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30 Keeping our workforce safe and healthy
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“We are one of the world’s largest vertically integrated producers of zinc”
About Xstrata plc

We are a major producer of a range of vital commodities used in everything from constructing buildings and delivering electricity, to developing jet engines and mobile phones. We are one of the top five global producers of copper, thermal and metallurgical coal, ferrochrome, zinc and nickel and we also produce silver, lead, platinum, gold, cobalt and vanadium.

Founded in 2002 and headquartered in Switzerland, we operate in over 20 countries and employ over 70,000 people at more than 100 operations and projects around the world. We work in a responsible and sustainable way, with an entrepreneurial spirit and dynamic approach. For more information, visit www.xstrata.com

About Xstrata Zinc

We are one of the world's largest vertically integrated producers of zinc, with operations in Australia, Canada, Europe (Germany, Spain and the United Kingdom) and Peru. A versatile material, zinc has a number of vital end-uses. It is an essential nutrient in human health, addressing malnutrition through the adequate dietary supplements, and very useful in crop yield improvement. Zinc in galvanizing protects steel against corrosion, for its use in automobiles, buildings and others. Zinc is also used for the production of zinc die-casting alloys, brass and oxide, and in manufacturing batteries and other electrical and consumer goods.

In Australia, we operate the Mount Isa complex in north west Queensland composed of George Fisher underground, Handlebar Hill open cut, Black Star open cut, and Lady Loretta (under construction) zinc-lead mines and their supporting processing infrastructure, including a zinc-lead concentrator and lead smelter. Our Bowen Coke Works in coastal North Queensland is a key supplier to the lead smelter. In the Northern Territory, we operate the McArthur River open pit zinc-lead mine and its processing and loading facilities.

In Europe, our Spanish operations include the San Juan de Nieva zinc smelter and the Armadillo zinc semis plant in Asturias, and the Hinojedo roasting plant in Cantabria. We also operate the Nordenham zinc smelter in northern Germany and the Northfleet lead refinery in the United Kingdom.

In the Americas, we have operations and exploration projects in Canada including the Brunswick zinc-lead mine and lead smelter (New Brunswick); 25% of the CEZ zinc smelter near Montreal and the Perseverance zinc deposit (Quebec). We own, as well, 33.75% of the Antamina mine in Peru. For more information, visit www.xstratazinc.com.
## Our Australian operations

<table>
<thead>
<tr>
<th></th>
<th>2011</th>
<th>2010</th>
<th>% Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Brisbane Head Office Employees (excluding contractors)</strong></td>
<td>12</td>
<td>10</td>
<td>20%</td>
</tr>
<tr>
<td><strong>Xstrata Zinc Mount Isa</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employees (excluding contractors)</td>
<td>1,443</td>
<td>1,149</td>
<td>26%</td>
</tr>
<tr>
<td><strong>Production</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ore mined (t)</td>
<td>9,089,019</td>
<td>8,596,675</td>
<td>6%</td>
</tr>
<tr>
<td>Zinc in concentrate (t)</td>
<td>357,011</td>
<td>355,024</td>
<td>1%</td>
</tr>
<tr>
<td>Lead in bullion (t)</td>
<td>138,629</td>
<td>140,059</td>
<td>-1%</td>
</tr>
<tr>
<td>Silver in crude lead (k oz)</td>
<td>6,546</td>
<td>6,775</td>
<td>-3%</td>
</tr>
<tr>
<td><strong>McArthur River Mining</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employees (excluding contractors)</td>
<td>310</td>
<td>282</td>
<td>10%</td>
</tr>
<tr>
<td><strong>Production</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ore mined (t)</td>
<td>2,338,328</td>
<td>2,231,032</td>
<td>5%</td>
</tr>
<tr>
<td>Zinc in concentrate (t)</td>
<td>194,058</td>
<td>185,517</td>
<td>5%</td>
</tr>
<tr>
<td>Lead in concentrate (t)</td>
<td>38,284</td>
<td>31,635</td>
<td>21%</td>
</tr>
<tr>
<td>Silver in concentrate (k oz)</td>
<td>1,594</td>
<td>1,463</td>
<td>9%</td>
</tr>
<tr>
<td><strong>Lady Loretta</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employees (excluding contractors)</td>
<td>25</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td><strong>Bowen Coke</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employees (excluding contractors)</td>
<td>19</td>
<td>22</td>
<td>-14%</td>
</tr>
<tr>
<td><strong>Production</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coke (t)</td>
<td>41,722</td>
<td>45,958</td>
<td>-9%</td>
</tr>
</tbody>
</table>

NA – Not Applicable
Chief Executive’s statement

“I am pleased to commend this report on the sustainable development of the Xstrata Zinc Australia operations in 2011.”

We are on an unprecedented growth path in Australia, the success of which is important for Xstrata Zinc globally. All operations are undergoing expansions of both their mining and processing infrastructure to support increased production, which contributes positively to the integrated global business.

This growth has been supported by significant increases in our resources and reserves in Australia. The latest estimates of resources and reserves reported in December 2011 show we have been effective in building our resource base while at the same time, increasing production. Our total resources of zinc and lead in this country have increased from 564 million tonnes to 579 million tonnes since June 2010. The majority of these resources, some 409 million tonnes, are located in and around Mount Isa, including the high-grade Lady Loretta deposit.

This gives us confidence in our strategy to organically grow and expand our mines while maintaining the group’s low cost production profile.

In managing this growth, the Australian operations are also diligent in managing the impacts and opportunities which potentially arise for their surrounding communities and environments.

It is interesting that during 2011, at a time when we were investing around $846 million in our capital projects, the value of the direct economic benefits generated by our operations was a similar amount. These economic benefits rose by 14% in 2011 to $892 million, up from $784 million in 2010, demonstrating the value to the Australian economy and regional communities flowing from our expanding operations.

I am also pleased to see improvements in the safety records of our operations. In particular, I would like to compliment our Bowen Coke and Black Star Open Cut teams who both celebrated five years lost time injury free during the year. This is a tremendous achievement which demonstrates that even in high risk operating environments, we can and are achieving safe production.

As shown in the performance scorecard in this report, our Australian operations performed well against the targets set for 2011 and we remain committed to pursuing our strategy for sustainable development.

Santiago Zaldumbide
Executive Director Xstrata plc
Chief Executive Xstrata Zinc
I congratulate our team in Australia for their success in taking positive action across many priority areas for sustainable development in 2011. This report puts greater focus on the material issues that our stakeholders—both internal and external—have identified as being of key interest to them.

In particular, I would like to highlight:

- 24% increase in total employees from 1,462 in December 2010 to 1,809 in December 2011 as our operations expanded and local employment levels rose
- substantial increases in training investments in all our people, particularly our leaders as we introduced new programs tailored to their needs
- investing $3.5 million in our Corporate Social Involvement programs, including major health infrastructure facilities in Mount Isa, recognising the vital role these services play in the community
- sustaining our 23% Indigenous workforce participation rate at MRM and learning from our community through an extensive consultation program about what a tremendous impact that has had on families, especially by setting role models for the next generation
- commencing development on Lady Loretta, the high-grade, zinc-lead-silver deposit in north-west Queensland, now the site of a greenfield underground mine project
- undertaking a comprehensive environmental impact assessment for the $270 million MRM Phase 3 Development Project which, if approved, will increase production from 2.3 million tonnes to 5.5 million tonnes a year and extend the life of mine by nine years from 2027 to 2036

While achieving this, we also reported record levels of mine production at MRM and Xstrata Zinc Mount Isa, with ore treated increasing by 6% and 8% respectively.

In addition, the health and safety of our people remains a key area of focus for us. While some improvements have been made in 2011, there is more that can be done and I am optimistic that the safety leadership programs, new occupational health initiatives and various actions in place to improve the identification of hazards and adherence to procedures will result in continued improvement in 2012.

Alongside financial targets, we hold ourselves accountable for the safety of our teams, to caring for the environment and ensuring our communities benefit from our operations. I am pleased to demonstrate that commitment in the 2011 Xstrata Zinc Australia Sustainability Report.

Brian Hearne
Chief Operating Officer
Xstrata Zinc Australia
Tina Birthisel’s story

“It’s about zero harm. Building our skills and experience and continually developing best practice training programs so we can send everyone home safely at the end of each shift. That’s what it’s all about...”

The Pro3 simulator is giving the suite of operator training tools at Black Star Open Cut (BSOC) a futuristic edge. Combining industry leading, high-tech gadgetry with all the muscle of our mega-machines, the Pro3 simulator uses ultra-modern visual and motion technology to create a virtual driving reality. It has dump truck operator Tina Birthisel seeing the Black Star pit from a completely new angle.

“It’s where the latest in interactive gaming meets the mining boom!

My first day on the job, I remember standing in the shadow of one of the 200 tonne CAT dump trucks I would be driving and wondering how I was ever going to be the master of something so huge.

Luckily for me, the first stop on my training path was the Pro3 simulator. BSOC was the first mining operation in the world to use the Pro3.

Training with the simulator gave me the chance to practice my technical driving skills and learn to manoeuvre the truck safely in a number of scenarios. I was equipped and mentally ready to deal with an emergency before climbing up those 20 steps to the cabin for the first time.”

## How we performed in 2011

### Health and Safety

<table>
<thead>
<tr>
<th>2011 Targets</th>
<th>2011 Performance</th>
<th>2012 Targets</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 fatalities, fines and penalties</td>
<td>✔️ Xstrata Zinc North Queensland ✔️ McArthur River Mine</td>
<td>0 fatalities, fines and penalties</td>
</tr>
<tr>
<td>15% reduction on TRIFR</td>
<td>9.1 ✔️ Xstrata Zinc North Queensland – 16.7 = 1% increase 7.1 ✔️ McArthur River Mine – 5.2 = 42% reduction</td>
<td>10.3 4.4</td>
</tr>
<tr>
<td>15% reduction on LTIFR</td>
<td>1.7 ✔️ Xstrata Zinc North Queensland – 0.4 = 73% improvement 0.9 ✔️ McArthur River Mine – 0.7 = 17% improvement</td>
<td>0.2 0.6</td>
</tr>
<tr>
<td>15% reduction on DISR</td>
<td>139 ✔️ Xstrata Zinc North Queensland – 232 = 53% reduction 76 ✔️ McArthur River Mine – 10.4 = 88% improvement</td>
<td>84 8.8</td>
</tr>
<tr>
<td>0 occupational illnesses</td>
<td>✔️ Xstrata Zinc North Queensland ✔️ McArthur River Mine</td>
<td>0 occupational illnesses</td>
</tr>
<tr>
<td>0 employees and contractors &gt;36µg/dl blood lead level</td>
<td>✔️ Xstrata Zinc North Queensland – 8 ✔️ McArthur River Mine – 1</td>
<td>0 male personnel &gt;35µg/dl blood-lead level 0 female personnel&gt;12 µg/dl blood-lead level</td>
</tr>
<tr>
<td>0 employees and contractors &gt;6 µg/dl blood cadmium</td>
<td>✔️ Xstrata Zinc North Queensland – 1 ✔️ McArthur River Mine</td>
<td>0 employees and contractors &gt;5µg/dl blood cadmium 0 personnel &gt;5 µg/dl creatinine cadmium</td>
</tr>
<tr>
<td>Fully implement local drug and alcohol policies</td>
<td>✔️ Xstrata Zinc North Queensland ✔️ McArthur River Mine</td>
<td>Sites to maintain fit-for-work programs</td>
</tr>
<tr>
<td>Review and implement identified actions and controls from hygiene risk assessments</td>
<td>✔️ Xstrata Zinc North Queensland ✔️ McArthur River Mine</td>
<td>Sites to annually review and update if necessary occupational health and hygiene hazard registers and report into CURA software the main ones</td>
</tr>
</tbody>
</table>

- ✔️ Achieved  
- ✗ Not achieved  
- ➔ Action continues into 2012

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**Overview**

Our material issues

**Other information**

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7
# How we performed in 2011

## Our People

<table>
<thead>
<tr>
<th>2011 Targets</th>
<th>2011 Performance</th>
<th>2012 Targets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ensure 88% compliance with mandatory training requirements as identified in the Sustainability Management System</td>
<td>Xstrata Zinc North Queensland</td>
<td>Ensure 88% compliance with mandatory training requirements</td>
</tr>
<tr>
<td></td>
<td>McArthur River Mine</td>
<td></td>
</tr>
<tr>
<td>12% reduction in turnover from 2010</td>
<td>Xstrata Zinc North Queensland – 14%</td>
<td>12% reduction in turnover from 2011</td>
</tr>
<tr>
<td></td>
<td>McArthur River Mine – 28%</td>
<td></td>
</tr>
<tr>
<td>15% reduction in absenteeism from 2010</td>
<td>Xstrata Zinc North Queensland – 2.65%</td>
<td>15% reduction in absenteeism from 2011</td>
</tr>
<tr>
<td></td>
<td>McArthur River Mine – 3.5%</td>
<td></td>
</tr>
<tr>
<td>Develop leadership initiatives/programs in line with safety and risk strategy</td>
<td>Xstrata Zinc North Queensland</td>
<td>Education and learning framework to be developed for all leaders and identified talent pool across XZ North Queensland operations</td>
</tr>
<tr>
<td></td>
<td>McArthur River Mine</td>
<td></td>
</tr>
<tr>
<td>Identify and train potential successors for all critical positions</td>
<td>Xstrata Zinc North Queensland</td>
<td>Succession plans – identify/train potential successors for all critical positions</td>
</tr>
<tr>
<td></td>
<td>McArthur River Mine</td>
<td></td>
</tr>
<tr>
<td>Achieve one suggestion per employee using the Xstrata Zinc Suggestion System</td>
<td>Xstrata Zinc North Queensland – 19 with 6 implemented</td>
<td>Achieve 1 suggestion per employee under the Xstrata Zinc Innova Suggestion System</td>
</tr>
<tr>
<td></td>
<td>McArthur River Mine – Over 100 suggestions received</td>
<td></td>
</tr>
<tr>
<td>Ensure over 90% of non-unionised employees are a part of the performance management system</td>
<td>Xstrata Zinc North Queensland</td>
<td>100% of non-unionised employees are a part of the performance management system</td>
</tr>
<tr>
<td></td>
<td>McArthur River Mine</td>
<td></td>
</tr>
<tr>
<td>0.75% of employees recognised under the Xstrata Zinc recognition system</td>
<td>Xstrata Zinc North Queensland – 11</td>
<td>1% of employees recognised under the Xstrata Zinc recognition system</td>
</tr>
<tr>
<td></td>
<td>McArthur River Mine – 8</td>
<td></td>
</tr>
<tr>
<td>Sites to continue to further develop Indigenous employment programs with the ability to monitor and analyse performance</td>
<td>Xstrata Zinc North Queensland</td>
<td>Sites to continue to further develop Indigenous employment programs with the ability to monitor and analyse performance</td>
</tr>
<tr>
<td></td>
<td>McArthur River Mine</td>
<td></td>
</tr>
<tr>
<td>Develop communication processes for information to all levels of employees in the business</td>
<td>Xstrata Zinc North Queensland</td>
<td></td>
</tr>
<tr>
<td></td>
<td>McArthur River Mine</td>
<td></td>
</tr>
</tbody>
</table>

- **Achieved**
- **Not achieved**
- **Action continues into 2012**
## Environment

<table>
<thead>
<tr>
<th>2011 Targets</th>
<th>2011 Performance</th>
<th>2012 Targets</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 environmental breaches</td>
<td>Xstrata Zinc North Queensland – Breach of overpressure limits</td>
<td>0 environmental breaches</td>
</tr>
<tr>
<td></td>
<td>McArthur River Mine</td>
<td></td>
</tr>
<tr>
<td>0 category 3, 4 or 5 environmental incidents</td>
<td>Xstrata Zinc North Queensland</td>
<td>0 category 3, 4 or 5 environmental incidents</td>
</tr>
<tr>
<td></td>
<td>McArthur River Mine</td>
<td></td>
</tr>
<tr>
<td>20% reduction in category 2 environmental incidents over 2009 performance</td>
<td>3 Xstrata Zinc North Queensland – 11</td>
<td>0 environmental fines, penalties or prosecutions</td>
</tr>
<tr>
<td></td>
<td>0 McArthur River Mine – 3</td>
<td></td>
</tr>
<tr>
<td>0 environmental fines, penalties or prosecutions</td>
<td>Xstrata Zinc North Queensland</td>
<td>0 environmental fines, penalties or prosecutions</td>
</tr>
<tr>
<td></td>
<td>McArthur River Mine</td>
<td></td>
</tr>
<tr>
<td>3% reduction in GHG direct emissions intensity (tonnes CO₂-eq/tonne of bullion and zinc and lead in ore mined) over 2010 performance by 2012</td>
<td>927 Kg/Tn</td>
<td>Achieve a 2.4% reduction in GHG direct emissions intensity (per tonne of final product/ore milled) over 2010 performance by 2012</td>
</tr>
<tr>
<td></td>
<td>4.0kg/Tn</td>
<td>Mount Isa Mines Processing – 1060.2 kg/Tn</td>
</tr>
<tr>
<td></td>
<td>1.5 kg/Tn</td>
<td>Mount Isa Mines Mining Operations – 11.4 kg/Tn due to the increase in operational size</td>
</tr>
<tr>
<td></td>
<td>8.4 kg/Tn</td>
<td>Bowen Coke – 1.6 kg/Tn</td>
</tr>
<tr>
<td>1% reduction in energy intensity (per tonne of final product/ore milled) over 2007 performance by 2012</td>
<td>8.7</td>
<td>Achieve a 1% reduction in energy intensity (per tonne of final product/ore milled) over 2007 performance by 2012</td>
</tr>
<tr>
<td></td>
<td>0.5</td>
<td>Mount Isa Mines Processing – 10.4</td>
</tr>
<tr>
<td></td>
<td>0.1</td>
<td>Mount Isa Mines Mining Operations – 0.5</td>
</tr>
<tr>
<td></td>
<td>0.6</td>
<td>Bowen Coke – 0.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>McArthur River Mine – 0.1</td>
</tr>
<tr>
<td>Sites to report monthly on NGERS requirements and track performance according to targets set by CBU</td>
<td>Xstrata Zinc North Queensland</td>
<td>Implement key findings from the 2011 NGERS review to ensure mandatory requirements are accounted for</td>
</tr>
<tr>
<td></td>
<td>McArthur River Mine</td>
<td></td>
</tr>
<tr>
<td>Sites to continue to develop energy efficiency opportunities and report annually</td>
<td>Xstrata Zinc North Queensland</td>
<td>Develop a second round of energy efficiency opportunity initiatives</td>
</tr>
<tr>
<td></td>
<td>McArthur River Mine</td>
<td></td>
</tr>
<tr>
<td>Sites to report on cost savings associated with GHG or energy efficiency projects on an annual basis</td>
<td>Xstrata Zinc North Queensland</td>
<td>Ensure sites have adequate mechanisms to account and quantify energy and carbon savings from increased efficiencies in stockpile, screening plant management and haulage efficiencies</td>
</tr>
<tr>
<td></td>
<td>McArthur River Mine</td>
<td></td>
</tr>
<tr>
<td>XZA and Energy Management Group to work together to develop energy reduction programs in line with the FTSE 4 Good Climate Change Criteria</td>
<td>Xstrata Australia</td>
<td></td>
</tr>
<tr>
<td>2% reduction in fresh water consumption intensity (m³ /tonne of bullion + zinc and lead in ore mined) over 2010 performance by 2012</td>
<td>3.1</td>
<td>Achieve a 2% reduction in fresh water consumption intensity (per tonne of metal) over 2010 performance by 2012</td>
</tr>
<tr>
<td></td>
<td>1.37</td>
<td>Xstrata Zinc North Queensland 4.3%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>McArthur River Mine 28% increase</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The installation of more flow meters resulted in more accurate readings, recording an anomalous increase in mid-2011.</td>
</tr>
</tbody>
</table>

Achieved  ❌ Not achieved  🔁 Action continues into 2012
### Environment (continued)

<table>
<thead>
<tr>
<th>2011 Targets</th>
<th>2011 Performance</th>
<th>2012 Targets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sites to develop water management strategies for conservation and operational control mechanisms. Includes specific targets for Xstrata Zinc Mount Isa water infrastructure upgrades and management controls.</td>
<td>✔ Xstrata Zinc North Queensland Note: Stormwater plans developed in line with Environmental Authority Transition ✔ McArthur River Mine</td>
<td>Ensure UN Global Compact initiatives are integrated into water management strategy. Mount Isa to design and implement stormwater management processes in line with environmental transition to the Environmental Protection Act Catchment modelling and control methods in line with regulatory and regional biodiversity parameters to be completed as part of Lady Loretta development.</td>
</tr>
<tr>
<td>Mount Isa operations to complete Emissions Reduction Project before April 2011.</td>
<td>✔ Xstrata Zinc North Queensland ✔ Feasibility phase ongoing ✔ McArthur River Mine</td>
<td>Completion of pilot program for scrubbing system.</td>
</tr>
<tr>
<td>Mount Isa to develop emission project deadlines after the Xstrata Zinc CBU project review outcomes.</td>
<td>✔ Deadlines completed ✔ Mount Isa Mines Air Quality Model to be implemented in 2011. ✔ Model tested, to be implemented in 2012 ✔ Completed</td>
<td></td>
</tr>
<tr>
<td>Mount Isa operations to submit an Environmental Management Plan for all relevant mining activities in May 2011.</td>
<td>✔ Xstrata Zinc North Queensland ✔ Mount Isa ✔ McArthur River Mine</td>
<td>XZA to continue to develop ongoing flora and fauna programs and ensure that ecosystem changes are monitored and analysed</td>
</tr>
<tr>
<td>Sites to continue to develop biodiversity programs for flora, fauna, weed, pest and potential conservation area development with key stakeholders.</td>
<td>✔ Xstrata Zinc North Queensland ✔ McArthur River Mine</td>
<td>MRM to continue to work with government authorities and relevant stakeholders to develop an offset program</td>
</tr>
<tr>
<td>MRM to undertake design phase of biodiversity offset project.</td>
<td>✔ McArthur River Mine ✔ Xstrata Zinc North Queensland</td>
<td>MRM to continue monitoring and re-use potential to reduce output to tailings dams</td>
</tr>
<tr>
<td>Conduct audits on tailings storage facilities and process water ponds and develop/review long-term tailings/pond management plans annually</td>
<td>✔ Xstrata Zinc North Queensland ✔ McArthur River Mine</td>
<td></td>
</tr>
<tr>
<td>Sites to further develop waste characterisation into minimisation in waste streams and develop waste reduction targets and report quarterly</td>
<td>✔ Xstrata Zinc North Queensland ✔ McArthur River Mine</td>
<td></td>
</tr>
<tr>
<td>Monitor Dangerous Goods legislation and progress plan for potential integration for sites in 2011</td>
<td>✔ Xstrata Zinc Australia</td>
<td></td>
</tr>
<tr>
<td>Develop guidelines that determine end points for product stewardship tracking and potential control mechanisms for sites.</td>
<td>✔ Xstrata Zinc North Queensland ✔ McArthur River Mine</td>
<td></td>
</tr>
</tbody>
</table>

☑️ Achieved ✗ Not achieved ✪ Action continues into 2012
## Governance, Assurance and Strategy

<table>
<thead>
<tr>
<th>2011 Targets</th>
<th>2011 Performance</th>
<th>2012 Targets</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Review material SD issues using recognised methodology</strong></td>
<td>![Checkmark] Xstrata Zinc North Queensland</td>
<td>![Checkmark] McArthur River Mine</td>
</tr>
<tr>
<td><strong>Sites to conduct audits as per CBU requirements</strong></td>
<td>![Checkmark] Xstrata Zinc North Queensland</td>
<td>![Checkmark] Conduct 3rd party SD Standards Audit at Mount Isa</td>
</tr>
<tr>
<td>• Bowen Coke – 3rd Party</td>
<td>![Checkmark] McArthur River Mine</td>
<td></td>
</tr>
<tr>
<td>• Mount Isa Mines – Internal assessment</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Xstrata Zinc Australia division and sites to develop and review plan on quarterly basis</strong></td>
<td>![Checkmark] Xstrata Zinc Australia</td>
<td>![Checkmark] Conduct a strategic review and incorporate applicable CBU items to develop new Xstrata Zinc Australia SD Strategy (2013-2015)</td>
</tr>
<tr>
<td><strong>Xstrata Zinc Australia to work with CBU to align frameworks with ISO 31000:2010</strong></td>
<td>![Checkmark] Xstrata Zinc Australia Major Hazard Protocol reviewed and implemented at sites</td>
<td></td>
</tr>
<tr>
<td><strong>Closure plans to be reviewed on an annual basis</strong></td>
<td>![Checkmark] Xstrata Zinc North Queensland</td>
<td>![Checkmark] McArthur River Mine</td>
</tr>
<tr>
<td><strong>Xstrata Zinc Australia Sustainability Report to be generated and assessed against GRI G3 and AA1000APS</strong></td>
<td>![Checkmark] Xstrata Zinc Australia</td>
<td>![Checkmark] Xstrata Zinc Australia Sustainability Report to be generated and assessed against GRI G3 and AA1000APS</td>
</tr>
<tr>
<td><strong>Xstrata Zinc Australia to develop knowledge-sharing mechanism for sites in relation to hazards, incidents and anticipated risks</strong></td>
<td>![Checkmark] Xstrata Zinc Australia</td>
<td></td>
</tr>
<tr>
<td><strong>Sites to develop 3rd and 2nd party audit plan in line with risk priority</strong></td>
<td>![Checkmark] Xstrata Zinc North Queensland</td>
<td>![Checkmark] McArthur River Mine</td>
</tr>
<tr>
<td><strong>Sites to review risk registers to ensure aggregated risks have been identified and accounted for</strong></td>
<td>![Checkmark] Xstrata Zinc North Queensland</td>
<td>![Checkmark] Continue to conduct annual risk process as mandated by Xstrata Zinc</td>
</tr>
<tr>
<td><strong>100% of employees and relevant stakeholders to be informed of the Xstrata plc Code of Conduct and Business Principles</strong></td>
<td>![Checkmark] Xstrata Zinc North Queensland</td>
<td>![Checkmark] 100% of employees and relevant stakeholders to be informed of the Xstrata plc Code of Conduct and Business Principles</td>
</tr>
<tr>
<td><strong>Report annually as per Voluntary Principles of Security and Human Rights and expand materiality assessment to capture requirements</strong></td>
<td>![Checkmark] Submitted to Xstrata Zinc as per annual survey requirements.</td>
<td>![Checkmark] Report annually as per Voluntary Principles of Security and Human Rights and expand materiality assessment to capture requirements</td>
</tr>
<tr>
<td><strong>Zero incidents of bribery and corruption</strong></td>
<td>![Checkmark] Xstrata Zinc North Queensland</td>
<td>![Checkmark] Zero incidents of bribery and corruption</td>
</tr>
<tr>
<td><strong>McArthur River Mine</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- ![Checkmark] Achieved
- ![X] Not achieved
- ![Arrow] Action continues into 2012
## Our Communities

<table>
<thead>
<tr>
<th>2011 Targets</th>
<th>2011 Performance</th>
<th>2012 Targets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annually review stakeholder engagement plans</td>
<td>✔️ Xstrata Zinc North Queensland</td>
<td>Sites to maintain effective and transparent engagement and communication process with stakeholders. Sites to document an annual review of their stakeholder engagement plans</td>
</tr>
<tr>
<td></td>
<td>✔️ McArthur River Mine</td>
<td></td>
</tr>
<tr>
<td>Maintain effective and transparent engagement and communication processes with stakeholders</td>
<td>✔️ Xstrata Zinc North Queensland</td>
<td></td>
</tr>
<tr>
<td></td>
<td>✔️ McArthur River Mine</td>
<td></td>
</tr>
<tr>
<td>Conduct annual review of partnership programs and CSI plans for effectiveness</td>
<td>✔️ Xstrata Zinc North Queensland</td>
<td>Sites to periodically monitor the effectiveness of CSI plans against desired outcomes and report quarterly</td>
</tr>
<tr>
<td></td>
<td>✔️ McArthur River Mine</td>
<td></td>
</tr>
<tr>
<td>Develop long-term (3-5 year) CSI plans including principles and criteria for all investments and develop communication strategies/plans to support CSI activities</td>
<td>✔️ Xstrata Zinc North Queensland</td>
<td>Sites to develop/maintain long-term (3-5 year) CSI plans including principles and criteria for all investments and develop communication strategies/plans to support CSI activities</td>
</tr>
<tr>
<td></td>
<td>✔️ McArthur River Mine</td>
<td></td>
</tr>
<tr>
<td>Contribute to the social, economic and institutional development of the communities where we operate with a minimum of 0.6% annual site profit before taxes</td>
<td>✔️ Xstrata Zinc North Queensland</td>
<td>Contribute to the social, economic and institutional development of the communities where we operate with a minimum of 0.4% annual site profit before taxes</td>
</tr>
<tr>
<td></td>
<td>✔️ McArthur River Mine</td>
<td></td>
</tr>
</tbody>
</table>

- ✔️ Achieved
- ✗ Not achieved
- ➔ Action continues into 2012

How we performed in 2011
Sustainability strategy

Our sustainable development strategy integrates economic, environmental and social responsibility aspects in our governance.

To achieve this, we are governed by Xstrata’s world-class Sustainable Development (SD) Framework comprising Xstrata’s Business Principles, Sustainable Development Policy, Sustainable Development Standards and Independent Assurance Program.

In 2011, Xstrata plc retained its position as Mining Sector Leader in the annual Dow Jones Sustainability Index review 011/12 for the fifth consecutive year. The company was also again named as the Super Sector Leader for Basic Resources Industries.

This corporate framework is complemented within the commodity businesses. Xstrata Zinc’s SD Policy is specific to the operations of its business and is implemented with site-specific policies related to safety and health, training, environment, community, risk management, and human resources.

Xstrata Zinc’s SD Strategy for 2009 – 2012 provides the guide for annual plans of action at a site level which require all operations to address both corporate and site-specific targets for continuous improvement.

Material issues

Materiality assessments were undertaken by Xstrata Mount Isa Mines and MRM to ensure our stakeholders and their issues, concerns and opportunities were understood and taken into consideration in stakeholder engagement planning. Our stakeholders include:

- employees, contractors, unions and other organisations that represent these groups
- local communities; including residents, schools, businesses and community organisations in the towns of Borroloola, Mount Isa and Bowen surrounding our operations and in the wider Northern Territory and Queensland communities
- Traditional custodian groups
- business partners, including joint venture partners, suppliers and customers
- local, Queensland Government, Northern Territory Government and Federal Government representatives
- inter-government and organisations
- local, regional, national and international media
- non-governmental and development organisations
- Xstrata Community Program North Queensland partners
- Xstrata Community Program Queensland partners
- partners under the MRM Community Benefits Trust.

The material issues of interest to these stakeholders have been identified through quantitative and qualitative research methods, internal performance metrics, issues arising through media networks and regulatory trends.

The resulting material issues and our actions against them have determined the topics to be covered in detail within this sustainability report.

For more information about Xstrata’s SD Framework, our SD strategies or site-based activities, please visit:

- www.xstrata.com
- www.xstratazinc.com
- www.mcarthurrivermine.com.au
- www.mountisamines.com.au
Our material issues

17 Supporting regional communities
30 Keeping our workforce safe and healthy
34 Attracting and retaining the best people for our workforce
39 Meeting our environmental responsibilities

“We make a significant contribution to the communities in which we operate”
Case Study

Ronnie Raggett’s story

“If the mine wasn’t there they would all just be sitting down in Borroloola. When people are working it makes them feel proud...”

Three generations of the Raggett family have worked at McArthur River Mine. Traditional Owner Ronnie Raggett and his wife, May, couldn’t be more proud. He and around 300 others provided feedback to MRM’s expansion plans as part of an intensive consultation program for the Draft Environmental Impact Statement lodged in January 2012.

“In our family we’re working people. My son, young Ronnie, is working at the mine. He drives trucks and other machinery. He was there when they started the mine off. He’s bought a house in Darwin and also bought a unit so he can rent it out. He’s got a son working there too. Jordan, my grandson, is driving trucks with his Dad.

I reckon the mine is the best thing that could happen to the Borroloola community. The mine does good things, like help with getting the road, the swimming pool and helping to build up the school. Our daughter teaches high school here and she reckons there are more kids going there now than ever before.

The best thing is having the work. If the mine wasn’t there they would all just be sitting down in Borroloola. When people are working it makes them feel proud.”

Supporting regional communities

We make a significant contribution to the communities in which we operate by providing jobs, skills and training; paying taxes and royalties; buying goods and services from local businesses; supporting community development programs; and by developing and improving local infrastructure such as housing.

In this way, we play an important role in improving local health, education, employment and living standards and we work with local governments, communities and other stakeholders to share these benefits in a sustainable manner. Our contributions are tangible.

The key issues of material interest to our stakeholders are:

- local procurement and employment
- life of mine planning for long-term sustainable operations
- effective stakeholder engagement and relationships
- liveability issues within Mount Isa
- delivering tangible community benefits
- community health issues in Mount Isa
- cultural heritage management with Indigenous stakeholders.

<table>
<thead>
<tr>
<th>Economic contributions</th>
</tr>
</thead>
<tbody>
<tr>
<td>During 2011, Xstrata Zinc Australia increased the value of direct economic benefits by 13% from $787 million in 2010 to $892 million. Most notably, this featured:</td>
</tr>
<tr>
<td>• 40% increase in employee wages and benefits at MRM and 22% increase in the Mount Isa operations as permanent employee numbers rise</td>
</tr>
<tr>
<td>• 31% increase in payments for utilities to $197 million</td>
</tr>
<tr>
<td>• 47% increase in government taxes and royalties paid by the North Queensland operations</td>
</tr>
<tr>
<td>• 13% increase in community investments.</td>
</tr>
</tbody>
</table>

Figure 2. Economic value distributed ($m)

- Employee wages and benefits
- Utilities
- Government taxes and royalties
- Community investments
- Other

* Other includes procurement, consumables and contractors.

Figure 1. 2011 Economic value distributed ($m) by Xstrata Zinc Australia
Supporting regional communities

Local goods and services

We support local businesses by consciously sourcing goods and services from local suppliers wherever possible. Our policy is to source local suppliers who provide value for money and quality products or services. We also assess businesses based on their involvement in community support programs or local social initiatives.

All suppliers and contractors are provided with a copy of Xstrata’s Business Principles and Sustainable Development (SD) Standards so they are aware of our core values and performance expectations.

In 2011, Xstrata Zinc Australia’s combined expenditure on local goods and services was around $419 million, or 39% of all goods and services purchased, which can be grouped into four major categories: utilities, freight and logistics; mining consumables; process consumables and on-site support services.

At MRM, more than $93 million was spent in the Northern Territory, a 30% increase on the previous year’s $72* million invested in Northern Territory suppliers. (*Note: Restated from the 2010 Sustainability Report which reported $60 million spent in the Northern Territory).

<table>
<thead>
<tr>
<th>Site</th>
<th>Local Region</th>
<th>Local Spend 2011</th>
<th>Local Spend 2010</th>
<th>% Local vs Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>MRM</td>
<td>Gulf Region/Borroloola</td>
<td>$12 million</td>
<td>$7.2 million</td>
<td>4%</td>
</tr>
<tr>
<td>Xstrata Zinc Mount Isa</td>
<td>Mount Isa</td>
<td>$386 million</td>
<td>$298 million</td>
<td>50%</td>
</tr>
<tr>
<td>Bowen Coke</td>
<td>Bowen</td>
<td>$21.5 million</td>
<td>$9.3 million</td>
<td>87%</td>
</tr>
</tbody>
</table>

* Percentage restated from the 2010 Sustainability Report which reported 90% local spend for Bowen Coke

Life of mine planning

Xstrata Zinc Mount Isa

Xstrata Zinc assets are part of the Mount Isa Mines complex which was established in 1924. The zinc operations comprise the George Fisher underground mine, Black Star and Handlebar Hill open cut mines, zinc-lead concentrator, lead smelter and zinc filter plant, and administration and services.

Latest estimates as at December 2011 have identified total ore reserves of 114 million tonnes targeted by these mining assets.

Mount Isa is the largest source of zinc in concentrate within the Xstrata Zinc business worldwide. In fact, it is one of the largest zinc mines in the world. Approximately 60% of the zinc in concentrate is exported to zinc smelters located in the Far East and 30% to Xstrata Zinc smelters in Europe. Approximately 10% of zinc concentrate is sold domestically. Bullion from the lead smelter is shipped to Xstrata Zinc’s Britannia Refined Metals lead refinery in the United Kingdom.

In 2011, our zinc operations mined 9.1 million tonnes of ore and produced more than 357,000 tonnes of zinc in concentrate, 138,600 tonnes of lead in bullion and 6,500 kilo ounces of silver in crude lead. Since 2003, the capacity of the Mount Isa concentrator has been increased from 3.5 million tonnes per year to 9.2 million tonnes in 2011.

Our life of mine planning for the Mount Isa assets features expanded mining and production. This is being supported by major capital projects which are extending the life of existing mines and increasing production rates.

During 2011, two projects were completed on time and on budget – the $40 million Handlebar Hill Open Cut expansion and the $133 million Black Star Open Cut Deep project – while a further five major projects were in pre-feasibility, feasibility or construction.

Matthew Breen, Senior Project Advisor for the George Fisher Mine Expansion project.
Table 2. Current Projects – Xstrata Zinc Mount Isa

<table>
<thead>
<tr>
<th>Project</th>
<th>Details</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>George Fisher Mine Expansion</td>
<td>The $274 million George Fisher Mine expansion will increase the annual production rate from 3.5 to 4.5 million tonnes per annum. This increased rate will reduce the life of mine by five years to 2034 years. However, the orebody remains open at depth to the north of the mine and exploration will continue. The project involves constructing a second hoisting shaft and associated infrastructure to service the northern area of the mine, using large diameter raise boring technology. It will also include the installation of an underground crushing and ore handling facility and upgrades to power and air ventilation services.</td>
<td>Under construction. Due for completion mid-2013.</td>
</tr>
<tr>
<td>George Fisher North Crushing Plant</td>
<td>The $36 million crushing plant relocates around 40% of zinc-lead ore crushing currently conducted in Mount Isa to George Fisher Mine. It will eliminate double-handling and reduce emissions from the operations in town for the benefit of the Mount Isa community.</td>
<td>Under construction. Due for completion 2012.</td>
</tr>
<tr>
<td>Black Star Open Cut Deeps</td>
<td>The $133 million project deepened the existing pit to target ore at a depth of 400 metres below ground surface level, 100 metres below the previous design. It adds approximately 14 million tonnes of ore to the production profile, extending the life of the pit by four years to 2016.</td>
<td>Operational. Completed October 2011.</td>
</tr>
<tr>
<td>Black Star Open Cut South</td>
<td>A feasibility study is assessing adding 13 million tonnes of ore to the profile of the mine. The project proposes a cut back to the south of the existing pit, requiring relocation of 16 pieces of infrastructure to maintain the mine’s production.</td>
<td>Feasibility due to conclude in 2012.</td>
</tr>
<tr>
<td>Handlebar Hill Open Cut Project</td>
<td>The completion of the $40 million Handlebar Hill Open Cut Project has extended the open pit to the north, increasing the mine’s total footprint by 54 hectares. It adds another two years to the life of mine until mid 2013 and targets an additional 2.4 million tonnes of ore.</td>
<td>Operational. Completed December 2011.</td>
</tr>
<tr>
<td>Mount Isa Open Pit Project</td>
<td>A $47 million pre-feasibility study between Xstrata Copper and Xstrata Zinc commenced into the development of a large, multi-commodity open pit mine on the existing Xstrata Mount Isa Mines footprint. The project proposes a major open pit mine encompassing the existing open pit and underground operations on the XMIM mining lease. The pre-feasibility phase is investigating the viability of a gradual expansion of mining development, infrastructure relocation and decommissioning occurring over several phases. Subject to feasibility studies and environmental assessment and internal and government approvals, the development of this pit would commence in 2016 and extend the life of mine to approximately 2060.</td>
<td>Pre-feasibility due to be complete early 2013.</td>
</tr>
<tr>
<td>Concentrator De-bottlenecking Project</td>
<td>In order to meet production supply and different ore grades as projects come online, the zinc-lead concentrator is undergoing a $70 million Concentrator De-bottlenecking Project which aims to result in accelerated production to a sustainable combined feed rate of 10 million tonnes per annum by the end of 2013.</td>
<td>Under construction.</td>
</tr>
</tbody>
</table>

Mount Isa is the largest source of zinc in concentrate within the Xstrata Zinc business worldwide.
Supporting regional communities

Lady Loretta Mine
Construction of the $246 million Lady Loretta deposit, 140 km north-west of Mount Isa started in mid 2011 to develop a new greenfield underground mine. Lady Loretta contains a total mineral resource estimated at 13.3 million tonnes (as at December 2011) featuring 16.4% zinc, 5.7% lead and 93 grams per tonne of silver.

Work on the decline development, surface infrastructure and services are progressing well ahead of schedule. This high-grade zinc-lead-silver deposit was initially planned to be operational by 2013 but since the end of 2011, these plans have been reviewed to escalate production with a further $57 million project investment which will now have production commencing in late 2012 for a 12-year mine life. Ore produced by Lady Loretta will be trucked to Mount Isa for processing.

Lady Loretta is a strategic asset within the zinc portfolio. Due to its higher grade of zinc, it improves the overall quality of our Mount Isa resource base, increases annual average zinc production from this region by around 20% to 100,000 tonnes and supports further cost efficiencies from the Mount Isa operations.

Bowen Coke
Bowen Coke converts coking coal from the Xstrata Coal mine at nearby Collinsville into metallurgical coke for use in the production of non-ferrous metals. Coke is an important feedstock for Xstrata Zinc’s operations in Mount Isa.

In November 2011, Bowen Coke Works began a $6 million project to upgrade 14 of the 54 beehive ovens with under-floor flues. The flues are designed to allow heat to circle below the coal as well as above, enabling larger tonnages to be produced and a higher, more consistent level of heat in the system. The project, due for completion in late 2012, aims to increase production at Bowen Coke by 30% and reduce emissions.

Bowen Coke employs 19 people and in 2011, produced 41,722 tonnes of coke, a 9% reduction on the previous year.
McArthur River Mining

MRM is located in the Northern Territory approximately 970 km south-east from Darwin and 60 km south-west of its closest township, Borroloola. The operation consists of the open-pit mine, a 2.5 million tonnes per annum capacity concentrator and processing plant, a heavy medium plant under construction in 2011, and the Bing Bong loading facility in the Gulf of Carpentaria.

MRM is the largest producer of zinc in bulk concentrate form used by Imperial Smelting Process smelters in Europe and Asia to produce zinc and lead metal and alloys. During 2009, MRM began producing a zinc concentrate which is supplied to electrolytic smelters. Concentrate is transported from the mine to the MRM-operated Bing Bong loading facility by road, a distance of 120 km. From there it is loaded onto a barge and transported to waiting ships at sea in the Gulf of Carpentaria.

In 2011, we increased production on the previous year at MRM by 5% with 2.3 million tonnes of ore mined, translating to a 5% increase in zinc in concentrate produced, a 21% lead in concentrate increase and a 9% silver in concentrate increase.

Expansion plans were announced in early 2011 and an Environmental Impact Assessment commenced for the MRM Phase 3 Development Project. The proposal involves increasing mine production from 2.5 million tonnes to approximately 5.5 million tonnes per year, resulting in an increase in zinc-lead-silver concentrate volume from 360,000 dry metric tonnes to 800,000 dry metric tonnes per annum. The $270 million project is subject to completion of studies and internal Xstrata and government approvals during 2012.

A Draft Environmental Impact Statement was submitted in January 2012 and the Supplementary EIS lodged in May 2012. Subject to internal Xstrata and government approval, works on the project would commence in 2012.

The Project proposes:

- increasing MRM’s mineable reserves from an identified 53 million tonnes to 115 million tonnes
- extending the life of mine by nine years from 2027 to 2036
- expanding the current pit within the existing bund from a footprint of 145 hectares to 210 hectares and the depth from 210 metres to 420 metres
- increasing our operational workforce by 67% at its peak from 440 currently to 735 by 2020 and sustaining a high level of Indigenous workforce participation
- extending the life of our MRM Community Benefits Trust to 2036, which will allow an additional $11.3 million to be invested in the community and bring total investment by the Trust to $43.3 million since 2007
- increasing the capacity of the existing tailings storage facility, including an already planned, new, lined water management dam
- generating approximately 530 million tonnes of additional waste rock to be accommodated in one existing and two new overburden emplacement facilities
- expanding the power station at the mine to a capacity of 45-50 MW
- building a temporary construction camp and expanding existing accommodation facilities
- investing 75% of the capital expenditure (or over $190 million) and 100% of operational expenditure for the Project with Northern Territory suppliers and industry.
Sue Morgan’s story

“It will help keep our doctors flying, and for that, we couldn’t be more grateful.”

In 1927, Dr George Simpson comforted an injured miner aboard a chartered emergency Qantas flight from Mount Isa to the Cloncurry Base Hospital. Since then, the legacy of Australia’s iconic Royal Flying Doctors Service (RFDS) has left an indelible handprint on the heart of the mining community of north-west Queensland. Now, with a $2 million contribution in 2011 from Xstrata Mount Isa Mines, a new Mount Isa base facility has allowed RFDS Acting Base Manager Sue Morgan and her team to stretch their wings.

“Our beautiful new base means we now operate in a purpose-built facility with the latest in health technology—we feel like we’ve been catapulted into the 21st century. With room for up to 75 employees we’re able to work as one team under one roof. This makes planning and coordinating our health care programs simple and effective. Our work ranges from remote medical consultations and aero-medical retrievals to general practice, Aboriginal and Torres Strait Islander health initiatives and mental health promotion.

It will help keep our doctors flying, and for that, we couldn’t be more grateful.”

Effective stakeholder engagement

We work closely with our host communities to maximise the benefits and minimise or avoid negative impacts from our operations. We engage openly and honestly with all our stakeholders and respond to community complaints and enquiries through fair and equitable grievance and conflict resolution processes.

We encourage dialogue with our stakeholders and integrate feedback into business planning and sustainable development strategy. Stakeholder feedback is used to identify and manage material risks and opportunities, guide our strategy and business activities, protect and develop our corporate reputation, strengthen stakeholder relationships, manage expectations, respond to concerns and share our plans for the business. Stakeholder engagement is conducted in an equitable and culturally appropriate manner with the maximum transparency wherever commercially possible.

All sites implement structured stakeholder engagement plans which identify all stakeholders, the material issues of interest, and actions to inform, respond, consult and partner with them.

In addition to these ongoing programs, two major consultation projects were conducted in 2011:

• Xstrata North Queensland Community Attitudes Survey
• Social Impact Assessment (SIA) as one of the studies under the MRM Phase 3 Development Project, Environmental Impact Statement.

Xstrata North Queensland Community Attitudes Survey

This study is conducted every two years to track perceptions and expectations of community members regarding the issues that matter to them and the performance of our operations.

An independent research firm conducted interviews with almost 1,000 residents of Mount Isa and Bowen. The areas of greatest concern are shown in Figure 3. In summary, these identify needs around:

• Lack of infrastructure, employment opportunities and community services
• Investments in emergency housing, Indigenous issues and more activities for youth
• Air pollution, including emissions, as well as water access and quality.

These findings are now influencing planning and action under our long-term Corporate Social Involvement (CSI) programs and environmental management. For more information, see pages 25 and 26.

MRM Social Impact Assessment

A comprehensive SIA was conducted to identify and analyse intended and unintended social consequences, both positive and negative, of the proposed Phase 3 Development Project and how these may affect the future vision of the area.

Almost 300 people were reached through 130 points of contact in a comprehensive consultation program conducted as an input to the SIA.

The consultation found genuine interest in and support for the Project and support for the methodology undertaken to equitably involve a large number of stakeholders representing a diverse range of local, regional and cultural interests. Consultation aimed to share information in an open, equitable, all-inclusive and comprehensive way and to encourage community feedback and input into the process.

Interestingly, it found there was a strong alignment between the planning conducted at all levels of socio-political governance within the community, Territory and local government, and Indigenous organisations to help the Gulf region become a vibrant, healthy, thriving community, with Borroloola targeted for development as a Northern Territory Growth Town.

The outcomes of discussions revealed a number of topics of common interest: job opportunities and community benefits were the most frequently raised subjects and were recognised as ways MRM is positively contributing to the region. Comments and questions were also raised in relation to traffic conditions (specifically the state of the local roads), rehabilitation of the McArthur River, environmental monitoring at Bing Bong, economic opportunities for local procurement, and to a lesser extent, the purpose and performance of the tailings storage facility and the overburden emplacement facility rehabilitation.

All feedback has been fully considered within the risk management planning for the Project and a Social Impact Management Plan has been prepared.
Supporting regional communities

Figure 4. Frequency of topics of focus for consulted stakeholders (% of meetings where topic is raised)

For more information on the SIA and Environmental Impact Assessment, please visit www.mcarthurrivermine.com.au/publications. For more information on our CSI initiatives, see pages 25 and 26.

Mount Isa Liveability Study

In the highly competitive national resources industry, we needed to define a distinct advantage for attracting and retaining our people as a residential mine site in the outback city of Mount Isa. We therefore undertook an innovative study in 2011 focussed in two areas: Mount Isa quality of life, and housing styles and preferences.

A total of 360 people representing our workforce and a variety of household styles were involved in the studies, providing feedback through workshops and online surveys. This included 20 children aged 10-16 years of age who participated in a creative study to photograph what they liked, disliked and desired about living in Mount Isa.

The research revealed:

- The location of the north-west region and its surrounding beautiful natural environment is enjoyed but can also lead to a sense of isolation which can ultimately drive people away.
- People relocating from the city to the country still expect to enjoy the standard of living and services that reflect a contemporary lifestyle.
- Home ownership is a key driver of satisfaction in the community and there is a strong demand for quality, affordable housing of all forms in Mount Isa.
- Our ability to retain people within our operations will be factor of how successful we can be at meeting their full expectations for a challenging, developing and rewarding career, an attractive lifestyle and work/life balance.

The outcomes are now shaping future strategies in relation to human resource management, community development and housing development.
Delivering tangible community benefits

Our CSI programs aim to enhance the social and economic development of local communities in a manner that avoids their dependency on our operations over the long term. They are established through extensive engagement with communities and other stakeholders and are coordinated with local government and development organisations where possible.

For every community where we operate, we seek to develop partnerships in the areas of art and culture, education, enterprise and job creation, the environment, social and community development and health.

This is delivered through:

- **Xstrata Community Program North Queensland (XCPNQ):** a program shared by Xstrata Zinc North Queensland and Xstrata Copper North Queensland. The XCPNQ program commenced in 2005 and has since supported nearly 70 initiatives and several social infrastructure projects with a total program value of more than $20 million. In 2011, commitments were made to another nine partnerships with a total value of $3.6 million to be implemented over two years.

- **Xstrata Community Program Queensland (XCPQ):** a program shared by the Queensland operations of Xstrata Zinc, Xstrata Copper and Xstrata Coal. Since 2006, the XCPQ has provided more than $30 million to Queensland communities. In 2011, commitments were made to another eight partnerships providing almost $3 million.

- **MRM Community Benefits Trust:** a partnership between MRM and the Northern Territory Government to promote the social and economic development of the Gulf region. During the 2011 financial year, the Trust committed $2.1 million in grants to 11 programs making it the largest investment year since its establishment in 2007.

- **Site-based sponsorship and donation programs which provide either financial or in-kind support to community-based organisations ranging from major annual events such as the Xstrata Mount Isa Rodeo, Lake Moondarra Fishing Classic and Xstrata Mining Expo in Mount Isa, and Borroloola Show, Rodeo and Gymkhana in the Gulf, to support for health infrastructure in all locations.**

- **Xstrata plc Central Fund:** for investments in extraordinary programs or projects. In 2011, the central fund committed $3.5 million for the development of a multi-purpose community centre in Borroloola in collaboration with the MRM Community Benefits Trust, the Northern Territory Government and community organisations. The allocation to Xstrata Zinc Australia was the largest made from the central fund in 2011 to any operation in the world and was the only project awarded in Australia.

In 2011, we also celebrated the end of construction of a major asset for the Bowen community which was the subject of an earlier grant. The Bowen Police and Citizens Youth Club opened in November 2011 supported by a $750,000 contribution from the XCPNQ.
## Supporting regional communities

<table>
<thead>
<tr>
<th>CSI Program</th>
<th>Partners</th>
<th>Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xstrata Community Program North Queensland</td>
<td>Books in Homes</td>
<td>Empowering children through reading</td>
</tr>
<tr>
<td></td>
<td>North West Queensland Indigenous Catholic Social Services</td>
<td>Childcare traineeships</td>
</tr>
<tr>
<td></td>
<td>Royal Flying Doctor Service</td>
<td>Mount Isa Base Development</td>
</tr>
<tr>
<td></td>
<td>Southern Gulf Catchments</td>
<td>Environment and Community Project Officer</td>
</tr>
<tr>
<td></td>
<td>St Mary’s Primary School</td>
<td>Laptop computers and shade</td>
</tr>
<tr>
<td></td>
<td>Stride Foundation</td>
<td>Sport for Life project</td>
</tr>
<tr>
<td>Xstrata Community Program Queensland</td>
<td>Cerebral Palsy League</td>
<td>Virtual family support centre</td>
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<td></td>
<td>Flying Arts</td>
<td>Creative development workshops</td>
</tr>
<tr>
<td></td>
<td>The Pyjama Foundation</td>
<td>Love of Learning Program</td>
</tr>
<tr>
<td></td>
<td>Queensland Department of Environment and Resource Management</td>
<td>Northern Hairy-Nosed Wombat breeding and relocation project</td>
</tr>
<tr>
<td></td>
<td>RSPCA</td>
<td>Xstrata 1300 ANIMAL community service phone hotline</td>
</tr>
<tr>
<td></td>
<td>The Salvation Army</td>
<td>Support services for homeless Queenslanders including refurbishment of Glenhaven Homeless Service</td>
</tr>
<tr>
<td></td>
<td>The Smith Family</td>
<td>Digital literacy program</td>
</tr>
<tr>
<td></td>
<td>University of Queensland School of Engineering</td>
<td>Xstrata Chair of Metallurgical Engineering</td>
</tr>
<tr>
<td>MRM Community Benefits Trust</td>
<td>Waanyi Nation Aboriginal Corporation</td>
<td>McArthur River Machine Hire business strategy</td>
</tr>
<tr>
<td></td>
<td>Mabunji Aboriginal Resource Assn</td>
<td>Little River Youth Diversion Program</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Boonu Boonu and NAIDOC Festival 2011</td>
</tr>
<tr>
<td></td>
<td></td>
<td>London exhibition by local artists and marketing support</td>
</tr>
<tr>
<td></td>
<td>Borroloola Amateur Race Club</td>
<td>New chutes for rodeo</td>
</tr>
<tr>
<td></td>
<td>Li-Anthawimyarra Sea Ranger Unit</td>
<td>New vehicles</td>
</tr>
<tr>
<td></td>
<td>Department of Education and Training</td>
<td>Strong Start, Bright Future, vocational education and training program</td>
</tr>
<tr>
<td></td>
<td>Barkly Regional Arts</td>
<td>Borroloola and McArthur River Song People Sessions</td>
</tr>
<tr>
<td></td>
<td>McArthur River Mine</td>
<td>Indigenous employment and training strategy</td>
</tr>
</tbody>
</table>
Community health

Xstrata Mount Isa Mines takes the health and safety of the Mount Isa community very seriously. Mount Isa is a unique environment where lead is present from natural and industrial sources.

In March 2011, Queensland Health released the findings of its 2010 follow-up blood-lead screening program of Mount Isa children aged one to four. The report showed a marked improvement with 95% of children recording safe blood lead levels, up from 89% in 2008.

Since 2003, we have now invested more than $290 million in more than 250 environmental initiatives at our Mount Isa operations to minimise potential impacts to the environment and local community. We continue to support the Living with Lead Alliance to deliver community education programs about how to live safely with lead in Mount Isa. We also continue to offer free, independent and confidential blood-lead testing to the Mount Isa community.

Our support for the University of Queensland’s independent Lead Pathways Study is continuing. The release of Phase One (Land) report of the study in 2009 showed a low risk to human health from historical mine sediment. Subsequent reports into the sources and impacts of lead through Air and Water are now due to be completed and independently peer reviewed during 2012.

In early 2011, a court proceeding commenced on behalf of a claimant against Mount Isa City Council, the Queensland Government and Xstrata Mount Isa Mines seeking damages for alleged negligence. We have a policy of not speaking or reporting publicly about legal cases as we feel it is unfair on the claimants and their families. The company is preparing to answer the claim in court.

Mount Isa has the most intensive air quality monitoring system of any city in Australia. We have never exceeded regulatory limits for respirable lead at any air monitor in the Mount Isa community since Xstrata’s acquisition of Mount Isa Mines in 2003.

Indigenous rights and Aboriginal cultural heritage

We respect the traditional rights of Indigenous people and support Aboriginal cultural heritage and customs. We respect local customs and values and safeguard sacred sites within the footprint of our operations. There were no incidents of Indigenous rights being violated or reports of cultural heritage breeches as a result of our operations in 2011.

Our cultural recognition policies provide a mandate for cultural respect and awareness through which we have established valued relationships with local Aboriginal people and Traditional Owners. They also ensure our workforce understands the traditional rights and culture of Indigenous people. The policies ensure systems and processes are in place so that sites of cultural significance and matters of cultural interest are identified and preserved.

In north-west Queensland, there are 14 language groups represented; the largest of these is the Kalkadoon Nation. On 12 December 2011, the Federal Court of Australia awarded the Kalkadoon People Native Title rights over Mount Isa and a large area of north-west Queensland. This was an historic day for the Kalkadoon after an application process taking 18 years.

Xstrata Mount Isa Mines recognises north-west Queensland’s Kalkadoon people as the traditional custodians of the lands on which our operations are based, and had done so prior to Native Title determination. We are dedicated to the preservation of the cultural heritage of the region’s Indigenous people and committed to providing resources to encourage career development and new business ventures.

During 2011, Xstrata Mount Isa Mines worked towards establishing an Indigenous Land Use Agreement with the Kalkadoon People. We are pleased to report this agreement was officially signed by both parties in December 2011. This will see:

- a consultative committee formed to meet regularly to address a range of issues on the Kalkadoon agenda such as employment, business and capacity building opportunities
- a formalised Cultural Heritage Management Plan for the Xstrata Mount Isa Mines mining lease (ML8058)
- a formalised Ancillary Agreement for future acts associated with exploration activities.

For Lady Loretta, we agreed comprehensive commitments with the Kalkadoon people under a Cultural Heritage Management Plan also executed in 2011. The plan is a shared vision to protect and manage Aboriginal cultural heritage within the mine’s project area and is valid for the life of the mining lease.

The plan is in line with the Aboriginal Cultural Heritage Act 2003 (Qld) and details commitments including conditions for cultural heritage surveys and monitoring, cultural heritage awareness training for all staff and an Indigenous trainee position within the Sustainable Development team onsite.

MRM is situated on the traditional lands of the Gurdanji, Binbinga and Yanyuwa people. Today, these lands continue to be important to these and other local traditional language groups including Garawa, Mara and Alyawa people.

MRM’s Cultural Recognition Policy provides a mandate for cross-cultural respect and awareness through which MRM has established valued relationships with local Indigenous people and Traditional Owners. It also ensures our workforce understands the traditional rights and culture of Indigenous people and oversees a number of systems and processes to ensure sites of cultural significance, and matters of cultural interest, are identified and preserved.

Cross-Cultural Awareness Training is mandatory for MRM employees and contractors. In 2011, this training began to be delivered by a local Traditional Owner as a new enterprise initiative.
Community grievances

We record, monitor and address community complaints, take corrective action where appropriate, and provide feedback to complainants.

In 2011, our North Queensland operations received nine community complaints with a reasonably even split between the Mount Isa and Bowen operations. Most complaints were related to fumes and in each case complainants were advised of the Air Quality Control (AQC) Centre status and any action being taken. The AQC Centre closely monitors emissions and automatically closes down the smelter in Mount Isa if emissions approach regulatory limits. All complaints are handled by our site community relations staff and are responded to promptly.

MRM received no community complaints over the same period.

Table 4. Aboriginal Cultural Heritage Surveys

<table>
<thead>
<tr>
<th>Outcomes</th>
<th>Xstrata Mount Isa Mines</th>
<th>MRM</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2011</td>
<td>2010</td>
</tr>
<tr>
<td>Number of Aboriginal Cultural Heritage</td>
<td>24</td>
<td>21</td>
</tr>
<tr>
<td>Surveys completed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total area covered (hectares)</td>
<td>723</td>
<td>727</td>
</tr>
<tr>
<td>Findings</td>
<td>2011</td>
<td>2010</td>
</tr>
<tr>
<td>Aboriginal artefacts</td>
<td>21</td>
<td>4</td>
</tr>
<tr>
<td>Sites of significance</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 5. Complaints received by type and site in 2011

<table>
<thead>
<tr>
<th>Complaint Type</th>
<th>XMIM</th>
<th>Bowen</th>
<th>MRM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fumes attributable</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Fumes not attributable</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fumes attributable to Acid Plant</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blasting</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dust</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (employee behaviour etc)</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fallout damage</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Complaint Rec’d not applicable</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sub Total</td>
<td>5</td>
<td>4</td>
<td>0</td>
</tr>
</tbody>
</table>
Case Study

Nick Diamond’s story

“It’s nice to leave a mark—to invent something that makes everybody’s lives easier and safer...”

The simple but ingenious invention of Nick Diamond, Instrument Technician in Mount Isa, has shaken up Xstrata Zinc’s approach to lead smelter maintenance. So outstanding was Nick’s idea, he can proudly claim reducing maintenance down time for cable trays by 90% and eliminating a safety hazard from the site.

“We’ve got cable trays running electrical cabling right up high through the lead smelter. They seem to collect quite a bit of concentrate in no time at all which then sets into a solid. The cable trays are not the best place for concentrate to settle. The trays end up being too heavy for their supports and we want to avoid any sort of structural collapse.

We used to remove the build up by chipping away at the cables using hammers, wooden stakes or other non-conductive materials. I started tinkering with a few motors and I sourced a single, 7 kg, split phase vibrating motor that can be plugged into any 10 amp outlet. It took 30 minutes for the vibrating motor to clean a tray which would usually take three people more than two days. That’s $440 for the little engine versus the labour cost of around $2,500.

It’s nice to leave a mark—to invent something that makes everybody’s lives easier and safer.”

Keeping our workforce safe and healthy

We strive for an injury-free, safe work environment and we hold our management accountable for safety performance, and for providing visible leadership.

We ensure our employees and contractors receive training to improve their safety knowledge and skills and make them aware that they have a responsibility to themselves, their family and friends to work and act safely.

We detect, mitigate or eliminate conditions that pose a risk to the health and safety of our workplaces and neighbouring communities. We ensure that every task undertaken in our operations has a safe system of work defined and that our people have the right tools and equipment to complete tasks safely and productively. We also monitor our employees’ health, wellbeing and fitness for work through our comprehensive screening programs.

The key issues of material interest to our stakeholders are:
• prevention of fatalities
• safety around heavy vehicles and mobile equipment underground and on the surface
• improving safety leadership and culture
• providing personal health advisory services to all people, particularly tailored to their needs based on occupational health risks
• improving the safety performance of contractors
• exposure to lead and other industrial substances in the workplace.

Safety performance

We value the health and safety of our people. Safety performance is tracked using the following measures:
• Total Recordable Injury Frequency Rate (TRIFR), which includes all injuries except first aid treatments
• Lost Time Injury Frequency Rate (LTIFR)
• Disabling Injury Severity Rate (DISR), which records the number of days lost or on restricted duties per million hours worked.

In 2011 our operations achieved solid improvements in safety performance.

The standout achievement for 2011 was Bowen Coke which reached five years LTI free. The relatively small, 19-strong Bowen team work in what could be considered a high-risk site—feeding 54 beehive ovens reaching temperatures of up to 1,300 degrees. In addition to the long-serving track record of each team—on average 15 years at the operation—the site introduced a number of innovations to improve production and reduce safety risks, including a mobile screening plant for crushing coke, which replaced an old fixed plant and two pneumatic suction vibrators which have improved coal unloading from the coal wagons, eliminating the need to manually jack-hammer the wagons.

Investigations into safety incidents continue to show two main causes: failure to identify hazards and a failure to follow procedures. Accordingly, a significant effort has been invested in making sure all our people understand and are aware of risks within their work environment both through their own initiative and through visible leadership shown in workplace observations.

Developed by our own people, in 2011, our Mount Isa operations trialled an innovative assessment tool aimed at increasing operational employees’ ability to clearly identify manual task risks and implement appropriate controls.

The tool takes seconds to use and calculates immediate and long-term injury risk based on the physical requirements and repetition of the task. The operator simply identifies the weight being handled or the speed of movement, postural requirements and repetition, then the mechanically operated tool indicates a risk level. Control options to decrease risk are displayed for each variable and feedback regarding the effectiveness of controls is provided immediately.

The first prototype was developed and trialled in August 2011 with implementation occurring site-wide in November 2011.
Heavy vehicle and mobile equipment safety

During 2011, there were four high potential risk incidents related to surface mobile equipment and this follows a similar trend in previous years.

Following successful trials in 2010, George Fisher Mine has implemented an industry-leading Vehicle Proximity Detection System, as part of an overarching strategy to continuously improve safety in the underground working environment.

Designed to significantly reduce the risk of vehicle related incidents, the $1.7 million system represents the next level of vehicle proximity technology. It alerts heavy machinery operators when people, light vehicles or other heavy equipment are nearby, as close as five metres in the adjustable ‘inner zone’.

The system detects people and machinery entering the mine through a Radio Frequency Identification tag worn by all personnel and fitted to equipment underground. A data logging system is linked to a touch screen display unit in the operator’s cab and alerts drivers with both visual and audible alarms.

The system is the first of its kind to be implemented with the ability to accurately detect objects and people from a close and adjustable range.

Improving safety leadership and culture

Approaches to improving safety performance have typically focused on providing fit for purpose equipment, training competent people, and using safe work practices.

In the past year, we have focused more on the need for behavioural safety management and this has added another dimension to building the right safety culture in our Mount Isa operations.

The purpose of this program is to improve safety performance and culture by focusing on each crew. Working with the leadership team, as well as individuals on the crews, we aimed to improve awareness of their accountability and responsibility for safety. The program has three key components:

- **Professional development planning:** This commences with correlating data on safety performance, production Key Performance Indicators, absenteeism, turnover, performance management, a psychometric test and 360 degree assessment of the leader to get an overall picture of a team's performance. The information then forms the basis for professional development planning for leaders.
- **Leadership development and support:** This refers to every person in the crew's capacity to lead. Coaching is provided at an individual and team basis to mentor teams on whatever they need support for. The key focus of this work is around the concept of leadership at all levels and giving our people a voice in talking about safety matters, including issues or concerns.
- **Organisational development:** We are developing a new formal training package that is tailored for the expectations of leaders at every level. This will commence roll out in 2012.

The safety leadership program is progressively being rolled out across the Mount Isa operations and may be applied to other operations within our portfolio where there is a similar need.

Personal health advisory services

Our health promotion campaigns continued across all operations and were expanded in 2011 to introduce campaigns focused on serious diseases, dengue fever and influenza, and health and support information on obesity, smoking, alcohol and drugs, fatigue, nutrition, men’s and women’s health, mental health, hearing conservation and shift work.

At George Fisher Mine, we introduced Emergency Assist in 2011 – a rapid response, on-site medical service in case of emergency. The site’s 20km distance to emergency services necessitated the service with a similar satellite provision provided to Lady Loretta mine.

Xstrata Mount Isa Mines partnered with Kinetic Health in 2011 to deliver new on site health and wellness packages and an online personal health management resource. One of the major aspects of this partnership has been the purchase and fit out of a purpose-built Health Surveillance Vehicle (HSV). Built on a 4.5 tonne Mitsubishi truck, the HSV provides on and off site medical assessments.

The truck spends time both in the Xstrata work areas and entry gates, along with having a significant community presence.

These resources provide a range of medical services to all our people.

Medical services available to Mount Isa team

- Medical examinations (periodic medicals)
- Audiometry (hearing tests)
- Spirometry (lung function)
- Urinalysis (kidney testing, toxicities, dehydration)
- Blood Glucose Testing (diabetes)
- General blood sampling including occupational testing (blood lead and other toxicities)
- General health/wellbeing (liver screening etc), on the spot blood cholesterol levels
- Occupational PPE fit testing (respirators/hearing protection)
- Adult vaccinations
- Eye testing
- Weight management
- On and off site medical and wellness education.
Other initiatives based on specific workplace risks and implemented through ongoing monitoring and sampling programs included:

- **Noise**: Implementation of noise control plans in Mount Isa and the development of the plan for MRM including new training initiatives.
- **Dust contaminants and Diesel Particulate Matter (DPM)**: Regular monitoring of DPM exposure and tracking of dust against Australian Standards for respirable levels and provision of compulsory dust masks in areas where it is appropriate.
- **Vibration**: Completion of a baseline Whole Body Vibration (WBV) study to help reduce exposure and the risk of musculoskeletal disorders such as lower back pain.
- **Arsenic**: A focus for action in the Mount Isa lead smelter where we introduced new engineering and plant design changes, arsenic awareness training, and enforced a mandatory respirator zone and designated smoking area for primary smelting.

At MRM, the appointment of a full-time physiotherapist as an Injury Prevention Advisor has been influential in helping keep our people active, health and safe. Through this position, a number of new initiatives have focused on improving the physical and mental health of employees, including an occupational noise survey, baseline assessments of cadmium levels on site, new exercise programs available through the camp gym—both in groups and individually tailored programs—physiotherapy treatments, and assessments of work organisation, safe work practices and fatigue management.

### Occupational hygiene and lead management

During 2011, we increased the range and quantity of sampling conducted to monitor occupational health. Strict protocols are helping to reduce lead exposure to employees in the workplace and biological and dust monitoring is conducted in accordance with the National Occupational Health and Safety Commission (NOHSC) and recognised occupational hygiene standards.

All employees at our operations are required to have venous lead in blood tests at frequencies which are determined by the area they work in, previous result, gender and reproductive capacity. This form of biological sampling provides an accurate measure of a worker’s exposure to lead. A total of 6,783 blood lead samples were taken from our employees and contractors during 2011, with no instances of our people exceeding the national medical removal limit of 50µg/dl blood lead level.

No new occupational illnesses were confirmed during 2011.

### Table 6. Occupational hygiene sampling and analysis

<table>
<thead>
<tr>
<th>Type of sample collected and analysed</th>
<th>Xstrata Mount Isa Mines 2011</th>
<th>Xstrata Mount Isa Mines 2010</th>
<th>MRM 2011</th>
<th>MRM 2010</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Airborne dust</strong> (inhaled, respirable, static and asbestos)†</td>
<td>662</td>
<td>388</td>
<td>175</td>
<td>+</td>
</tr>
<tr>
<td><strong>Arsenic in urine</strong>†</td>
<td>1328</td>
<td>1371</td>
<td>20</td>
<td>+</td>
</tr>
<tr>
<td><strong>Diesel Particulate Matter (DPM)</strong>†</td>
<td>51</td>
<td>63</td>
<td>0</td>
<td>+</td>
</tr>
<tr>
<td><strong>Lead in blood (employees and contractors)</strong></td>
<td>4,495</td>
<td>5,334</td>
<td>2,288</td>
<td>1,226</td>
</tr>
<tr>
<td><strong>Noise</strong>†</td>
<td>363</td>
<td>221</td>
<td>232</td>
<td>+</td>
</tr>
<tr>
<td><strong>Potable water (microbiological and metals)</strong>†</td>
<td>1083</td>
<td>714</td>
<td>311</td>
<td>314</td>
</tr>
</tbody>
</table>

† These numbers reflect the combined copper and zinc businesses operating at Xstrata Mount Isa Mines.
+ Not recorded.

### Contractor management

Trends for the lag indicators of health and safety over 2010-2011 showed contractors were more likely to be involved in safety incidents leading to recordable injuries than our employees. The issue of working with contractors to ensure they comply with our site health and safety policies and standards has therefore been a priority.

Our contractor portal was further customised in 2011 with Xstrata-engaged contracting firms given access to Xstrata’s Business Principles, all site-level sustainable development (SD) documents, commercial terms and released site communications. This helps improve their understanding of our requirements and also enables them to use the information to build their own systems and safety management standards in line with our SD requirements.

Targeted reviews of particular contract companies experiencing the highest rates of injury were also conducted to assess the causes for these incidents. As a result, action has been taken by the contractor companies’ leadership with our support to review fatigue management and roster policies, training and safe work practices.

### Crisis and emergency preparation

In Mount Isa, the unexpected arrival of a category one cyclone, Cyclone Yasi, created a real-life evacuation scenario that showed our emergency management systems were effective.

An Xstrata Mount Isa Mines team was the overall winner in the annual North West Minerals Province Mine Rescue Challenge this year. The seven competing teams gathered from mining operations in the region including Xstrata, MMG and Resolute, to test their capability in challenging and realistic scenarios.

The MRM Emergency Response Team is well trained and readily available to provide immediate assistance to the mine or community when required.
Leigh Neindorf’s story

“I have Xstrata Zinc to thank for providing a platform where creativity was encouraged and being driven by imagination was organisationally endorsed!”

In 2011, the man behind some of Xstrata Zinc’s industry-leading innovations said goodbye after almost four decades in our business.

“By the mid ’80s I was the Registered Mine Manager of an area that used a method called “cut-and-fill”. Cut-and-fill required miners to drill, blast, muck and then fill from within the orebody void, which was a known safety risk. It was a universal mining problem and we knew that if we found an innovative solution, we’d change the way the mining industry operates. So we came up with a loader that could be controlled remotely. By experimenting with different technologies the new machines became integral to our operations.

In 2004 as the Technical Services Manager for Xstrata Zinc, I saw we had significant resources at George Fisher and Black Star mines, but in order to convert them to reserve we had to make sure retrieving them would be economically viable. Being involved in the project that saw Xstrata Zinc boom in north-west Queensland is something I’ll always be proud of.

I always believed that Mount Isa would be a great place to work, and it offered me so many opportunities to challenge and prove myself professionally.”

Attracting and retaining the best people for our workforce

Our ability to attract, develop and retain the best talent is fundamental to our business success. In addition to providing development and training opportunities and safe and healthy workplaces, we have a strong set of values, expressed by our company-wide Business Principles and Code of Conduct, which are based on integrity, trust, personal accountability, respect and care for others.

The key issues of material interest to our stakeholders are:

• attraction and retention of quality personnel in the face of a national skills shortage
• local employment within the communities associated with our operations
• investing in the career development of our people
• Indigenous employment and training as a key opportunity for workforce diversity.

Attraction and retention strategies

Our total number of employees grew by 24% from 1,462 in December 2010 to 1,809 as at December 2011. In addition, a further 901 people were engaged as contractors, primarily working on capital development projects.

This increase in people was characterised by a 26% increase at Mount Isa where the conversion of around 180 local contractors to permanent employees lifted local employment rates and a further 114 people were brought in for expanding operational teams.

MRM also achieved a 10% increase in people as operations expanded.

The first 25 people within the Lady Loretta team were engaged primarily in leadership and administrative roles as mine development commenced.

Turnover maintained a rate of 17% during 2011. Importantly, however, the turnover rate in our North Queensland operations continued to fall to within industry averages for residential mine-sites.

Among those leaving Xstrata Zinc were two people who have achieved extraordinary years of service and we celebrated their careers and contributions:

• John Williams, retired after 37 years at Bowen Coke as a production worker
• Leigh Neindorf, who retired after 37 years at Mount Isa Mines, most recently as Technical Services Manager (see Leigh’s story, on page 33).
Table 7. Profile of our people in Xstrata Zinc Australia

<table>
<thead>
<tr>
<th>Turnover profile by role type</th>
<th>Number of leavers</th>
<th>Number of employees</th>
<th>Percentage turnover</th>
</tr>
</thead>
<tbody>
<tr>
<td>Executive Management</td>
<td>0</td>
<td>1</td>
<td>0%</td>
</tr>
<tr>
<td>Senior Management</td>
<td>0</td>
<td>14</td>
<td>0%</td>
</tr>
<tr>
<td>Management</td>
<td>2</td>
<td>32</td>
<td>6%</td>
</tr>
<tr>
<td>Supervisors, administration, technical</td>
<td>118</td>
<td>503</td>
<td>23%</td>
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<tr>
<td>Operational, production, maintenance</td>
<td>191</td>
<td>1,259</td>
<td>15%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>311</strong></td>
<td><strong>1,809</strong></td>
<td><strong>17%</strong></td>
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</table>

<table>
<thead>
<tr>
<th>Employees by role type and gender</th>
<th>Female</th>
<th>Male</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Executive Management</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Senior Management</td>
<td>2</td>
<td>12</td>
<td>14</td>
</tr>
<tr>
<td>Management</td>
<td>4</td>
<td>28</td>
<td>32</td>
</tr>
<tr>
<td>Supervisors, administration, technical</td>
<td>130</td>
<td>373</td>
<td>503</td>
</tr>
<tr>
<td>Operational, production, maintenance</td>
<td>170</td>
<td>1,089</td>
<td>1,259</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>306</strong></td>
<td><strong>1,503</strong></td>
<td><strong>1,809</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Employees by age and gender</th>
<th>Female</th>
<th>Male</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>under 30</td>
<td>145</td>
<td>502</td>
<td>644</td>
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<tr>
<td>30 to 50</td>
<td>143</td>
<td>768</td>
<td>1,013</td>
</tr>
<tr>
<td>over 50</td>
<td>18</td>
<td>233</td>
<td>251</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>306</strong></td>
<td><strong>1,503</strong></td>
<td><strong>1,809</strong></td>
</tr>
</tbody>
</table>
Attracting and retaining the best people for our workforce

Investing in career development and training

In support of building a skilled and safe workforce, as well as supporting the career development of our people, training investment increased in 2011 on all sites. In total, $6.6 million was invested in training with 84% of this spent in our Mount Isa teams, where 82% of our permanent site employees are based. The results featured:

- a 92% increase in training spend per employee in Mount Isa
- a 52% increase in the hours of training for operational or production employees as a greater focus was placed on safety competency as well as technical skills. This more than doubles the time invested in all levels of leadership.
- a 34% increase in training spend per employee at MRM, including a 114% increase in the hours invested in operational or production employees.

Our training systems focus on delivering competency-based training for all workers. Training requirements identified during career planning and leadership and professional development also form part of the process.

Building leadership

The substantial increase in the training investment in leaders in Mount Isa represents participation in the Xceed Leadership Series. The training program was introduced following a review in 2010 to identify the leadership skills needed for executive, management, superintendents and supervisors to succeed.

Programs were delivered in communication, information technology tools, finance and budgeting, and human resource management.

In the second half of the year, an innovative dimension was added through the safety leadership program as previously described in the Health and Safety chapter of this report.

Xstrata Apprenticeship Program

Apprenticeships in a range of trades are offered at our Xstrata Zinc Mount Isa and MRM operations.

In Mount Isa, we participate in the largest apprenticeship program in north Queensland operated by Xstrata Mount Isa Mines.

There were 159 apprentices engaged in 2011, of which 15 are sponsored or area apprentices, meaning they were only open to current Xstrata employees for the opportunity to up-skill or obtain a trade.

The program is designed to enhance our maintenance programs and strategies. It is focused on providing real employment and development opportunities for people living in the region and currently targets eight key trades.

In 2011, Xstrata Mount Isa Mines invested approximately $4.9 million in apprenticeships and traineeships, and recruited 54 apprentices plus 19 school-based trainees for their first year training at the Xstrata Skills Centre in Mount Isa. A further 67 apprentices completed their apprenticeships with 51 of these accepting offers to remain with Xstrata. Offers of employment have been made to 58 apprentices and 21 school-based trainees who will begin training in 2012.

MRM’s program employed 12 apprentices in 2011 as light and heavy vehicle fitters, electricians and carpenters.

School and university-based programs

We participate in and support a number of programs conducted by Xstrata Mount Isa Mines which help build interest in careers in mining and provide a pipeline of potential future skilled employees:

- Vocational Skills Development Program to target secondary schools in the north-west region of Queensland, introduce opportunities and careers within the mining sector and provide on-the-job training
- Queensland Academy of Minerals and Energy
- Structured work experience and readiness programs involving 82 students in 2011
- Bursaries worth $1,000 each to 16 high performing secondary school students in 2011 to assist with their education and provide work experience
- Graduate Program which attracted 30 participants in 2011
- Vacation Work Experience Program for university undergraduates – 68 participated in 2011
- Scholarship programs valued at $10,000 each for university students with 9 granted in 2011 to maintain a total of 30.

<table>
<thead>
<tr>
<th>Table 8. Training investment in site personnel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xstrata Zinc Mount Isa</td>
</tr>
<tr>
<td>------------------------</td>
</tr>
<tr>
<td>2011</td>
</tr>
<tr>
<td>Total training (hours)</td>
</tr>
<tr>
<td>Executive management (average hours)</td>
</tr>
<tr>
<td>Senior management (average hours)</td>
</tr>
<tr>
<td>Management (average hours)</td>
</tr>
<tr>
<td>Supervisors, admin, technical (average hours)</td>
</tr>
<tr>
<td>Operational, production, maintenance (average hours)</td>
</tr>
<tr>
<td>Total $ spend on training</td>
</tr>
<tr>
<td>Average $ spend per employee</td>
</tr>
</tbody>
</table>

*Training data collation method altered in 2011 and was recalculated for 2010 data based on financial records for Mount Isa Mines.
Financial assistance

In 2011, Xstrata Mount Isa Mines operations received $311,544 from the Mining Industry Skills Centre for the delivery of nationally accredited competencies. We also received $454,530 from the Queensland Apprenticeship Services to support our apprenticeship program, $145,834 in government funding to support the Indigenous training program, and $232,907 from the Mount Isa Institute of TAFE for training first year apprentices.

Encouraging diversity and opportunity

We value diversity and treat all our employees and contractors fairly. We offer equal opportunity at all levels of the organisation without prejudice of any type. We hire according to the skills and experience required for each particular position, without discrimination based on gender, race, age, sexual orientation, religion, nationality or any other factor. We do not tolerate any form of discrimination, abuse of power, harassment or physical or verbal violence in the workplace.

All our people are obliged to comply with the Xstrata Code of Conduct and Xstrata Zinc Ethics Code and equally, have the opportunity to report complaints to the Xstrata Ethics Line.

Table 9. Diversity profile

<table>
<thead>
<tr>
<th>Profile</th>
<th>Xstrata Zinc North Queensland</th>
<th>MRM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employees</td>
<td>1,487</td>
<td>310</td>
</tr>
<tr>
<td>Contractors</td>
<td>647</td>
<td>254</td>
</tr>
<tr>
<td>Local employees % *</td>
<td>79%</td>
<td>11%</td>
</tr>
<tr>
<td>Non-local employees % *</td>
<td>21%</td>
<td>89%</td>
</tr>
<tr>
<td>Foreign nationals</td>
<td>17</td>
<td>5</td>
</tr>
<tr>
<td>Indigenous workforce</td>
<td>Not recorded</td>
<td>23%</td>
</tr>
<tr>
<td>participation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>% female employees</td>
<td>17%</td>
<td>18%</td>
</tr>
</tbody>
</table>

*Note: Local employees are defined as being sourced from the local community associated with operations. It should be noted that the non-local employees in our North Queensland operations include those people who have relocated to the residential Mount Isa operation from other centres.

The majority of our people were sourced within the Australian resource industry. There is only a small number of working visa holders engaged within our teams. Significantly though, an innovative recruitment drive for tradespeople in Spain during 2011 led to 11 people relocating to Mount Isa. This successful initiative tapped into the high unemployment rate in Spain to help meet the demand for tradespeople in Australia and was supported by the Xstrata Zinc Madrid human resources team.

In 2011, 27 incidents of bullying, harassment and/or discrimination were reported across our operations. Of these reported incidents, 100% have been resolved and are now closed off to the satisfaction of the employee. All cases were dealt with internally.

Indigenous training and employment

We have reviewed our Indigenous employment and training programs at both Mount Isa and MRM in an effort to continually improve retention and engagement.

The revised Xstrata Mount Isa Mines Indigenous Traineeship Program was launched in July 2011 in conjunction with Xstrata Copper North Queensland, with 22 participants enrolled by the end of the year. This program aims to improve the employment prospects for Indigenous Australians by providing a pathway from community to the workplace through a nationally recognised qualification.

Upon successful completion of the traineeship, the participants will have completed a Certificate II in Surface Extraction Operations with the opportunity to progress into full-time employment or further study within the resource industry.

At MRM, the trainee program opens up nine career paths within MRM in mining, environmental management, administration and services such as catering. For trainees and their community, involvement brings better education, lifestyle and health improvements, confidence and pride in achievement. In 2011, 11 trainees were enrolled in the MRM program with eight trainees moving into permanent work at the site.

Our goal to sustain and grow our Indigenous workforce participation rate at MRM above 20% has been exceeded for two years with a participant rate as at December 2011 of 23%. This has reflected the benefit of focusing on all Indigenous employment opportunities including skilled and experienced people while also maintaining our trainee intake.

Figure 11. MRM Indigenous workforce participation, total numbers and as a percentage of workforce

Labour relations

All employees have the right to collective representation and are free to join a union of their choice. We strive to form direct relationships between our employees and management teams that are based on quality leadership, effective communication, respect and mutual trust. We consult with our employees in advance of any significant operational change. Similarly, we communicate regularly with our employees and provide ongoing support during times of organisational change, such as acquisitions, divestments or mergers or the closure of operations. Minimum notice periods vary across our operations and are generally specified in collective agreements.

No new Union Collective Agreements were negotiated or implemented in 2011.
Meeting our environmental responsibilities

We aim to maintain an environment that sustains biodiversity, landscape functions and the needs of local communities, including the Traditional Owners of these lands.

The key issues of material interest to our stakeholders are:

- High standards of environmental management to ensure no breaches of conditions.
- Compliance with environmental regulation and in regard to our Mount Isa operations, contemporary environmental legislation.
- Water management and mitigation of impacts on natural waterways.
- Air quality, particularly in regard to our Mount Isa and Bowen operations which are close to neighbouring communities.
- Biodiversity monitoring at MRM as an indicator of the health of the natural environment and rehabilitation of the McArthur River and Barney Creek channels.
- Climate change and the reduction of carbon emissions.
- Effective management of waste, particularly in regard to tailings and overburden.

Our operations are in different natural and built environments with varying degrees of ecological sensitivity. None of our operations are located within protected areas.

Xstrata Mount Isa Mines manages approximately 30,000 hectares of land on mining lease ML8058 within the Inlier bioregion and Australia’s tropical savannas. ML8058 is characterised by rugged, rocky hills and poor shallow soil. Low open woodland with Eucalyptus, Corymbia and Acacia species predominates with a ground layer of Triodia species (Spinifex) which reflects the complex geology, infertile soil and semi-arid climate. A 2009 biodiversity survey identified the Red Goshawk, listed as vulnerable, on the Xstrata Mount Isa Mines lease.

Bowen Coke Works is located in the coastal town of Bowen in north Queensland. It encompasses nine hectares of land situated on the northern bank of Doughty Creek, approximately 1.5 kilometres upstream of the creek mouth.

MRM is contained within five adjoining mineral leases located on the McArthur River Station Pastoral Lease. The 8,000 square kilometre station is an operating property leased and managed by Colinta Holdings Pty Ltd, an Xstrata subsidiary. Bing Bong Loading Facility is situated on a mining lease also located within the McArthur River Station. This lease extends into the Gulf of Carpentaria to include the navigation channel between the loading facility and the designated offshore transfer zone.

Some notable species of fauna are located in areas potentially affected by or adjacent to the open pit operations. These species include:

- **Endangered species:** Freshwater Sawfish (*Pristis microdon*) found in the McArthur River and a species listed in the International Union for the Conservation of Nature and Natural Resources (IUCN) Red List
- **Near threatened species:** Carpentaria grasswren, spectacled hare wallaby, purple-crowned fairy wren, white-browed robin, grey falcon and Worrell’s turtle
- **Vulnerable species:** Australian bustard.

### Table 10. Environmental expenditure by type ($million)

<table>
<thead>
<tr>
<th></th>
<th>Xstrata Zinc North Queensland</th>
<th>MRM</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2011</td>
<td>2010</td>
</tr>
<tr>
<td>Capital</td>
<td>$6.0</td>
<td>$3.5</td>
</tr>
<tr>
<td>Clean up costs for remediation of spills</td>
<td>$0.05</td>
<td>$0.2</td>
</tr>
<tr>
<td>Environmental consultants/contractors</td>
<td>$2.1</td>
<td>$2.0</td>
</tr>
<tr>
<td>Environmental personnel – employees</td>
<td>$2.4</td>
<td>$1.6</td>
</tr>
<tr>
<td>Licences/liability insurance</td>
<td>$0.8</td>
<td>$0.6</td>
</tr>
<tr>
<td>Rehabilitation and decommissioning costs</td>
<td>-</td>
<td>$0.03</td>
</tr>
<tr>
<td>Research and development</td>
<td>$0.07</td>
<td>$1.6</td>
</tr>
<tr>
<td>Treatment and disposal of waste</td>
<td>$0.4</td>
<td>$1.1</td>
</tr>
<tr>
<td>Treatment of emissions</td>
<td>$5.6</td>
<td>$4.0</td>
</tr>
<tr>
<td>Monitoring and analysis equipment</td>
<td>$0.02</td>
<td>$0.8</td>
</tr>
<tr>
<td>Other operating expenses</td>
<td>$0.3</td>
<td>$3.3</td>
</tr>
<tr>
<td>Annual expenditure</td>
<td>$17.7</td>
<td>$18.7</td>
</tr>
</tbody>
</table>
Regulatory compliance

The main development in our regulatory compliance in 2011 was in relation to the transition of Xstrata Mount Isa Mines from operating under the Mount Isa Mines Limited Agreement Act 1985 to contemporary legislation, the Environmental Protection Act 1994 (Qld) in line with other mining operations in Queensland. After three years of intensive studies to support our environmental planning, a new Environmental Authority was granted by the Queensland Government in December 2011. This authority requires the development of Transitional Environment Plans (TEP) for our compliance with standards for air and water which will be tabled for government approval in 2012.

At MRM, we continue to comply with the conditions set by the Northern Territory Government including the requirement to support an Independent Environmental Monitor to assess our environmental performance annually. The report for 2010, released during 2011, indicated there were no issues requiring urgent investigation and complimented MRM on the evidence of improved environmental management and procedural compliance.

For more information on the Independent Monitor, please visit: www.mrmindependentmonitor.com.au

Table 11. Environmental Incident Classification

<table>
<thead>
<tr>
<th>Incident Category</th>
<th>Environmental impact</th>
<th>Xstrata Zinc Australia</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>2011</td>
</tr>
<tr>
<td>1</td>
<td>Negligible incident</td>
<td>46</td>
</tr>
<tr>
<td>2</td>
<td>Minor incident</td>
<td>14</td>
</tr>
<tr>
<td>3</td>
<td>Significant incident</td>
<td>0</td>
</tr>
<tr>
<td>4</td>
<td>Serious incident</td>
<td>0</td>
</tr>
<tr>
<td>5</td>
<td>Disastrous incident</td>
<td>0</td>
</tr>
</tbody>
</table>

Figure 12. Water consumption – Xstrata Zinc Australia (ML)

- Recycled or re-used water
- Groundwater
- Potable water
Meeting our environmental responsibilities

Water management
With concurrent years of above average annual rainfall at all sites, we remain focused on efficiently and effectively minimising freshwater consumption and maximising recycled water use. A continuous improvement process has facilitated a number of opportunities within plant infrastructure to improve our efficiencies and larger scale projects have allowed for the capture and re-use of stormwater for use within critical plant items and dust suppression initiatives.

Freshwater consumed at our Mount Isa Mines zinc operations is sourced from Lake Moondarra (17,636 ML in 2011) and Lake Julius (2,158 ML in 2011). These two dams are used in combination to ensure fresh water supply to Xstrata Mount Isa Mines as well as the Mount Isa community. Lake Moondarra reached 100% capacity in early March 2011 and Lake Julius reached 100% in early January 2011. Alternative water sources include stormwater harvested on site, underground mine dewatering, water recycled within plant area, return water from tailings thickeners, and tailings decant water.

Of particular note is the 45% reduction of freshwater use by the zinc concentrator in Mount Isa over the past five years.

Water for MRM’s mine use is sourced from 16 groundwater bores, five at the Mimex borefield, seven at the Emu borefield and four at the Donkey borefield. Around 97% of the mine’s process water comes from recycled water with the remaining 3% from borefields. The mine’s consumption rate for raw, soft and potable water was 661 ML in 2011. The consumption rate of extracted surface water was 96 ML.

Bowen Coke Works uses relatively low amounts of water, primarily in a cooling process. Water not lost as steam is recycled.

Significant improvements have been made to the understanding and strategy to manage stormwater flows across all sites. At Mount Isa, this process was facilitated by the development of a site water balance model by surface water management specialists. Investigations into site connectivity, catchment characteristics and a wide range of rainfall events were the key inputs to this approach, with the aim to realistically assess the potential for offsite discharges and water movement between on-site storage facilities.

Discharges
At Xstrata Mount Isa Mines, there were several minor instances of stormwater discharging off site from the King Gully area in 2010. Significant improvements are being made to maximise re-use of stormwater and prevent stormwater from leaving site during high rainfall events. Water discharged off site is sampled and analysed, and the results provided to the Department of Environment and Resource Management.

During 2011, a total amount of 1.37 gigalitres was discharged from MRM under license 0174-02. Water was removed from within the Mine Levee Wall and from the Water Management Dam through a series of pumps and siphons during the wet season when flow rates and volumes within the natural waterways were high. To check water quality, 24 surface water sampling sites are positioned up and downstream of MRM. Sediment is also collected at these sampling locations. During 2011 further ecotoxicology studies were completed in order to facilitate discharging operations.

Emissions
Emissions monitoring, control and impact reduction strategies are a major component of sustainable environmental management at our operations. Each of our sites manages their own comprehensive network of emissions monitoring systems. These systems are essential to ensure compliance with internal and external standards, provide baseline data for emission identification, and demonstrate the effectiveness of improvements.

Sulphur dioxide
In Mount Isa, the position of these air monitoring stations ensures that every resident lives no more than 1,200 metres from a real-time SO2 air monitoring station.

During 2011, the annual average ground level SO2 concentration over all monitoring stations in Mount Isa was recorded as 11.5 micrograms per cubic metre (μg/m3) in 2011 which has remained consistent with previous years. The 2011 result is well below our Mount Isa Mines Limited Agreement Act’s required level of 80 μg/m3.

Figure 13. Annual* sulphur dioxide (SO2) emissions – Mount Isa Mines operations

Figure 14. Ambient PM10 lead-in-air 90 day average concentrations for monitored sites (µg/m3)

* National Pollutant Inventory (NPI) reporting year was 1 July 2010 to 30 June 2011. ** The 2010 figure has been restated from 44 to 111 to correct a previous error.
The Air Quality Control system uses the information from the monitoring network and wind/weather stations to direct or shutdown operations at Xstrata Mount Isa Mines’ copper and lead smelters and Incitec Pivot’s acid plant. Westerly winds have a significant impact on our Mount Isa operations, as winds from this direction have the greatest potential for operations on site to affect our community. In 2011, the AQC restricted zinc smelter and coking operations (including complete and partial shutdowns) for 607 hours, compared to 577 hours during 2010.

As part of the Smelter Emissions Project established in 2007 with Xstrata Copper North Queensland, we have been assessing the feasibility of and progressively implementing opportunities from over 120 emissions reducing initiatives.

In 2011, Xstrata Zinc Mount Isa invested a further $850,000 for studies into:
- fugitive emissions characterisation
- blast furnace feed-floor fugitive emissions reduction
- a HMA hygiene system
- a Ducon hygiene system
- options for enriching sinter machine SO₂ for potential treatment in the IPL acid plant.

In 2012, we will continue to assess and implement opportunities to increase the capture and treatment of our smelter emissions and run the final pilot plant trial with the Dynawave SO₂ scrubber and zinc precipitation circuit.

**National Pollutant Inventory (NPI)**

The NPI is an initiative of the Federal Department of Environment, Water, Heritage and the Arts. The online database contains information relating to the emission of 93 substances from industrial facilities and diffuse (non-industrial) sources across Australia.

The NPI provides data solely on source emissions and does not measure emissions into the community or take into account the comprehensive measures in place at Mount Isa to limit potential impacts from emissions on the environment and local community. It is also important to note that Xstrata Mount Isa Mines has a significant operational footprint, comparable to the sum of multiple individual mines and industrial facilities listed on the NPI, with two separate mining and processing streams, copper and zinc-lead-silver, forming one of the largest base metal mining operations in Australia.

We reported a range of increases and decreases for the top eight on-site emission estimates. Substantial decreases were observed for antimony, cobalt and cadmium due to utilising more accurate laboratory analysis methods. These substances were potentially over-estimated in previous years.

Increases were reported for arsenic, copper, lead, and zinc, predominately due to reduced acid plant availability, increased smelter production and increased concentrations of metals in smelter feed. Sulphur dioxide emissions increased due to reduced acid plant availability and increased fuel usage due to increased production.

Information on the NPI and estimated on-site emissions at the source are available from [www.npi.gov.au](http://www.npi.gov.au).

**Lead Pathways Study**

In late 2006, we commissioned an independent Lead Pathways Study to examine potential sources of lead in the Mount Isa community from both naturally occurring minerals and those from mining operations. Headed by the University of Queensland’s internationally recognised Centre for Mined Land Rehabilitation and in collaboration with the National Research Centre for Environmental Toxicology, the Lead Pathways Study is a comprehensive research program which was established to better understand the potential pathways of lead into the Mount Isa community through land, air and water.

The Land study has been completed and provided to the community. The remaining two phases, Air and Water, continue to progress with a peer review being conducted in 2012 by the Commonwealth Scientific and Industrial Research Organisation (CSIRO) for the Water phase.

We are committed to this study and will keep the Mount Isa community informed of the study’s progress.
Ben Young is the Technical Services Manager for the zinc open pits at Xstrata Zinc Mount Isa Mines. He started as a graduate back in 2005.

"The thing I liked about Xstrata was that it was going places. It's an ambitious company that makes things happen. We identified a need within the business to obtain a better quality sample data but also to do so in a timely manner to allow for better planning. We said: Can we do it differently?

Under my recommendation, and with significant help from my colleagues, we completed the purchase, conversion and commissioning of a Reverse Circulation (RC) drill rig dedicated for sampling at our Black Star open cut mine. It was about moving into industry best practice as far as open cut grade control sampling goes.

At Xstrata, decisions are made quickly; once made, the work starts then and there. This has impressed me and, while it was a little uncomfortable at first, it has shaped my way of thinking to be progressive and able to take opportunities as soon as they are presented. Being accountable for my work drives me harder to achieve."

Meeting our environmental responsibilities

Biodiversity

Our operations have biodiversity conservation plans to protect species and landscape functions throughout their lifecycle.

At MRM, a comprehensive monitoring program regularly assesses and records the mine’s environmental performance at every point of potential impact. In addition to the annual surveys conducted at MRM, in 2011 as part of the comprehensive Environmental Impact Statement (EIS) assessment for the Phase 3 Project, we completed more than 40 detailed baseline studies and assessments of flora, fauna, land resources, surface water, groundwater, air quality, noise, traffic and cultural heritage working with external experts. Results of those studies can be found in the EIS via www.mcarthurrivermine.com.au/publications.

Table 12. MRM 2011 biodiversity monitoring outcomes

<table>
<thead>
<tr>
<th>Study</th>
<th>Summary of outcomes</th>
</tr>
</thead>
</table>
| Fish surveys              | • The design of the McArthur River and Barney Creek channels has been effective in establishing a habitat supportive of the endangered Freshwater Sawfish and a wide range of other species.  
                           | • Sampling occurred during May and June in 2011 from 47 sampling sites.  
                           | • A total of 3,180 individual fish were counted in the McArthur River from 34 species, including five recordings of the Freshwater Sawfish.  
                           | • Over 22,644 fish representing 57 species have been captured and tagged since 2006 and there is evidence that migration is occurring in the channels.  
                           | • A total of 28 Sawfish have been captured and tagged since 2006.  
                           | • Fish diversity is increasing with improved stability and complexity of habitat.                                                                 |
| Ecotoxicology studies     | • Detailed assessment of Barney Creek and McArthur River flow rates and appropriate dilution ratios to support discharges from the Water Management Dam in line with the Discharge License issued by the Northern Territory Government and the MRM Sustainable Development Water Management Plan. |
| Riparian bird surveys     | • For the first time, a number of forest and woodland birds, such as the Bower Bird, were recorded in the regenerating vegetation and grass cover.  
                           | • A key riparian bird indicator species, the Purple Crowned Fairy-Wren, was observed using the area during May 2011.  
                           | • More than 37,147 bird observations have been noted since 2006 involving 110 bird species.  
                           | • Seasonal data on the distribution and abundance of riparian birds is assisting rehabilitation strategies and the selection of plant species. |
| Migratory bird surveys    | • A 58% decrease in the migratory shorebirds was counted in 2011 compared to 2010 studies with 14,204 migratory shorebirds, resident shorebirds and other wetland birds recorded and a further 6,702 recorded during a ground count.  
                           | • The reduction in numbers may be attributed to a number of factors including northern hemisphere habitat conditions and breeding success, local and regional habitat condition, season/climatic characteristics that may alter the local distribution and foraging and roosting behaviour of shorebirds.  
                           | • Port McArthur area is an internationally significant staging ground for birds and is not impacted by MRM’s operations. |
| Marine monitoring         | • There was no measurable impact by MRM on seawater, seagrass, surface sediments and several species of oysters and molluscs along the Bing Bong coast and Sir Edward Pellew Islands.  
                           | • All traditional foods collected meet Australian and New Zealand food standards.  
                           | • Zinc and lead concentrations in the Bing Bong swing basin were within the recommended guidelines set by the Australian and New Zealand Environment Conservation Council and Food Standards Australia New Zealand.  
                           | • Metal concentrations in sediment at the Bing Bong western beach site remain lower than ANZECC (2000) ISGQ guidelines.  
                           | • Marine Monitoring tests for 2011/2012 occurred in November 2011. |

Xstrata Mount Isa Mines conducted biodiversity management programs such as pest, plant and animal management and activated a fire management plan as both an ecological and infrastructure protection initiative.

In Bowen, a biodiversity assessment was conducted in 2010 and found no significant impacts from the Bowen Coke Works on the neighbouring estuarine system. Water and sediment quality in Doughty’s Creek is similar to that of other creeks in the Bowen region. The site is classified as self-bunded, due to the surrounding topography and management practices.
Meeting our environmental responsibilities

Table 13. Land disturbed and rehabilitated (ha)

<table>
<thead>
<tr>
<th>Land disturbed and rehabilitated</th>
<th>Xstrata Zinc Mount Isa</th>
<th>McArthur River Mine</th>
<th>Bowen Coke</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual rehabilitation (ha)</td>
<td>-</td>
<td>-</td>
<td>115.5</td>
</tr>
<tr>
<td>Total rehabilitation completed (ha)</td>
<td>-</td>
<td>-</td>
<td>190.6</td>
</tr>
<tr>
<td>Area disturbed during this year (ha)</td>
<td>35</td>
<td>8.72</td>
<td>268</td>
</tr>
<tr>
<td>Total area disturbed (ha)</td>
<td>1,028</td>
<td>993.01</td>
<td>1,862</td>
</tr>
</tbody>
</table>

Rehabilitation and site closure

In Mount Isa, the land disturbed in 2011 was marginally greater than in 2010 as a result of development works continuing for the expansion of the Black Star Open Cut mine and due to surface development works supporting the expansion of the George Fisher underground mine. Opportunities for rehabilitation at Xstrata Mount Isa Mines are currently limited because most areas are considered ‘active’ for operations and therefore not available for rehabilitation.

At MRM, the land disturbed increased from 123 hectares in 2010 to 268 hectares in 2011 due to the continued extension of the open pit and the overburden emplacement facility as mining progresses. Importantly, the area of land rehabilitated was nearly three times greater than in 2010 reflecting the significant work conducted on rehabilitating the McArthur River channel and continued work on the Barney Creek channel. Approximately 17,000 native species seedlings were planted during the year which brings the total seedlings planted count to around 57,000, which is 20,000 more than originally committed as part of the project’s Public Environmental Report for the open pit project. A further 47,000 native trees were received on site and will be planted in 2012. Rehabilitation works continued at Bing Bong on the dredge spoils, including ground preparation, wall stabilisation, and ordering seeds.

Climate change and energy

We recognise that the future effects of climate change - including increased regulation, higher energy costs and physical impacts such as drought and flooding - represent a risk for our operations and communities. We seek to be as energy efficient as possible to minimise our Greenhouse Gas emissions and reduce our operating costs. We also switch to renewable or low-carbon sources where it is available and cost effective.

Carbon emissions are heavily influenced by changing mineral properties and production rates. As ore grades decline, higher volumes of ore are needed to be processed in order to recover equivalent amounts of contained metal. This increase in processing will increase the site’s energy consumption making continued reductions in carbon intensity and energy intensity a significant challenge going forward.

In 2011, our total greenhouse gas emissions were 723,000 tonnes of carbon dioxide equivalents (CO₂-e), a 5.5% increase on the 2010 total of 685,000 tonnes of CO₂-e.
Waste and tailings management

All operations have waste management plans designed to reduce, re-use, recycle or responsibly dispose of waste. The core of waste management plans is a contract for general waste and scrap metal collection and recycling based on the ‘polluter pays’ principle. Waste costs are distributed to departments according to the volume they generate minus the cost benefits of scrap metal recycling. This provides an economic incentive for operational areas to achieve the Xstrata Product Stewardship standard.

Materials use increased at all operations in 2011 in line with increased production. We trucked 57.8 million tonnes of waste rock in our Australian operations in 2011, versus 51.6 million tonnes in 2010. Tailings production increased over the period, with 13 million tonnes produced, a 72% increase on 2010 figures. However, our tailings recycling program was boosted 62% in 2011 with 926,000 tonnes of tailings recycled as underground fill for our George Fisher mine operations, versus 572,000 in 2010. The tailings recycling program has proven to be reliable in terms of stability and safety and is a strong environmental outcome for the Mount Isa Mines operations.

All non-salvageable waste is disposed of in line with strict waste management systems and legislative requirements.

Recycling initiatives included:
- exporting scrap metal to South East Asia for recycling
- Increasing production at the George Fisher Mine paste plant
- sending waste oil from MRM to Mataranka Lime Plant for their calcification process—heat generated by the addition of oil decreases emissions and consumption of gas at that facility.

Tailings

Tailings storage facilities (TSF) are split into cells, with tailings deposition alternating between cells to keep them moist and reduce the risk of dusting by wind gusts.

Assessment of tailings’ chemical properties indicates they are non-acid forming. However any seepage from tailings dams is captured in seepage ponds and pumped back to prevent off site discharges. Multiple visual inspections of the tailings dams and seepage ponds are conducted daily, with increased frequency during the wet season. Seepage to groundwater is monitored through a series of bores.

At Xstrata Mount Isa Mines, two major research projects looking at re-vegetation and the environmental risk of seepage in naturally mineralised areas are assessing long-term closure options and potential impacts from the tailings dams. Along with other studies described in this report, such as the Lead Pathways Study and Biodiversity Study, these will refine closure criteria for the dams to ensure they are safe, stable and non-polluting in the long term.
At Mount Isa, tailings waste is recycled as much as possible as underground paste fill. Filling of stopes is vital to ongoing development of the underground mines. By using tailings material in the fill process, the volume of consumables such as cement is significantly reduced and is a good example of product stewardship in the business. In 2011, George Fisher Mine paste plant doubled production on the previous year. The expansion plans underway at George Fisher Mine will see the paste production increase to more than 1.5 million tonnes per year from 1.2 million tonnes.

At MRM, additional investment was made in the rehabilitation and integrity of the TSF as well as its efficiency in managing water levels. MRM experienced double the average rainfall in the 2010-2011 wet season with almost 1,500mm of rain falling. This increase in water flow was well accommodated within the TSF design. We recycle 100% of the water in the TSF through our processing plant at MRM and this, as well as evaporation, is effectively managing the water levels.

Since 2006, more than $10 million has been invested into improving the facility and managing seepage. During 2011, this included the following initiatives:

- ongoing erosion works on placed capping material
- constructing additional seepage collection sumps on the side of Cell 3
- the seeding of approximately 30 hectares on cell 1 to aid in erosion control
- increasing the use of recycled water from the TSF in the production process
- using sprinklers, water fountains and fans to increase evaporation of water
- spreading water within the Water Management Dam
- upgrades to the spillway on cell 2.

Overburden

Our operations stored an estimated 58 million tonnes of waste rock from overburden in 2011.

All overburden emplacement facilities are developed and managed in accordance with best practice design principles. A major component is encapsulating potentially acid-forming materials within the waste rock dumps for long-term storage, away from exposure to weather.

At MRM, the Kinetic Column Leach Project (Stage 7) recommenced, providing information on the reaction kinetics of mine waste materials simulating the natural weathering process. The kinetic tests assess acid-forming characteristics and indicate the rate of acid generation, and over what period of time. The findings will underpin future management control strategies of waste dump placement and storage.

At Black Star, trials of engineered cover systems continue to ensure improved environmental outcomes for waste rock storage facilities at Xstrata Mount Isa Mines.

Computer modelling of final outer slope designs for the overburden emplacement facilities at Black Star and Handlebar Hill open pit mines was refined during 2010 with surveys conducted in 2011.

Product Stewardship

Xstrata’s SD Standards provide guidelines to ensure the impacts and risks associated with our products and services are identified, analysed, evaluated and addressed. Material safety data sheets are completed for products and intermediaries, including product physical and chemical composition, risks to human health, handling, transport, storage and exposure control.

Zinc is used to galvanise steel, a cost effective and environmentally friendly method of protecting steel against corrosion. Zinc also finds application in the manufacture of die-cast alloys, brass and the production of zinc oxides and chemicals.

Lead is primarily used in lead acid batteries. Other applications for lead include alloys, submarine cables, lead sheeting and oxide lead uses.

We work with stakeholders, including industry associations, customers and suppliers, to understand the environmental, and health and safety risks of our products, and to find ways to mitigate these risks. We work on product stewardship issues through involvement with national and international industry and commodity associations.

Xstrata Mount Isa Mines ships most products from Townsville, 904 km from Mount Isa, by rail and road.

MRM operations are heavily reliant on air services to transport workers the 950 km from Darwin, while most goods are sourced by road. Product from the mine is transported by road to a loading facility at Bing Bong, 120 km from MRM, where a barge loads ships within an authorised channel at sea. MRM understands that a key area of product stewardship is working with suppliers and applying similar SD management systems. To ensure only environmentally and socially responsible suppliers are chosen, MRM introduced a SD assurance program in 2011 for accredited suppliers.

In 2011, MRM developed a robust product stewardship procedure that has systematically linked and united material, resource and process stewardship concepts. It focuses on the identification of risks and opportunities associated with the production, storage, handling and transportation of MRM product and ‘green procurement’, ensuring that suppliers and contractors involved in activities associated with manufacturing of MRM product act to a standard set by our SD Management System and share responsibility for environmental, health and safety, and social impacts associated with their activities. This procedure has been recognised within the larger Xstrata Group and advice has been sought on the development of a similar system within other Xstrata Business Units.
"Knowing your work is helping to nurture the health of these beautiful, natural resources for future generations—that makes me proud..."

At Xstrata Zinc, we recognise water is a vital resource we share with the community, and we’re committed to finding new and innovative ways to use it efficiently and protect its quality. That’s why Senior Environmental Advisor Alex Sexton and his team implemented a valuable water-saving initiative in 2011 known as the King Gully Catchment “First Flush” system for the Black Star open cut operation. The first flush system permanently reduces our freshwater consumption by capturing storm water from the King Gully catchment and diverting it to one of our onsite ponds.

“By making sure all of our process water was contained and by reducing our reliance on freshwater across our operations, we knew we could improve water quality downstream.

About four years ago, at the height of the drought in Mount Isa, we identified an ephemeral stream system within the King Gully catchment as a potential water efficiency opportunity. By successfully capturing this water we’re equipped to control business risks during drought. On top of that, by better capturing and storing our process water we can provide a reliable water source for our operations and continue to roll out our dust suppression activities across the lease without having to rely on freshwater.

The “first-flush” of stormwater from the catchment is diverted into the historical Kennedy Siltstone Open Cut using a purpose-built capture weir and culvert system, supported by a water management system installed at the toe of the waste rock dump.

This means better protection of the downstream environmental values of the Leichhardt River and Lake Moondarra, less pressure on freshwater sources, and ultimately a better outcome for the region’s vital river ecosystems.”

See www.mountisamines.com.au for Alex’s full story.
Other information

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Governance

Under Xstrata's highly devolved management model, the leaders of our business at each site are responsible for implementing the SD Framework. Guided by Xstrata’s SD Standards in leadership, strategy and planning, our leaders are empowered to identify and evaluate risks and opportunities, provide internal communication and training, and monitor performance. Outcomes at each site are reported to the global Xstrata Zinc SD Committee which meets quarterly.

Our Chief Operating Officer has direct responsibility for all aspects of SD, and specific managers at each site have accountabilities for health and safety, environmental performance, community relations and human resources. All managers are responsible for planning, resourcing, monitoring, and risk management.

Employees and contractors are made aware of our SD responsibilities and commitments through:

- various forums, including SD committees, positive attitude safety session (PASS) meetings, tool box talks
- job description and action plans

Bribery and corruption

Xstrata’s Business Principles state that we do not offer, solicit or accept any form of inducement or bribe. Xstrata’s internal audit function, supported by KPMG, takes into account identified fraud and compliance risks associated with our key business activities, including the ethical performance expectations contained in our Statement of Business Principles.

In addition, our Fraud Policy explicitly states any incidence of fraud committed by employees or others, either from within or outside the organisation, will not be tolerated. It outlines channels available for employees or others to safely and confidentially report fraud or other unethical behaviour contrary to the Xstrata Business Principles.

We ensure all relevant employees use the Delegated Authorities Manual that sets out the framework and controls for key decisions to be made in relation to financial matters. The internal audit function regularly tests the adequacy of these controls, particularly in relation to the procurement of goods and services. This ensures that business deals are always conducted in a competitive environment.

No incidents of corruption or fraud were recorded at our operations in 2011. Xstrata Zinc Mount Isa operations have been assessed for risks related to corruption, while our Bowen Coke and MRM sites are considered to have a low risk of corruption.

Xstrata Zinc Australia leaders participated in an Xstrata plc online training program during 2011 which educated in identifying bribery and corruption in the workplace and provided a framework to understand business ethics.

Public policy

Xstrata Zinc Australia plays an active role in a number of significant international and national industry organisations and multi-stakeholder groups through membership, funding, provision of expertise, and participation in committees and working groups.

Principal organisations of which we are members include:

- Minerals Council of Australia
- Queensland Resources Council
- Minerals Council of Australia Northern Territory Division
- Australian Institute of Mining and Metallurgy
- International Lead Association
- The Mining Industry Skills Centre
- Skills DMC – National Industry Skills Council
- Indigenous Mining and Enterprise Task Force
- The Australian Institute of Occupational Hygienists
- Major Industry Training Advisory Council
- Queensland Minerals and Energy Academy.

Initiatives supported by Xstrata Zinc, or its sites, include the annual Queensland Mining Industry Safety and Health Conference, the annual Queensland MISC Queensland Training Conference and Awards, the MISC regional training group, QRC steering committee for Indigenous employment, and the Minerals Council of Australia Workforce Committee.

In accordance with Xstrata’s Business Principles, no donations were made to any political party or individuals in 2011.

Table 14. 2011 Assurance Program results

<table>
<thead>
<tr>
<th>Date</th>
<th>Risks audited</th>
<th>Significant issues</th>
<th>Reportable issues</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xstrata Zinc Mount Isa September 2011</td>
<td>Working with dangerous goods</td>
<td>Nil</td>
<td>1</td>
<td>Acceptable</td>
</tr>
<tr>
<td>Various</td>
<td>31 separate audits of Standards and risks</td>
<td>Nil</td>
<td>Nil</td>
<td>Good</td>
</tr>
<tr>
<td>November 2011</td>
<td>Self Assessment on SD Standards</td>
<td>Score – 70%</td>
<td></td>
<td></td>
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<tr>
<td>Bowen August 2011</td>
<td>3rd Party SD Standards Audit</td>
<td>Score – 60%</td>
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<td></td>
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<tr>
<td>November 2011</td>
<td>Mobile equipment</td>
<td>Nil</td>
<td>Nil</td>
<td>Good</td>
</tr>
<tr>
<td>MRM May 2011</td>
<td>Mobile Equipment</td>
<td>Nil</td>
<td>Nil</td>
<td>Good</td>
</tr>
<tr>
<td>May 2011</td>
<td>Pit Wall Failure</td>
<td>Nil</td>
<td>Nil</td>
<td>Good</td>
</tr>
<tr>
<td>May 2011</td>
<td>Asset Management Concentrator</td>
<td>Nil</td>
<td>Nil</td>
<td>Good</td>
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<tr>
<td>May 2011</td>
<td>Hydrocarbons Audit</td>
<td>Nil</td>
<td>Nil</td>
<td>N/A</td>
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<tr>
<td>September 2011</td>
<td>Electrical supply</td>
<td>Nil</td>
<td>Nil</td>
<td>Draft</td>
</tr>
<tr>
<td>October 2011</td>
<td>Tailings Dam Management</td>
<td>Nil</td>
<td>Nil</td>
<td>Good</td>
</tr>
<tr>
<td>October 2011</td>
<td>Wet Season Management</td>
<td>Nil</td>
<td>Nil</td>
<td>Good</td>
</tr>
<tr>
<td>December 2011</td>
<td>Working at Heights</td>
<td>Nil</td>
<td>Nil</td>
<td>Draft</td>
</tr>
<tr>
<td>December 2011</td>
<td>Third party SD Standards Audit</td>
<td>Score – 74%</td>
<td></td>
<td></td>
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</tbody>
</table>
Awards
Recognition awards related to SD received in 2011 include:

- Australian Mining Prospect Awards
  - Minerals Processing Plant of the Year Winner: Xstrata Zinc Mount Isa Processing Operations
  - Community Interaction of the Year Finalist: McArthur River Mine
- People’s Choice Award at the annual Mount Isa Mining Expo: Xstrata Mount Isa Mines
- Queensland Training Awards
  - Industry Collaboration Award – the Xstrata Skills Centre
- National Training Awards
  - Industry Collaboration Award Finalist – the Xstrata Skills Centre
- Queensland Regional Achievement and Community Awards
  - Business and Employment Finalist – Xstrata Mount Isa Mines

Ethics Line
The Xstrata Ethics Line is a confidential facility operated independently by global business advisory firm KPMG. The line provides employees and other stakeholders with the opportunity to report any breaches of Xstrata’s Business Principles, policies or prevailing legislation. A toll-free phone number is provided in every country in which Xstrata has managed operations; for Australia, the number is 1800 987 310.

There was one complaint reported to the Xstrata Ethics Line regarding a conflict of interest issue. This matter was investigated and resolved.

Human rights
Suppliers and contractors that accept a purchase order for the supply of goods and/or services are contractually bound to comply with the governing laws of Queensland, the Northern Territory and Australia.

As the risk of human rights violations is assessed as low, our suppliers and contractors are not screened on compliance to human rights, and contracts do not include human rights clauses.

Training on human rights policies is conducted for human resources and other key personnel. Where we contract security personnel to protect our people and assets, we ensure appropriate human rights training has taken place. We also monitor compliance with our Business Principles, SD Policy and Standards with all personnel.

We uphold the elimination of all forms of forced or compulsory labour, and prohibit any form of child labour in compliance with Xstrata’s Statement of Business Principles and relevant Australian workplace legislation. The age of the youngest Xstrata Zinc Australia employee in 2011 was 17.

Fines
In 2011, Xstrata Zinc Australia recorded:

- no fines or sanctions for non-compliance with laws and regulations
- no legal actions for anti-competitive behaviour, anti-trust or monopoly practices.
Glossary

AQC
Air Quality Control

Biodiversity
An abbreviation of “biological diversity” that means the variability among living organisms from all sources, including land based and aquatic ecosystems of which they are part

Business Principles
Xstrata’s Statement of Business Principles sets out the ethical framework for the way we work globally. The statement sets out specific aspirations and commitments that apply to the company’s relations with its customers, employees, stakeholders, partners, suppliers and in the communities where it operates

Commodity Business
Xstrata’s activities are structured into global commodity businesses organised along commodity lines; Xstrata Alloys, Xstrata Coal, Xstrata Copper, Xstrata Nickel, Xstrata Zinc and Xstrata Technology

CO₂-e
Carbon Dioxide equivalents

CSI
Corporate Social Involvement programs

DISR
Disabling injury severity rate. DISR = (LTI Days Lost + RWI Days Lost) x 1,000,000 / hours worked in the reporting period

DPM
Diesel particulate matter

EEO
Energy Efficiency Opportunities

EIS
Environmental Impact Statement

GHG
Green House Gas

GJ
Gigajoules (a thousand million joules)

GRI
Global Reporting Initiative – a multi stakeholder, international process whose mission is to develop and disseminate globally applicable Sustainable Reporting Guidelines to assist corporations in reporting on the economic, environmental, and social performance of their operations

Ha
hectares

IUCN
International Union for the Conservation of Nature and Natural Resource

K oz
kilo ounces

LTIFR
Lost Time Injury Frequency Rate. LTIFR = LTI x 1,000,000/hours worked

MISC
Mining Industry Skills Centre

ML
Megalitres

MW
Megawatts (1 megawatt = 1,000,000 watts or 1,000 Kilowatts)

NGERS
National Greenhouse and Energy Reporting System

NPI
National Pollution Inventory

NOHSC
National Occupational Health and Safety Commission

Rehabilitation
In this report, rehabilitation is defined as disturbed areas that have been prepared for rehabilitation and seeded.

SD
Sustainable Development

SIA
Social Impact Assessment – the process of analysing, monitoring and managing the intended and unintended social consequences (positive and negative) of a planned project.

SO₂
Sulphur Dioxide

Stormwater
Rainfall that does not infiltrate into the soil but runs overland into creeks, catchment areas or man-made water storage facilities, such as dams (i.e. unplanned discharge of water). Quality of discharged stormwater is only reportable where it is directly discharged, i.e. not via a water treatment facility (which would already report total effluent quality).

t
tonnes

Tailings and tailings dam
The fine fraction of waste rock remaining after the mining and on-site processing of mineral resources. This consists of finely ground particles and traces of process reagents and chemical resides. Tailings are piped into engineered impoundments known as tailings dams, which are developed, operated, monitored and maintained to prevent seepage and water contamination both during and after mining operations.

TRIFR
Total recordable injury frequency rate. TRIFR = (LTI + RWI + MTI) x 1,000,000 / Hours worked in the reporting period

WBV
Whole body vibration

XCPQ
Xstrata Community Program Queensland

XCPNQ
Xstrata Community Program North Queensland

Xstrata Mount Isa Mines
Results of SD issues jointly managed by the copper and zinc-lead operations in Mount Isa

Xstrata Zinc Mount Isa
Issues and performance specific to the zinc-lead business in Mount Isa and reported separately to the copper operations

Xstrata Zinc North Queensland
Combined results from Xstrata Zinc Mount Isa and Bowen Coke