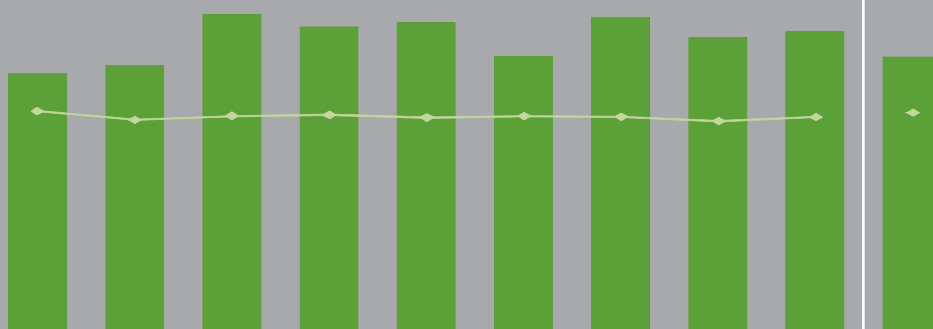
	2000	2008	2009	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Process	23.9	15.5	<b>10.8</b>	2.5	0.8	1.2	1.3	2.3	1.5	0.5	0.7				
Amenity	11.6	1.5	<b>1.9</b>	0.0	0.2	0.3	0.2	0.6	0.1	0.1	0.4				



AIR

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

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
GHG Mt	1.23	1.27	1.50	1.45	1.47	1.31	1.49	1.40	1.42	<b>1.30</b>
◆ GHG t/MWh	1.24	1.19	1.21	1.21	1.20	1.21	1.20	1.18	1.20	<b>1.23</b>



# environmental improvement

Environmental Management Targets	August	2009 Total	Forecast	2009 Target
Reportable Environmental Incidents	0	1	1	0
Env Near Miss vs Env Incident Run Rate (ratio)	0	2.1	2.1	2.5
Monthly EHS ASAT Audit Completion (%)	100	92	92	90

Air Emission Targets	August	2009 Total	Forecast	2009 Target
Ambient SO <sub>2</sub> (no. readings > 200ppb)	0	2	2	0
Stack SO <sub>2</sub> (no. hrs > 100kg/min)	0	0	0	0
SO <sub>2</sub> Load Reductions (lost MWh)	9463	24102	36154	N/A
GHG Efficiency (t CO <sub>2</sub> e/MWh)	1.21	1.23	1.23	1.20
Opacity (10 min av > 0.25g/m <sup>3</sup> normal operation)	0	0	0	0

Water Targets	August	2009 Total	Forecast	2009 Target
Town Water (ML)	1.1	12.7	19.2	14.2
Bore Water (ML)	232	1848	2772	4000

Waste Targets	August	2009 Total	Forecast	2009 Target
Waste to Landfill (t)	0.0	7.2	10.8	8.0
Solid Prescribed Waste to Landfill (t)	0.0	0.0	0.0	0.0

Mine Rehabilitation Targets	2009 Total	2009 Target
2009 Area to Clear (ha)	0.245	0.0
2009 Area to Rehabilitate (ha)	0.658	0.0

## OUR ENVIRONMENT AND OUR EMPLOYEE

### Hi Mike, what prompted you to attend Greening Australia's Make an Impact workshop?

I wanted to find out if there were any new ideas and where I should be concentrating my efforts for making my own impact.

### Have you made any changes at home to help reduce your water and energy usage?

I have concentrated on water conservation by mulching around trees and plants, and installing drip lines to them all. The lines are connected to a water tank. I have also installed a downpipe diverter to a wheelie bin which collects water to drip feed my berry plantation.

### What do you think of the overall program?

Greening Australia is doing a fantastic job by educating, encouraging and helping everyone to get involved, which is absolutely necessary for such a large scale project.

...MIKE ALDEN

