

NOVEMBER 2019

Reducing Maintenance Errors

- TOP SAFETY PROSECUTIONS
- CAN WE REDUCE OUR SAFETY INSPECTIONS?
- NEW FOOTPATH CYCLING LAWS
- GET READY FOR 2020 WITH OUR FREE STRATEGY BREAKFAST!



Welcome to November Safety News

This month we help you reduce your maintenance errors. Contrary to popular belief, most maintenance problems fall into predictable patterns.

Did you know that machine guarding is the second most common safety prosecution in 2018? We have summarised all the safety prosecutions on page 5 & 6

Gary answers a question from one of our regular readers about whether you can reduce the frequency of your inspections of building fire and emergency facilities.

Andrea recently spent a week in Singapore and found the difference in height safety standards quite amazing. Read on to find out more.



Photo: Andrea on her recent trip to Singapore

Stay safe!

The Safety Action Team



GARY



KATIE



SARAH



STEPHEN



BEN

GET READY FOR 2020! COME TO OUR FREE STRATEGY BREAKFAST

WED 11 DECEMBER – SAFETY ACTION UNIPARK CONFERENCE ROOM

Launch into 2020 with confidence.

Gary, our CEO, will provide tips on how to prepare a strategic safety plan and help identify what should be on your radar for 2020. Having a good plan means you'll spend your time and money on the right safety activities.

Register now!

**CLICK TO
REGISTER**



Minimising Maintenance Errors

It's been said that maintenance work is the "classic error producing job". Contrary to popular belief, most maintenance slips, lapses and mistakes fall into predictable patterns.

World-wide experience proves effective control of maintenance error requires multiple layers of safety defences.

If an evil genius was to create an activity guaranteed to produce an abundance of errors, it would probably involve:

- Frequent removal and replacement of large numbers of varied components.
- Cramped and poorly lit spaces.
- Make-shift equipment.
- Severe time pressure.
- Ambiguous or missing service manuals or instructions.
- Someone finishing a job that someone else started.
- Numerous groups working on the equipment simultaneously.

I would even wager the evil genius would have a name for this activity.... **MAINTENANCE WORK!**



Maintenance errors have been implicated in numerous disasters in safety-critical industries, including:

- Apollo 13 oxygen tank failure (1970)
- Three Mile Island nuclear plant failure (1979)
- Crash of DC10 in Chicago (1979)
- Piper Alpha offshore platform explosion (1988)
- Esso Longford gas plant explosion (1998)

Most maintenance personnel are highly skilled and dedicated, but a basic error management principle is that "the best people can make the worst mistakes". Work pressures can lead people into the same kind of error, regardless of who is doing the job.

For many tasks **Violation + Error = Disaster.**

The Good News – Maintenance Errors Are Predictable

Contrary to popular belief, most maintenance slips, lapses and mistakes fall into predictable patterns.

For example, most errors are triggered by the situation and task circumstances, which are common to maintenance activities.

Maintenance error is managed in the same way that any well-defined business risk is managed.

The Complexity of Maintenance Tasks

Operators can be distracted during critical phases (e.g. during a re-assembly or final safety inspection) and this could cause safety-critical deficiencies being left undetected or uncorrected.

All humans have limited short term memory capacity and it is unrealistic to expect maintenance workers not to be distracted or to make errors with complex sequences.

The simple example below demonstrates the difficulty of many maintenance tasks.



Consider a bolt with eight (8) nuts on it. Each nut is labelled "A" through to "H".

There is only one way to take the nuts off, but there are in excess of **40,000 opportunities to get the sequence wrong** when putting the nuts back on.

Calculation: $8 \times 7 \times 6 \times 5 \times 4 \times 3 \times 2 = 40,320$

The Maintenance Error Approach That Doesn't Work

Traditionally, efforts to prevent recurrence of maintenance errors took the form of:

- Disciplinary action.
- Introducing more procedures.
- Shaming.
- More training.

Unfortunately, traditional responses to error fail to recognise or address the underlying causes. For example, difficult task under difficult circumstances.

Maintenance errors are consequences, not causes. Situations and systems are easier to change than the human condition. And they're more reliable.

Successful Approaches

World-wide experience proves effective control of maintenance error requires **multiple safety defences**. Effective safeguards usually involve a balanced mixture of “hard” engineered defences (which are generally more durable) and “soft” administrative safeguards.

An individual’s behaviour can be influenced, but it is very difficult to achieve full compliance across a large organisation consistently. Human error is not the problem, it is the unforgiving consequences. Therefore, planning maintenance work needs to identify potential serious outcomes and provide engineering controls where possible.

Local Error Provoking Factors

As we explained earlier, maintenance errors do not emerge randomly. Local factors that promote errors include:

- Inadequate or inappropriate documentation. E.g. procedures and checklists.
- Time pressure or fatigue. E.g. perceived or real time restraints.
- Untidy or disorganised work areas.
- Poor co-ordination or communication. E.g. task not completed by end of shift, but next shift put equipment back on-line.
- Inadequate tools or equipment.
- Lack of knowledge or experience.
- Procedure usage. For example, less than 60% of workers open procedures during tasks.
- Personal beliefs on compliance. E.g. feeling that strict compliance is not important.

Error Management

To control errors, we need to remember:

- Human error is inevitable – plan for it!
- People cannot easily avoid those actions they did not intend to commit.
- You can't change the human condition, but you can change the conditions in which humans work.

The Best Defence - Safety Culture

Safety culture can be expressed as an environment where everyone willingly and habitually follows agreed safe work procedures.

This means all the time, not just when it is convenient.

Therefore, the real test of a safety culture is not observing behaviours in the good times, it’s about how people respond in tough times. For example, during difficult maintenance activities under time pressure.

[Email Us](#) about improving your safety culture with our Safety Leadership workshops.

Safety Prosecutions

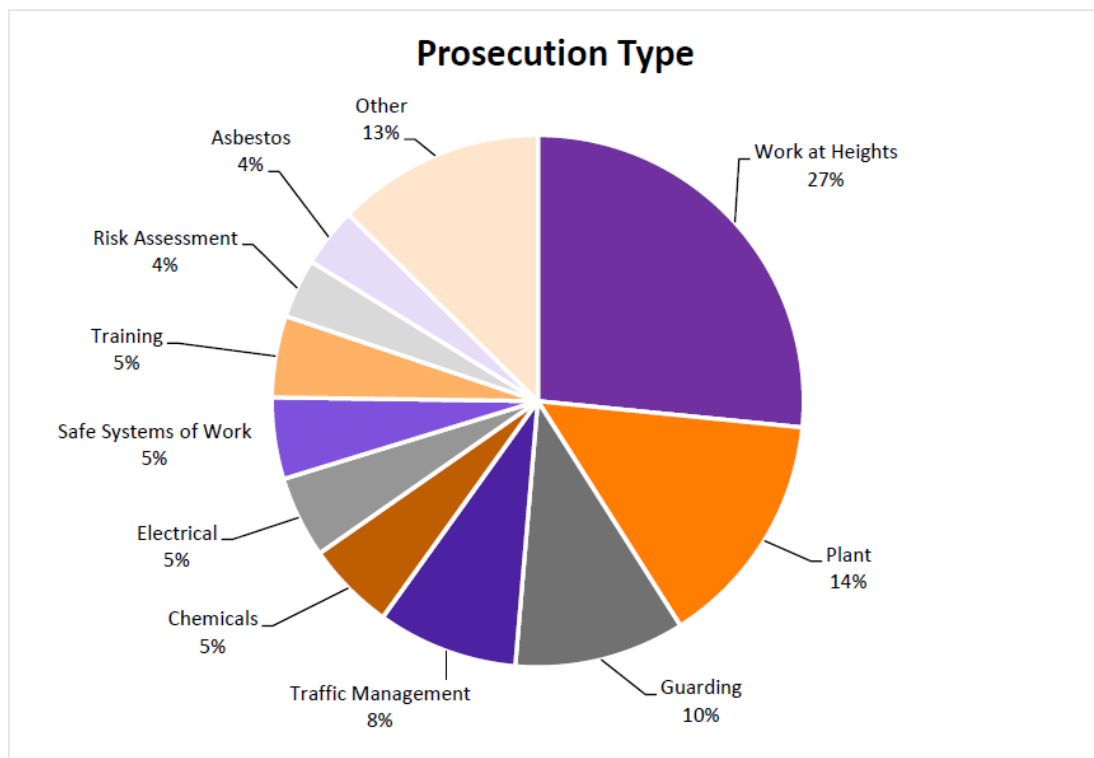
In the last financial year, there were significant changes in the prosecutions undertaken by the safety authorities.

Overall, we are seeing a significant increase in the number of prosecutions throughout Australia and an increase in the fines, both total and average, demonstrating the increase focus by the authorities and courts on motivating employers to meet their health and safety obligations.

Prosecution Summary

- Average prosecution fine was **\$85,000**, an average increase of around **\$14,000** from last year.
- The number of prosecutions have either remained consistent or shown a significant increase, NSW showed the highest increase with 21 more prosecutions than the previous year, a 250% increase on the previous year.
- Across the whole country we saw a 17% increase in prosecutions, this included:
 - **Work at Height** - Work at heights was the **#1** prosecution topic.
 - **Risk Assessment Failure** - The number of prosecutions for failing to have a proper Risk Assessment increasing and this category having the highest maximum fine of \$1.3 million.
 - **3 New Categories** - The introduction of fines in categories of Training, Safety in Design, Load Restraint, and Bullying/Stress/Harassment, with all three categories having an average fine of over **\$50,000**.

Prosecution Types



Top 10 Summary Safety Prosecutions - Australia

Category	# Prosecutions	Min. Fine	Max. Fine	Av. Fine
1. Work at Heights	59	\$0	\$700,000	\$69,759.78
2. Plant	32	\$0	\$1,137,525	\$122,863.97
3. Guarding	23	\$0	\$195,000	\$58,639.61
4. Traffic Management	19	\$1,000	\$375,000	\$100,111
5. Chemicals	12	\$0	\$200,000	\$67,746.4
6. Electrical	11	\$0	\$150,000	\$39,237.73
7. Safe Systems of Work	11	\$0	\$390,000	\$84,929.39
8. Training	11	\$0	\$177,349	\$52,224.45
9. Risk Assessment	8	\$10,000	\$1,300,000	\$222,670.57
10. Asbestos	8	\$2,092	\$175,000	\$29,060.53

Total Number of Prosecutions - 223

Total Value of Fines – \$17,873,164.51

Av. Fine Per Prosecution - \$80,874.05

If you'd like help improving safety in any of these categories, [register for our FREE Strategy Breakfast](#) and we'll help you plan for 2020!

[Click Here](#) to download the report summary – Includes a breakdown by state! Participants

Experience of the month **I CHILD PROOFED MY HOUSE, BUT THE KIDS STILL GET IN!**

New Footpath Cycling Laws

In effort to help children ride more safely together, new road rule changes have been introduced in Victoria.

- Children under 13 years old will now be able to cycle on footpaths.
- A person 13 years and older can accompany a child under 13 years cycling on a footpath.
- Adults with a young child in a child seat attached to their bicycle, or with a child pedalling on a bike attachment at the back of an adult bicycle, can cycle on the footpath



To read more about the changes to the cycling laws – [Click Here](#)

TV ‘Villain’ Owed Workers Comp



A landmark ruling from the Workers Compensation Commission has determined that a reality television contestant was the **employee** of a production company, a decision that could have far-reaching consequences for the TV industry.

What’s the impact?

Shine Lawyers in NSW said “If [TV Companies] manipulate a person’s environment in an adverse way which results in the person suffering psychological or physical injuries they can be held liable.”

[Click Here](#) to read the full article on the Age website.

First Industrial Manslaughter Charge

Two Qld directors charged

The first charge of industrial manslaughter under QLD WHS Act S.34C has occurred, with the two directors also being charged with reckless conduct, for failing to ensure adequate systems were in place to separate pedestrians from mobile plant.

In May 2019 a worker was struck by a reversing forklift at a wrecking yard in Rocklea, Qld. The firm Brisbane Auto Recycling Pty Ltd, is yet to be fined, but faces up to \$10 million for negligently causing the death of a worker.

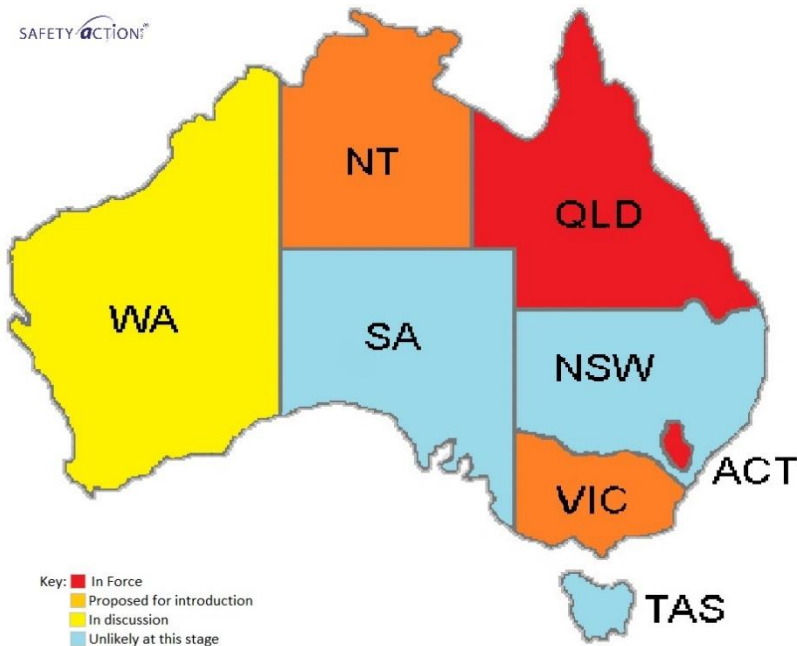
The two directors face the potential fine of up to \$600,000 each or up to 5 years jail, if they are found to have breached S31 (reckless conduct). To be charged with reckless conduct you must have known of the risk and not acted, or acted too slow, or not reasonably practically. In this case it is argued they failed to ensure adequate systems were in place to segregate plant and pedestrian and to ensure supervision of workers operating and working around mobile plant.

Industrial manslaughter does not require there to be any intent to harm, just negligence in providing a safe workplace, systems etc. that results in the death of a worker.

Victoria also Introducing Workplace Manslaughter

Workplace manslaughter (akin to Industrial Manslaughter) was introduced to Vic parliament, the bill amending the OHS Act is said to include fines of up to \$16.5 million and up to 20yrs jail for individuals. These penalties exceed those of any other state currently.

SAFETY ACTION®



The state of play

Once introduced in Victoria Industrial/ Workplace Manslaughter laws will be in place in; Queensland, ACT and Vic. It is expected to be introduced to NT, with a maximum fine of \$10million and life imprisonment. WA continue discussions of introduction. The Commonwealth, NSW, SA and Tasmania have not announced plans to introduce an industrial manslaughter charge as yet.

Are Your Workers Protected?

Did you know that up to 80% of workers using Personal Protective Equipment (PPE) are not properly protected? When working with engineered stone or hazardous chemicals, PPE users risk serious health damage.

We can confirm that everyone is effectively protected with PPE fit-testing.

Using scientific, calibrated equipment, qualified technicians from Safety Action can provide fit testing for:

- Hearing Protection (Ear Plugs & Earmuffs)
- Respirators
- Eye Protection.

[Click Here](#) to learn more about PPE Fit-Testing.



Can You Reduce the Frequency of Building Inspections?

A reader has asked if they can reduce the frequency of inspection and testing of the various emergency facilities in their buildings. They felt the fire service firm may be over-servicing them.



Fire extinguishers are part of compulsory inspections for building emergency services

What Are Typical Essential Services?

Building emergency facilities include the following as relevant for the circumstances:

- Exit doors & signage.
- Travel paths to exits.
- Emergency lighting.
- Portable fire extinguishers.
- Fire hose reels & hydrants.
- Fire detection and suppression systems. E.g. smoke detectors & sprinklers.
- Emergency alarms and communication systems.
- Fire blankets.
- Smoke containment systems. E.g. auto-shut corridors.

Legal Requirements

The workplace safety legislation does not provide specific inspection or testing details for building emergency facilities and equipment,

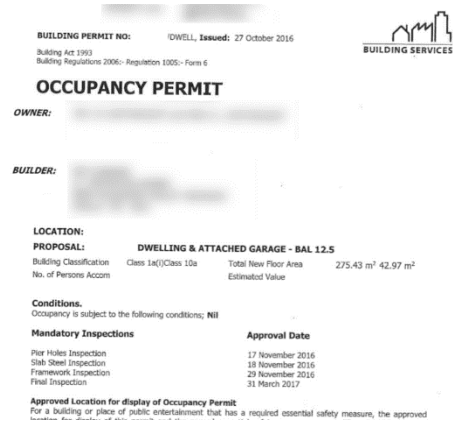
The Building Act and Building Regulations in each state reference the **National Construction Code (NCC)** for maintenance and inspection requirements. The NCC incorporates all the onsite building requirements into one volume from the Building Code Australia (BCA) and Plumbing Code of Australia (PCA).

The Building Regulations via the NCC prescribe the process for issuing of Building and Occupancy Permits, and ongoing building inspection and maintenance standards.

Occupancy Permit

The maintenance and testing of building emergency facilities, is usually specified in the **Occupancy Permit**, which is issued by the local government authority.

Occupancy Permits usually reference the relevant Australian Standards, as current at the time of issuing the certificate, per the sample table below:



Sample Conditions for Occupancy Permits

Essential Safety Measures	Installation Standards / Level Of Performance	Nature of Inspection or Test Frequency
Exit Door	BCA Section D	Every 3 months Confirm operation & hardware.
Travel Paths To Exits	BCA Section D	Every 3 months. Confirms paths clear.
Exit Signs	BCA Part E4, AS2293.1: 1998	Every 6 months to AS2293.2: 1995
Emergency Lighting	BCA Part E4, AS2293.1: 1998	Every 6 months to AS2293.2: 1995
Portable Fire Extinguishers	BCA E1.6, AS2444: 1995	Every 6 months to AS1851.1: 1995
Fire Hose Reels	BCA 1.4, AS2441: 1988	Every 6 months to AS1851.2: 1995
Fire Hydrant	BCA 1.3, AS2419.1: 1994	Every 6 months to AS1851.4: 1992

Conclusion

You must continue to inspect and maintain building emergency facilities and equipment in accordance with the requirements stated on your Occupancy Permit. If no requirements stated on your occupancy certificate, we recommend following the Australian Standard guidance.

[Click Here](#) to view this article on our website.

Have questions or would like to see a topic in a future newsletter?



Contact the editor

Do you have questions or is there a topic you would like to see in a future newsletter? [Email](#) with your ideas.

Kirill, editor

Crackdown on Dodgy Dangerous Goods Stores

Following toxic fires and the discovery of illegal stockpiles and dumping of dangerous chemicals in Victoria, harsh new penalties are proposed. Once the amendment to the Dangerous Goods Act is passed, a new criminal 'reckless conduct' offence will carry a penalty of up to 10-years' prison for individuals, and fines of up to \$6.4 million for body corporates, who engage in reckless conduct that places a person in danger of death.

Workplace Safety Minister Jill Hennessy encouraged the public to report dodgy operators. "We know that the unsafe storing, handling or disposal of dangerous chemicals poses a real threat to local communities. If something doesn't look, sound or smell right where you work or where you live, play it safe and report it." You can report unsafe storage to WorkSafe's advisory service on 1800 136 089.

Employers who manufacture, store, transport, transfer, sell or use dangerous goods have a duty to keep their workers, the community and the environment safe.

If you are not confident that your dangerous goods are safe and compliant, contact Andrea Rowe at Safety Action on 03 8544 4300 or email andrea@safetyaction.com.au for a free consultation.

