

Tasmanian Minerals Council 2009 Exploration Group Forum



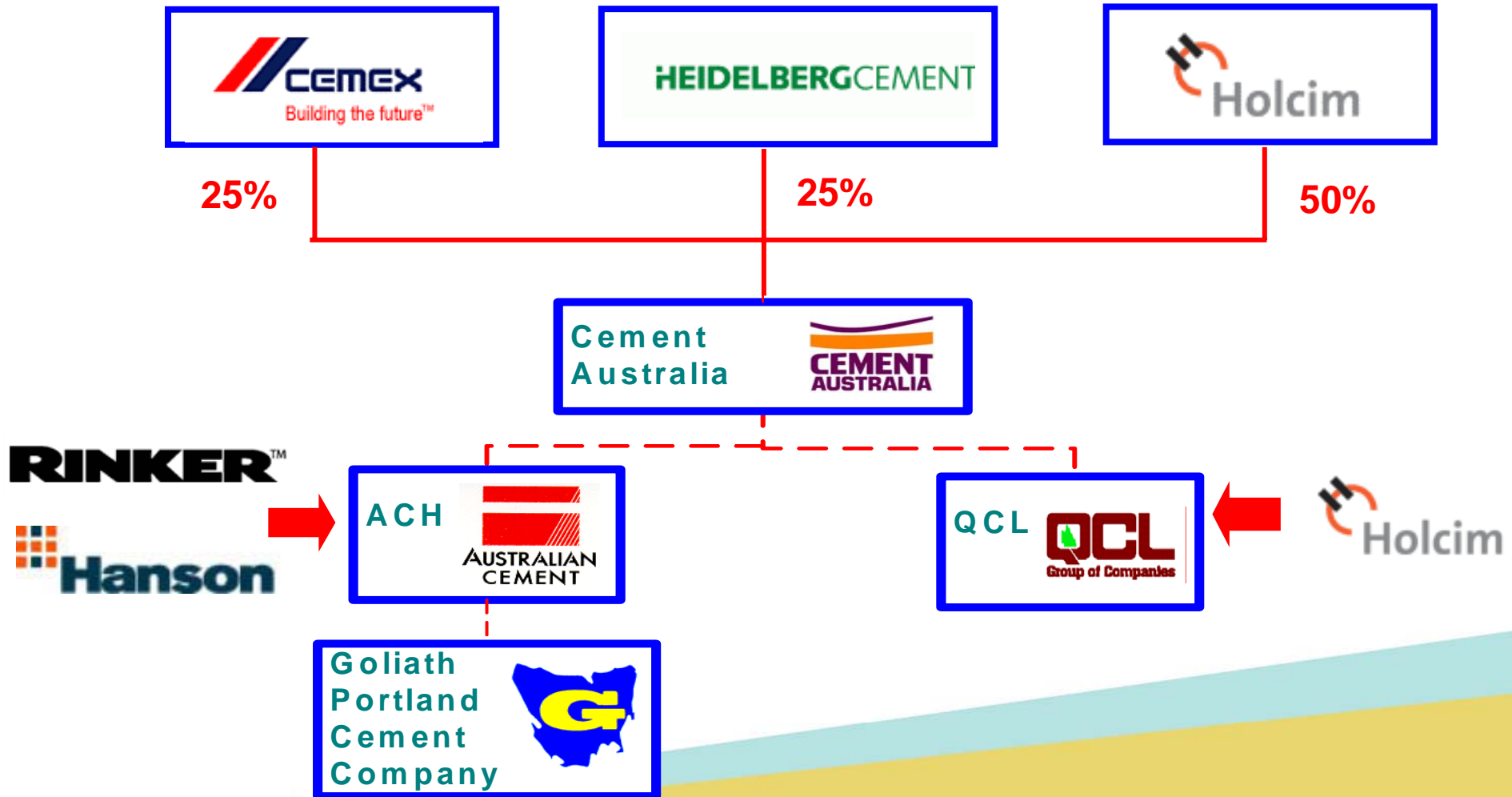
**Cement Australia, Railton
Community Licence to Operate**

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- Operations Review
- Environmental Improvements
- Sustainability – AFRs and Carbon Footprint
- RAILTON Asbestos Remediation Project
- Economic Outlook
- Learnings, Challenges & Conclusions

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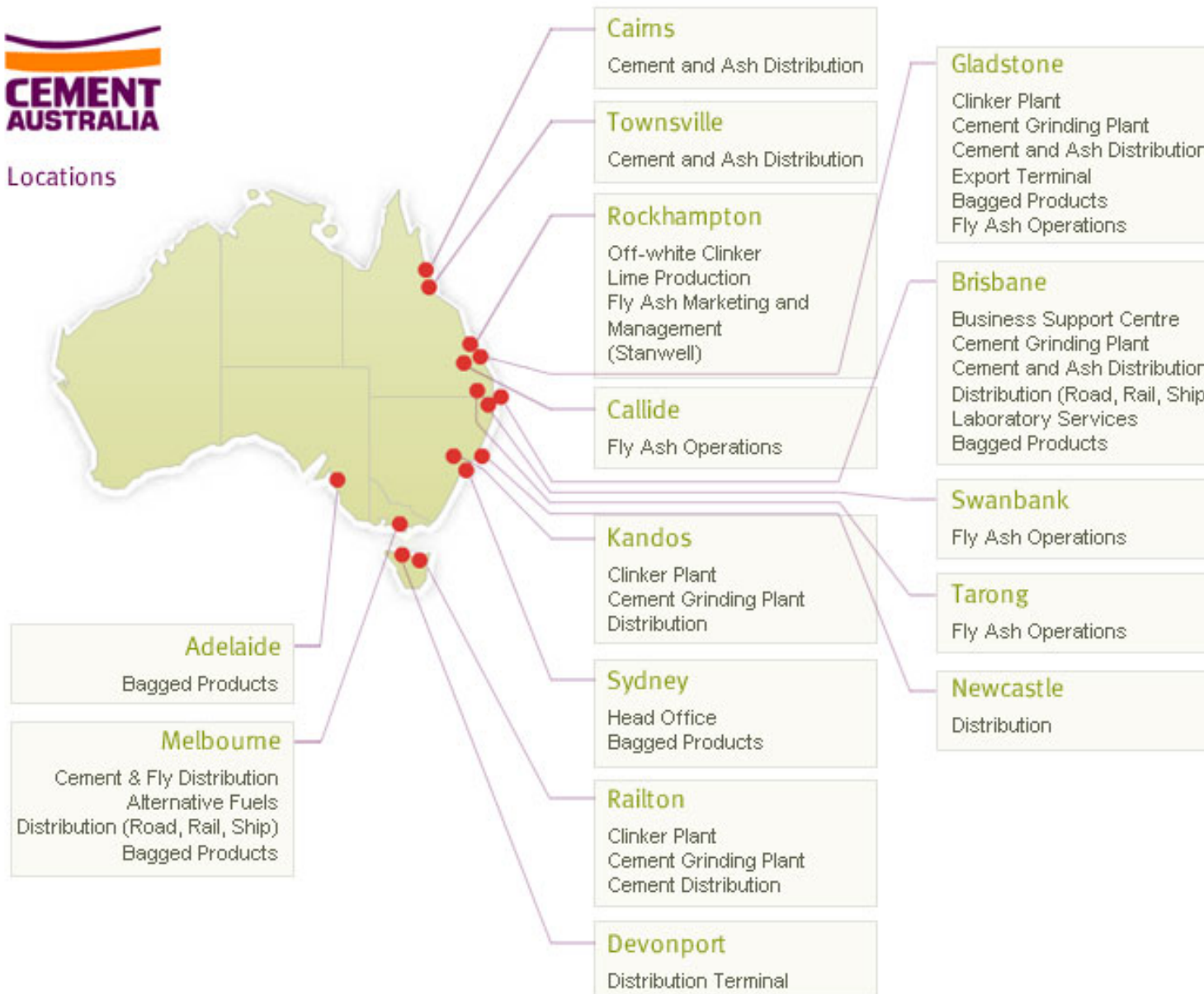
Cement Australia Ownership



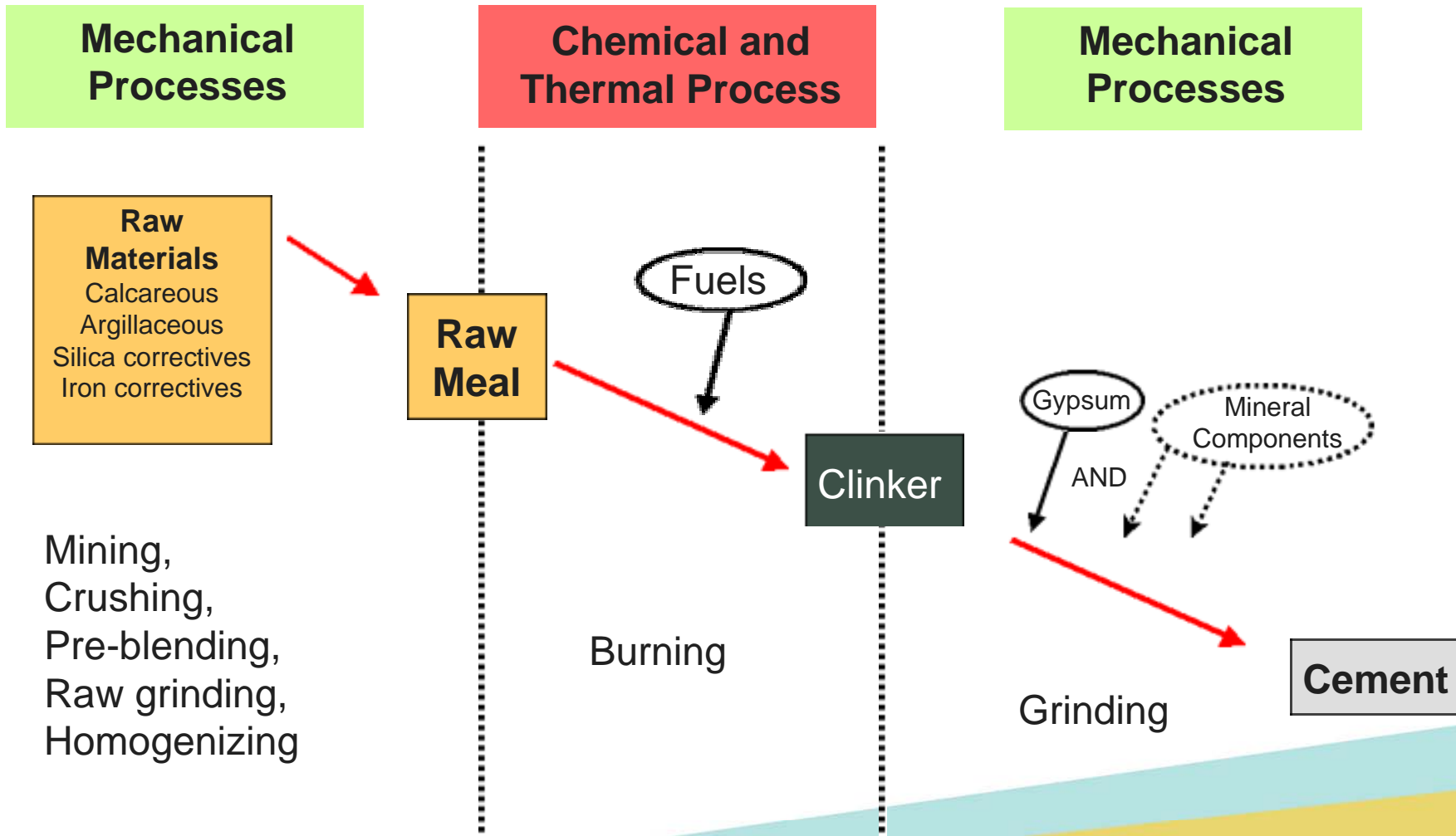
Australian Operations



Locations



The Cement Manufacturing Process



Mine

Reserves of the Deposits (Status 01.01.2008)				
Deposit	Raw material component	Reserves	Lifetime of reserves [years]	
Mine name	Rock type (Lithology)	[metric million t]	with standard capacity volume*	with actual production volume**
New Mine	Limestone	164.1	94	95
New Mine	Clay	20.0	120	120

- Continuing hydrogeological challenges
- Need to mine eastern cutback (pictured) at faster rate to mitigate above
- Small resource drilling campaign (~ 1000m just completed in this area



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Air Emissions – New Kiln Bag Filter



Type	No. per year	Ave duration
CO trips > 10,000 mg/m ³	50-60	2 – 5 mins
Ext kiln starts > 1,000 mg/m ³	2-3	Up to 36 hrs
Direct mode 300–500 mg/m ³	20-30	Up to 10 hrs

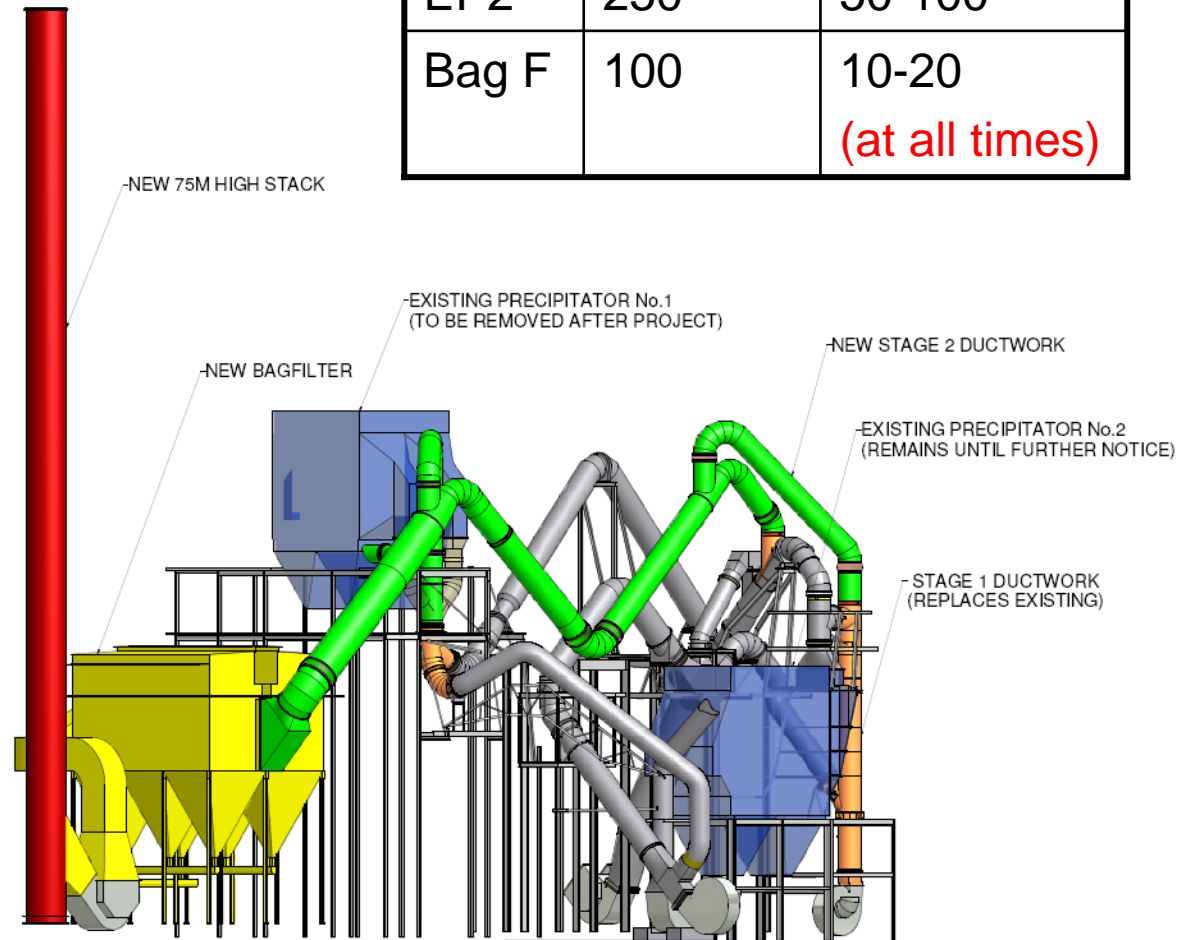
- The most significant environmental project undertaken at Railton operations since the wet kilns ceased production in the 1970's
- New kiln bag filter replacing 25/40 year old electrostatic precipitators (EPs) that do not meet modern performance standards and incur high maintenance costs
- \$19m project scheduled for completion in Sept 2009



Air Emissions – New Kiln Bag Filter (cont...)



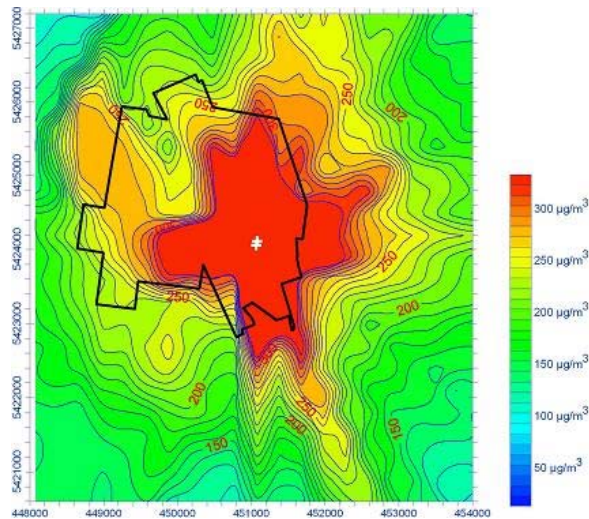
Unit	Permit Limit (mg/Nm3)	Typical Performance (mg/Nm3)
EP1	460	100-150
EP2	250	50-100
Bag F	100	10-20 (at all times)



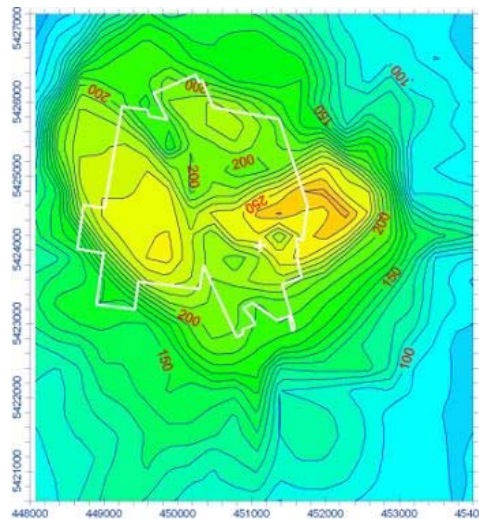
Air Emissions – Dispersion Modelling

Predicted dispersion improvement from 75m high stack

NO₂ – Current Maximum-Hourly Concentration
Kiln Stacks 1 & 2



NO₂ – Maximum-Hourly Concentration
Proposed Single Stack, 75 m Scenario



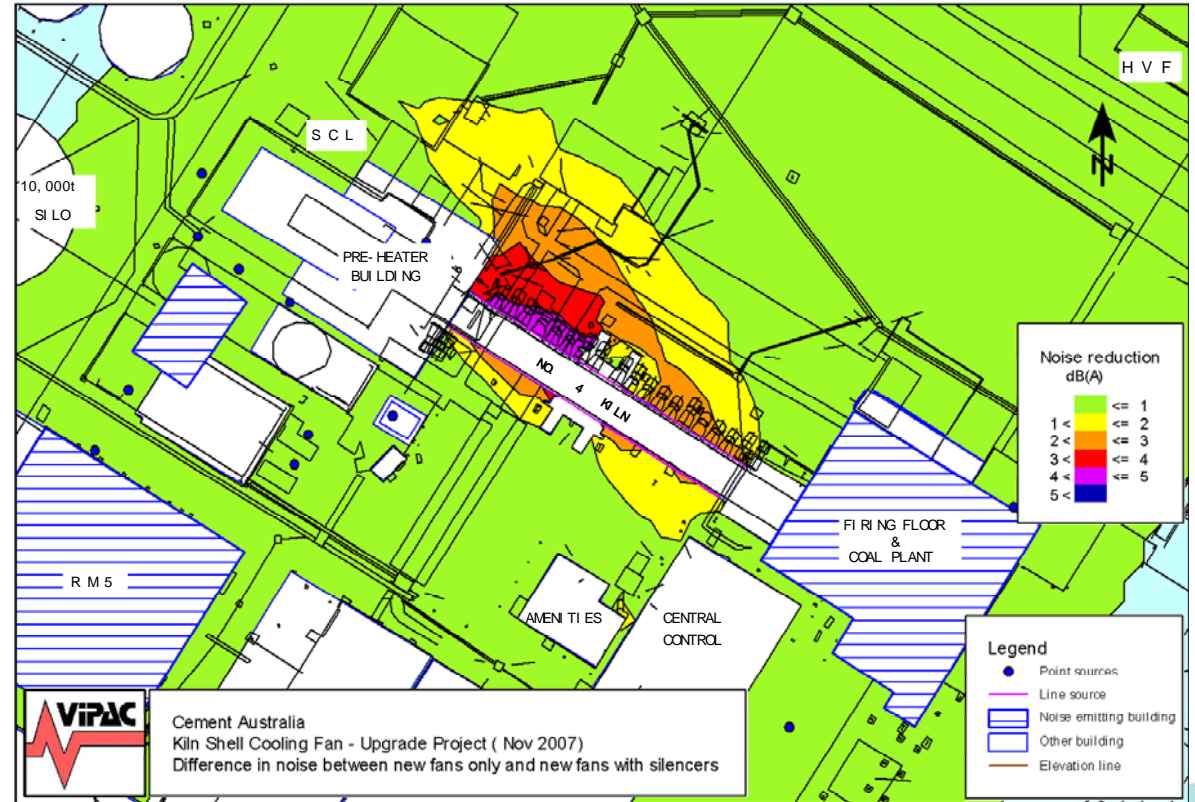
Species: NO ₂	Location: Cement Australia, Railton	Scenario: Current Situation: Kiln Stacks 1 and 2	
Averaging Time: 1 hour	Percentile Level: 100 th (maximum)	Air NEPM = 246µg/m ³ Air EPP = 328 µg/m ³	Grid-Maximum: 987 µg/m ³

Species: NO ₂	Location: Cement Australia, Railton	Scenario: Proposed Single Stack: 75 m Scenario	
Averaging Time: 1 hour	Percentile Level: 100 th (maximum)	Air NEPM = 246µg/m ³ Air EPP = 328 µg/m ³	Grid-Maximum: 274 µg/m ³

- Key project members Dr Steve Carter (Environmental Dynamics), Dr Mike Power (DTAE), & Connell Wagner
- Initial screening using AUSPLUME, then more sophisticated modelling using TAPM v3, ground truthing, then TAPM v4
- New and improved weather station installed as part of project
- Contours developed for a range of different stack heights



Noise Emissions



- \$500K project scheduled for completion in June 2009
- Acoustic modelling has shown significantly reduced noise levels surrounding the kiln – meeting OHS requirements, and eliminating the possibility of exceeding permit limits at some sections of site boundary in adverse weather conditions.

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Sustainability

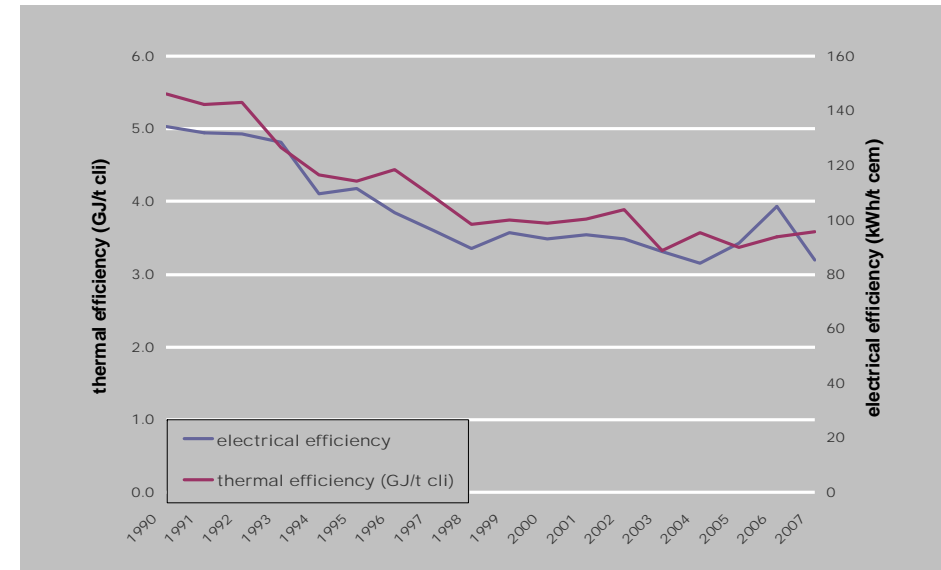
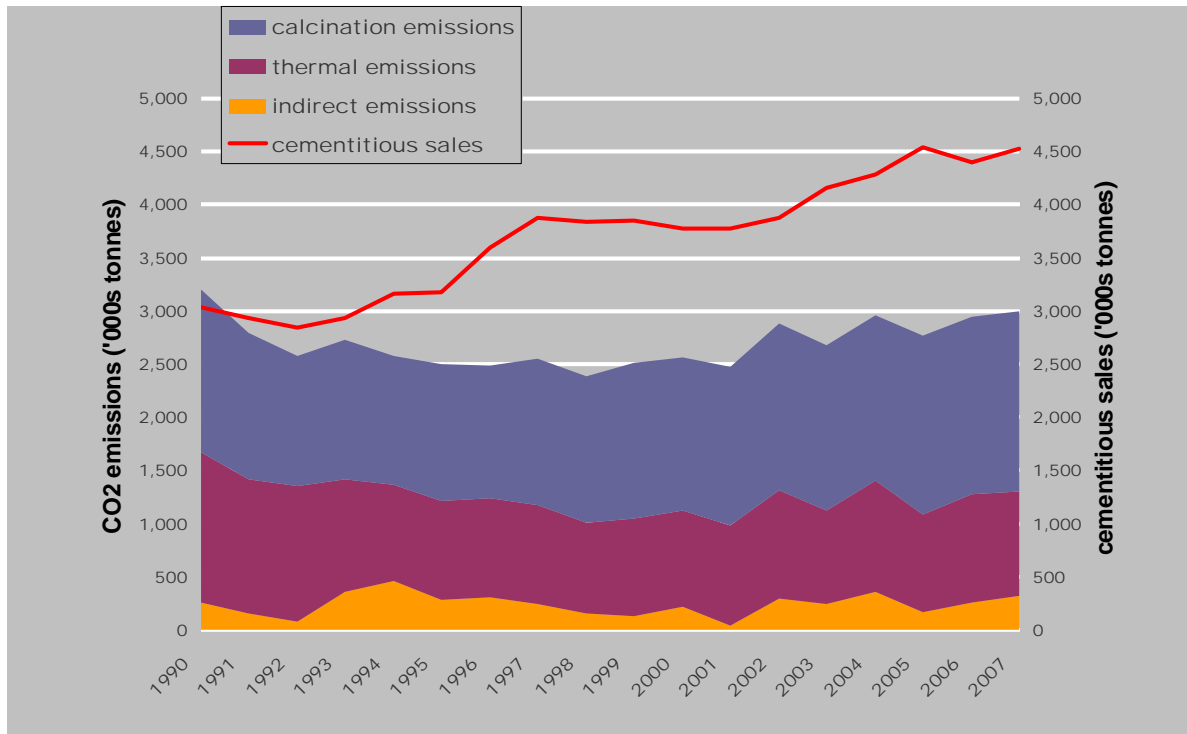
AF Performance Indicators

Apr-09	YTD actual	YTD budget	FY f/cast	FY budget	2008
HVF consumed (t)	3,462	3,124	12,080	10,886	8,247
SCL consumed (t)	0	435	1,873	4,000	0
Coal saved (t)	3,160	2,936	10,317	11,116	7,554
TSR	5.8%	6.1%	7.8%	6.6%	4.5%
Gross CO2 saved (t)	1,906	1,542	3,399	5,142	4,491

- Alternative Fuels program underway with \$3m HVF project commencing Feb 2008 and \$3m SCL project scheduled to commence June 2009.
- No adverse effects upon kiln performance evident so far from burning HVF. Recent permit change will allow up to 3 tph firing in future.
- Testing has confirmed negligible impact upon emissions.
- Other materials being explored include coal washery tailings and wastes from other industries.



Carbon Pollution Reduction Scheme



- Cement Australia has been actively engaged in CO₂ abatement activities since 1997 (CIF signed up to the Greenhouse Challenge Plus program)
- Holcim is an active member of the WBCSD Cement Sustainability Initiative
- CO₂ emissions less than 1990 levels despite a 50% increase in cementitious product sales

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Four major projects underpin the management of asbestos and legacy issues into the future at the Railton Site

Site Remediation	Track and Monitor Ex-Employees	Historical Study	Epidemiological Assessment
<ul style="list-style-type: none">• Staged, budgeted approach to remove ACMs from buildings (by 2010)• Continued management of buried asbestos• Employee awareness	<ul style="list-style-type: none">• Develop electronic employee list (from 1926)• Locate ex-employees• Provide chest x-ray and lung function test• Provide relevant information about asbestos related disease	<ul style="list-style-type: none">• Collate available historical information (CA, Govt, Unions)• Publish historical assessment	<ul style="list-style-type: none">• Assess asbestos disease incidence and mortality in the Railton worker and ex-worker cohort (Monash Uni).• Independent scientific review panel• Peer reviewed, public report

Asbestos Removal

An independent review in 2005 identified buildings where asbestos was present, and recommended either demolition (Green) or removal & replacement with steel cladding (Pink). CA has removed asbestos from 14 of the 21 (~66%) areas identified, including many large buildings.

BUILDING	STATUS Jan 2009
1. Vehicle Shed	Demolished
2. Mine Crusher & Conveyor	Proposed 2009
3. Bagging Shed	Reclad
4. Crusher	Demolished
5. CM4	Reclad
6. Blacksmiths Shop	Demolished
7. CM3	Demolished
8. Quarry Crib Room	Demolished
9. Oil Store	Demolished
10. Refractory Store	Demolished
11. Crane Beam	Reclad
12. Lab	Proposed 2009
13. Explosives Shed	Demolished
14. RM4	Reclad - Complete 2009
15. Carport	Scheduled 2009
16. Garage	Demolished
17. Q Silo Control Room	Demolished
18. Instrument Shop	Reclad
19. Lab Store	Proposed 2009
20. Tech Block	Proposed 2009
21. Training Room	Proposed 2009



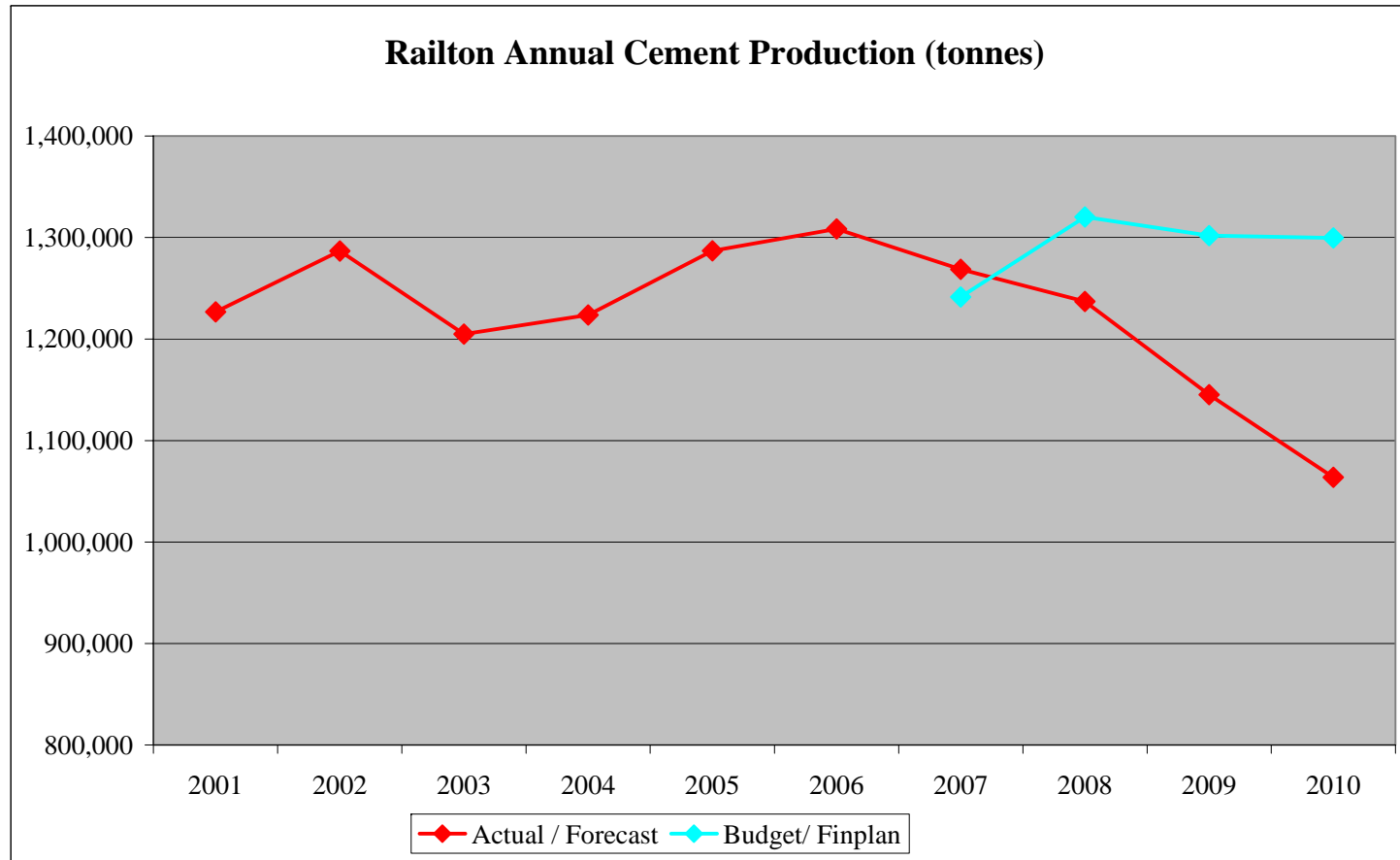
Asbestos Removal



**CEMENT
AUSTRALIA**

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Economic Outlook



- Downturn Action Plan (DAP) initiated
- Covers operating costs, capital expenditure, asset disposals, timing and scope of plant shutdowns, and resource sharing across the business

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Learnings & Challenges

$$CO_2 = \frac{Emissions}{Energy} \times \frac{Energy}{GDP} \times \frac{GDP}{Population} \times Population$$

Technology Energy Use Wealth Population

- Sustainability is a whole of society issue. In a sense, industry exists to meet society's demand for product, but society is also looking to industry for leadership
- Demand for our product was at an unprecedented high in 2008, while at the same time, society's expectation in halting climate change has also escalated

Definition of Sustainability by World Commission on Environment and Development, 1987

“development that meets the needs of the present without compromising the ability of future generations to meet their needs”

Learnings & Challenges (cont...)

Licence to Operate

- The community grants us our licence to operate – we must meet their expectations
- Regular and open communication with the communities in which we operate is essential
- We must think sustainability – particularly in the boom times

Challenges

Strategy continually being developed based upon holistic view of entire operation that attempts to balance competing interests and provide best overall outcome

- Minimise volumes waste mine material
- Maximise the use of alternative kiln fuels – that usually contain high silica and alkali contents in their ashes
- Easy to burn raw mix design (minimise thermal energy)
- Demands for higher cement performance