

Health and safety



The team at Ormeau Quarry, Queensland

Is Zero Harm possible?

Zero Harm is not a long-term ambition – it's a goal for today. We firmly believe that Zero Harm Today, and every day, is achievable and that is what we strive for.

We know through experience that all tasks can be done without causing injury, with the right equipment, process and behaviours. On average, our people work a total of more than 620,000 days every month free of injury.

We recognise, however, that errors in decisions and actions do occur that result in incidents – reinforcing the need for a continued focus on prevention. Recognising the importance of individual behaviours, we continue to adopt some of the latest thinking on cognitive safety, particularly in relation to eliminating serious harm risks, to further drive improvement programs.

Preventing serious harm

Since FY2015, Boral has participated in a project conducted by DEKRA Insight, a leading global safety consultancy and research centre, facilitating sharing of metrics and programs by safety-focused multi-national companies to improve identification and prevention of incidents that cause fatalities, or life-threatening and life-changing injuries.

Over the past three years, we have reduced the rate of serious harm events and their precursors by more than 70% through implementing programs that leverage the learnings gained through our participation in this global research project.

Through the project, we identified that serious harm events and their precursors accounted for 0.7% of our reported incidents in Australia and USG Boral, and 73% of those incidents were near-misses that did not result in loss, but had the potential to do so had only one circumstance changed (eg proximity of a person to a hazardous incident).

In FY2018, we continued this work, completing a comprehensive review and update of the systems and processes that guide our people to plan and undertake work safely (Safe Systems of Work), incorporating best practice behavioural science principles and learnings from extensive consultation across our operations. The program piloted in our Cement business and will be rolled out across Boral Australia in FY2019.

Using leading indicators to prevent incidents

We are increasingly using leading indicators of safety performance to monitor the efficacy of processes designed to prevent incidents; these indicators include training, behavioural and procedural observations, and corrective and preventative actions.

For example, in Boral Australia we routinely report progress against our hygiene monitoring and HSE audit programs, hazard and near-miss reporting frequency, and higher risk action closure. In Boral North America, we continue to monitor safety observations, which are an indicator of the cultural focus and priority given to safety.

While leading indicators tend to vary across our businesses, at a Group level we monitor hazard, near-miss and regulatory intervention reporting. **In FY2018, hazards reported increased 19% to more than 91,000, while near-misses reported increased by 37% to more than 16,000 compared to the prior year.**

Safety outcomes

After nearly four years without a fatality, we deeply regret the death of a delivery driver at our Concrete operation in Alexandria, Sydney, in September 2017. A supplier's driver, delivering diesel to the site, died after he was struck by one of Boral's agitator vehicles on site.

Immediately following the incident, all sites were alerted, and vehicle and pedestrian management risks across all of our sites were considered. Boral Australia is also considering further risk mitigation measures such as introducing additional technology to monitor vehicle and pedestrian movements on-site.

We are also saddened by the death of an off-duty contract employee at our Dutch Quality stone plant in Mt Eaton, Ohio in the US, who was killed in a two-vehicle collision on a public road outside our site in November 2017. While not work-related, it does not lessen the shared loss and our response to investigate and learn from this tragic incident.

To increase transparency, in FY2018 we commenced including all Group entities in our safety measures, irrespective of equity interest or management control. This compares to prior years when we included joint ventures where our equity interest was 50% or more. Consequently, we now include joint ventures within USG Boral.

FY2018 safety data also includes the Headwaters business, which when acquired in May 2017 was not as advanced in its safety journey as Boral.

After more than a decade of significant improvement in our safety data, FY2018 reported safety results broadly plateaued at relatively low levels largely due to the inclusion of new businesses, comprising over 4,500 employees and contractors.

Our recordable injury frequency rate (RIFR^{1,2}) of 8.7 was modestly higher than 8.1 in FY2017, but a greater than 50% improvement from FY2012, and our lost time injury frequency rate (LTIFR¹) of 1.6 was broadly in line with 1.5 last year.

On a proforma basis, restating FY2017 data to include the additional businesses, our RIFR improved by 6% and our LTIFR by 16% in FY2018.

On a divisional level:

- Boral Australia reported a RIFR of 11.3, comparable to 11.2 in FY2017.
- Boral North America reported a RIFR of 8.9, an increase from 6.7 last year, reflecting the inclusion of Headwaters in FY2018. Boral North America's legacy business RIFR was steady on last year at 6.7.



The Headwaters business reported a RIFR of 10.7, a substantial improvement from 14.6 the prior year. See page 25.

- USG Boral's reported RIFR of 4.5 remains relatively strong, and this is the best performing division in Boral. This year's result is softer than the 3.6 reported in FY2017 partially due to the inclusion of minority-owned joint ventures and partially due to a modest increase in injuries.

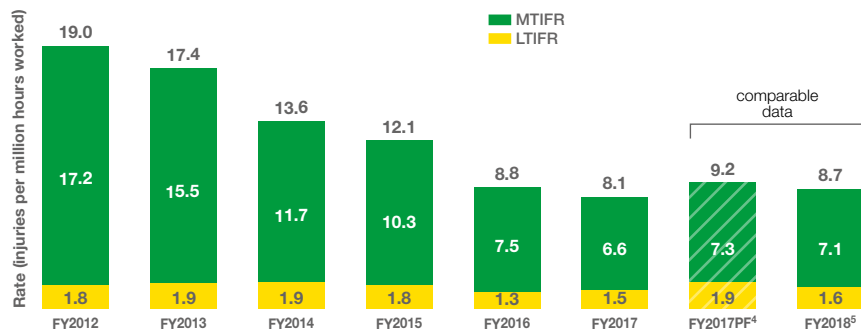
Boral's overall Group RIFR on a comparable basis to prior years (excluding Headwaters and minority held joint ventures), was 8.4.

Percentage hours lost³, which monitors the severity of our more serious injuries by the total time lost, increased modestly from 0.04% in FY2017 to 0.05% in FY2018.

Hours away on restricted or transferred duties³, a more holistic measure of the effect of all recordable injuries, improved to 0.18% from 0.22%. This suggests that injuries were generally less severe or responded better to treatment and return to work programs – a positive outcome for our injured people and the organisation.

Boral measures its safety performance for employees and contractors combined, which we believe is a true measure of performance. This can, however, make benchmarking challenging, as not all organisations report contractor data. In addition, Boral includes all entities irrespective of equity interest or management control, whereas other organisations typically include only entities in which they have management control.

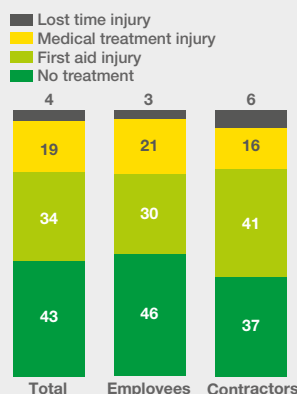
Boral Group recordable injury frequency rate (RIFR^{1,2})



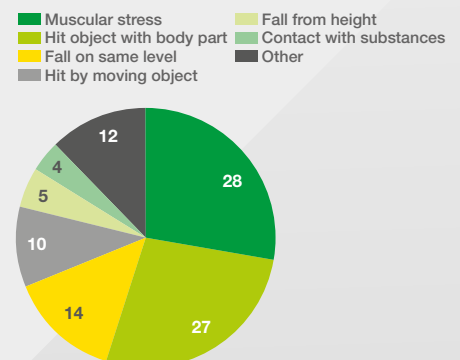
Injury analysis

Injury analysis assists in the development of corrective action plans, training and process redesign.

Injury treatment⁶ (%)



Mechanism of injury⁶ (%)



1. Per million hours worked for employees and contractors in 100%-owned businesses including Headwaters, and all joint ventures businesses regardless of equity interest in FY2018. Prior years data only includes 50%-owned joint ventures and excludes Headwaters.
 2. RIFR is the combined lost time injury frequency rate (LTIFR) and medical treatment injury frequency rate (MTIFR).

3. Defined as a percentage of total hours affected against total hours worked – for employees only.
 4. Proforma. All entities, including Headwaters data prior to Boral acquisition, and joint ventures within USG Boral.
 5. All entities, including full year Headwaters data, and joint ventures within USG Boral.
 6. Boral Australia reported injuries in FY2018.

Health and safety

Health and wellbeing

Beyond our safety goal of Zero Harm Today, we are committed to supporting the physical and mental wellbeing of our people – this helps them to be safer and more effective at work and in their personal lives.

We provide a range of programs for the health and wellbeing of our people including occupational hygiene programs, health and fitness checks, drug and alcohol support, quit smoking programs, a confidential counselling service and health seminars.

In FY2018, we extended our “Stop for Safety” day mental health awareness and support program more broadly across our operations following the success of the program in NSW last year – this has included translating materials into 11 languages for adoption by USG Boral. Boral Australia is developing a Mental Health Strategy focused on preventative interventions that is expected to be implemented in FY2019.

We piloted the first cigarette smoke-free site in our Quarries business, joining other sites across the Group that have adopted a smoke-free policy.

Sharing safety learnings across Boral

Leveraging our safety learnings across our global network of operations is critical to continually improving our safety practices and outcomes.

We share learnings from serious incidents via safety alerts and learnings documents. These are centrally maintained and distributed based on relevance to sites for discussion and action at morning toolbox talks.

Learnings that have broader organisational implications are discussed at cross-divisional meetings and, where appropriate, integrated into systems changes and training material revisions.



Outperforming Australian industry safety benchmarks

While our goal remains Zero Harm Today and we continually strive to achieve this, it is valuable for us to benchmark the safety performance of our businesses.

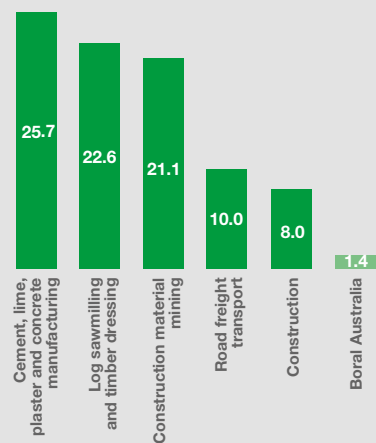
Based on Safe Work Australia’s latest injury statistics reports, the broader industries in which Boral Australia operates experience serious lost time injuries between five and 18 times more frequently than Boral’s workers.

Boral Australia’s operations pour concrete and lay asphalt across major projects and construction sites; have around 80 quarries and more than 300 manufacturing operations producing cement, concrete, asphalt, bricks, roof tiles and timber products; and manage a fleet of more than 2,500 heavy vehicles.

Boral Australia’s LTIFR¹ for serious injuries is 1.4, which compares to industry averages ranging from 8.0 to 25.7 across construction, road freight

transport, construction material mining, log sawmilling and timber dressing, and cement, lime, plaster and concrete product manufacturing.

Boral Australia’s LTIFR relative to Australian industry averages²



Leveraging technology to deliver a safer workplace

Technology is increasingly playing an important role in delivering solutions to improve the safety of our workplaces and work practices.

This year, Boral won an industry safety award for developing a brake-activating sensor on an asphalt roller, which is triggered to stop the asphalt roller when a worker wearing an electronic tag comes within a metre of it.

Boral Australia’s Asphalt business worked with proximity sensor supplier Strata to develop and link the sensor system to the braking and hydraulic systems on the asphalt equipment. It is an adaptation of similar systems in use in above and below ground mining operations.



Managing our heavy vehicle road transport risks

With a fleet of more than 2,500 heavy vehicles, reducing road safety risks including the incidence of vehicle rollovers, is a key focus for Boral Australia.

We have made considerable progress to reduce the risk of heavy vehicle rollovers through improved truck design and driver training since 2012. Despite these improvements, we identified that further reduction in rollover frequency rates was required to deliver best practice performance. In early FY2018, Boral engaged an international expert in

heavy vehicle transport to review its performance against world best practices and identify improvements.

To date, significant work has been undertaken to implement key recommendations, including improved standard operating procedures and driver safety training, rollover avoidance training, improved communication and haulage contractor management. These initiatives are already delivering positive results, with rollover incidents significantly reduced in FY2018.

Training our people and maintaining accountability

Delivering safety training to all our workforce is vital to achieving an effective safety-driven culture. Boral's safety training programs and initiatives include internal leadership courses and training for frontline managers, supervisors and operators. Training ranges from inductions and safe work practice through to behavioural-based programs. In FY2018, over 9,000 workers received safety training.

Boral's learning management system, My Learning Space, helps our people manage their own learning and competency requirements and helps our managers to monitor this as a leading safety measure.

Once appropriately trained, our people are held accountable and are required to take full responsibility for their safety and the safety of those around them. Poor management of safety or safety breaches are taken very seriously. For example, between FY2015 and FY2018, 78 employees in Australia and the USA, including 12 in FY2018, were terminated for poor safety management and breaches.

Improving Headwaters' safety performance

The acquisition of Headwaters in May 2017 more than doubled the size of our US-based workforce and nearly tripled our US operating sites, adding more than 4,000 employees across 170 operating sites.

While Boral North America's legacy business and Headwaters were culturally well aligned and delivering improved safety outcomes in recent years, Headwaters' injury performance was inferior to Boral's.

Improving Headwaters' safety performance has been at the forefront of our integration activities. We developed a focused improvement plan leveraging shared leading practices and prioritising high risk areas, and have embedded Boral's Zero Harm Today goal through proactive leadership and safety training. In the initial months of ownership, we invested close to US\$10 million of capital to upgrade machinery guarding and other safety equipment at Headwaters' sites.

In FY2018, Headwaters reported a RIFR³ of 10.7 and a LTIFR¹ of 1.6 for employees and contractors, an impressive 27% and 59% improvement respectively over FY2017 RIFR and LTIFR of 14.6 and 3.9 for employees only. This compares to Boral North America's legacy business, which reported a RIFR of 6.7 and a LTIFR of 0.8 in FY2018⁴.



Metal guarding installed at the Light Building Products Elkland plant, Pennsylvania

1. Lost time injury frequency rate per million hours worked.
2. Safe Work Australia, Table 2.1 – Number, frequency rate and incidence rate of serious claims by industry (2011–12 to 2015–16), based on Safe Work Australia's definition of LTIFR which is based on workers' compensation claims for work-related injuries that resulted in five or more days of lost time from work. Boral Australia LTIFR of 1.4 calculated on the same basis.
3. Recordable injury frequency rate per million hours worked.
4. For employees and contractors, including the Meridian Brick joint venture.