

How gutter guards can protect the value of your property assets



THE VALUE OF GUTTER GUARDS IN COMMERCIAL SETTINGS



For owners and managers of investment and commercial property portfolios, balancing income vs outgoings is an important exercise. Evaluating the costs of regular cleaning, repairs and maintenance against the impact these have on capital values and desirability of the property to tenants is an important part of managing these major assets.

One of the key areas for maintenance on a property is the roof and gutter. And while each building is different, all are at risk from water damage. From a minor leak to violently destructive winds or storms, any unwanted water intrusion can significantly impact the value of a commercial property. Protecting the roofs, walls, windows and other components of 'the envelope' is essential to reducing the likelihood of water damage.

A build-up of leaves and other debris in gutters can cause serious maintenance issues, including an increased risk of flooding, pest and vermin infestation. Unprotected gutters also require more frequent cleaning, with the increased risks to health and safety associated from working 'at height'. Apart from the misery they cause, leaking gutters cost Australian industry millions of dollars every year in product disruption, stock loss and maintenance costs.

A recognised way to prevent blocked gutters, and effectively manage these environmental and safety risks, is to invest in gutter guards, which frequently provides a better return than either no maintenance program or regular cleaning.

This paper will look at:

- + The common problems with gutters and how gutter protection works.
- + An economic model which calculates the cost benefits of installing gutter guards (with an overview of other well understood, but less tangible, economic benefits).
- + How gutter guards can deliver significant improvements in safe work practices.
- + Why Blue Mountain Mesh provides superior protection to other gutter protection systems.

- + One of the key areas of maintenance of a commercial property is the roof and guttering system.
- + Blocked gutters can lead to flooding, causing extensive damage to roof and ceiling areas, walls and floors, and destroying contents.
- + Installing high quality gutter mesh delivers many calculable economic benefits and significant improvements in safe work practices.
- + Several other intangible, but equally important, economic benefits further build the case for installing gutter protection across commercial property portfolios.
- + A superior quality gutter protection system like Blue Mountain Mesh can reduce maintenance costs, extend the life of your gutters and enhance capital values overall by protecting your important property assets.

Photo: BILL BROWN,
AUSSIE SHIELD,
Sept 2011



HOW GUTTERS PROTECT YOUR PROPERTY

The main function of a gutter is to remove or transport water away from the roof – either into a drainpipe or water collection and storage system. A gutter does a good job of removing this water, so long as it is properly maintained. Blockages are common and gutters require ongoing maintenance to ensure they can function properly.

Every year, fallen leaves, branches, dirt and debris gets washed off roofs into gutters. This can build up at an alarming rate and can cause damage to the guttering itself or to your property. Left unchecked, debris can clog gutters and prevent water from entering the downpipes. As a result, gutters can overflow and flood the roof cavity, causing extensive damage to roofs, walls, flooring and structural problems at the building's footings, leading to expensive (and avoidable) insurance claims, repairs, and loss of income.

Guttering also tends to be a haven for pests, including birds, possums and insects, who use gutters as their home and breeding ground. The wetter the climate, the more likely that moss and other build up will occur.



A leaking roof left unchecked can cause a flooding issue during a large rainfall event. Photo: BILL BROWN, Aug 2011

COMMON PROBLEMS WITH BLOCKED GUTTERS

Common problems with litter and debris build up in gutters include:

- + Frequent blockages leading to overflow flooding at times of heavy rainfall and storms (see Blue Mountain Mesh Information Guide Issue – Storm Damage Protection)
- + Pest intrusion, with snakes, possums, rats and birds getting access to roof cavities (see Blue Mountain Mesh Information Guide Issue – Pest Control); nesting and breeding in pooled water (mosquitoes); and causing blocked gutters (which in turn cause overflow flooding) (see Blue Mountain Mesh Information Guide Issue – Storm Damage Protection).
- + Over the longer term leaf litter, debris and trapped water may increase corrosion in gutters, requiring early replacement.
- + Increased risk of spread of fire as a result of ember attack in bushfire-prone areas (see Blue Mountain Mesh Information Guide Issue – Bushfire Building Compliance or Ember Attack Protection).
- + Reduced water harvest yields (both quantity and quality) at properties where water harvest is desirable.

PLANTS AND OTHER PESTS COMMONLY FOUND IN GUTTERS



Photo: 1. NEIL CHAMPION, Nov 2010; 2. BRIAN SNELSON, Jul 2006; 3. 500PX, Nov 2011; 4. JAMES GATHANY, CDC, Feb 2006; 5. TED GARVIN, Dec 2007; 6. TEMPORALATA, Nov 2010

What's lurking in your gutter?

- + Grass and plants growing in gutters and stopping water flow
- + Moss build up
- + Gutter blocked with leaves and debris
- + Pests including possums and birds making nests

Sometimes you can't see the problem from the ground; and you won't always notice the overflow until damage is done.

Regular cleaning may be sufficient to prevent many of these common problems; however, despite the best intentions, even regular cleaning programs have inherent risks and can fail.

A significant storm event or even a few days of windy weather can deposit significant debris onto the roof and gutter, causing blockages. If followed by heavy rain, enormous amounts of water can back up onto the roof, run down behind sidings and flashings, and penetrate to interior walls.

And of course, there are significant risks associated with regularly putting workers or contractors in a potentially unsafe situation, working 'at height' to clean out gutters.

HOW A GUTTER GUARD WORKS

A gutter guard is fixed to the roof and fitted over the gutter to prevent leaves and other debris from entering the guttering system.

Over-the-gutter systems that form a physical barrier to prevent leaves and debris from entering gutters offer a long term solution to minimise the risk of gutters flooding. Typically constructed using either steel or aluminium mesh, this form of gutter protection ensures year round low-maintenance protection that keeps gutters from getting blocked, preventing flooding of eaves, ceiling and wall cavities; and extra protection from hail and flooding rains during storms.

The ski-slope design of over-the-gutter gutter protection systems ensures that leaves and debris are blown off the roof through wind action whilst water is drawn through the mesh into the gutter. This form of gutter protection is highly superior to other in-gutter systems (e.g. gutter coils, foam or brushes) which don't stop debris from entering the gutter and can lead to a myriad of other problems (clogging, dislodging and need for more regular cleaning and maintenance).

CALCULATING THE REAL ECONOMIC BENEFITS OF GUTTER GUARDS

Large scale property portfolios typically have a number of buildings. When all the associated costs and maintenance required for all properties are put together, the financial load can be significant. The motivation for owner occupiers, property investors and asset managers alike is to reduce maintenance costs associated with buildings in a portfolio.

Commercial buildings often present challenges because of their height and size – often requiring special equipment, such as cherry pickers, and specially trained operators to undertake regular cleaning and maintenance tasks.

Installing gutter mesh on these properties would save owners a lot of money – and also the risk of something going wrong in between maintenance visits, whether that be flooding from a storm event or an accident cleaning gutters, which can be a very dangerous job.

It's a widespread issue, according to Stephen Porter from Allclear Gutter Protection Systems, a company that installs gutter guards to homes and businesses across North Queensland.

"Maintenance costs become a real problem when owners have a lot of property stock. Depending on the area and the number of buildings, property owners can literally spend hundreds of thousands each year cleaning gutters," Stephen says.

Leaving gutters unprotected raises possible risk factors including:

- + Unsafe work practices cleaning out gutters
- + Blockages leading to flooding of eaves from gutters
- + Pest and vermin infestation
- + Heavy fuel loads in gutters contributing to spread of fire
- + Unsafe work practices cleaning out blocked gutters



Gutter guard installed on box gutter
Photo : NEIL CHAMPION, Apr 2011



The multi-purpose hall at Innisfail State School in Queensland is one of a number that has had gutter guard installed to prevent water entering the roof space, saving thousands of dollars in maintenance visits annually.

Building height and difficulty gaining access are other issues where gutter guards can help.

"I've worked with a number of schools in North Queensland to install gutter guards on new multi-purpose halls. These are tall buildings, up to 8m high. The gutters were getting clogged and letting water into the roof space when it rained, shorting out the lights.

"As a result, schools were spending up to \$1000 a time hiring a scissor lift and a trained operator to clean out the gutters or change lights. Do that three or four times a year and it adds up. The principals were getting really fed up."

Stephen recommends installing quality steel gutter guards and an annual inspection before the wet season to check all areas of the roof and gutters.

"Installing gutter guards has saved many of my clients thousands of dollars in maintenance costs – and a lot of hassle. Add to that the prevention of loss time injuries and other risks of not being able to operate a business if something goes wrong – it's definitely worth the investment."

The cost of regular cleaning will depend on building design parameters including gutter height and length and surrounding landscaping which influences litter load and sludge build up. Commonly cleaning contractors costs will vary. It should be noted that these costs can be heavily impacted by 'safe working at heights' legislation, with costs increasing depending on what additional safety measures are required.

Alternatively steel and aluminium gutter protection guards may be fitted for a cost varying between A\$30.00 – 40.00 per lineal metre. Depending on the building design, once fitted these systems require little maintenance and provide significant reductions in operating costs and risk. These systems provide long lifespans and may reduce insurance premiums. Furthermore, installation costs may be added to the building's depreciation schedule for financial reporting and tax purposes.

For investors and managers, while cleaning and maintenance costs are typically passed onto tenants as part of rent and outgoings, high competition in commercial leasing means there is a strong need to offer competitive rates for outgoings and maintain all properties in good order.



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THE EQUIVALENT ANNUAL COST MODEL: AN INTERACTIVE TOOL FOR ASSESSING THE VALUE OF GUTTER GUARD

How do you calculate the economic benefit of installing a gutter guard at your commercial property?

Working out the calculable economic benefits of installing a gutter guard is possible with the help of an interactive tool that compares the ongoing gutter maintenance costs with the cost of installing a gutter guard. Developed by an independent asset management firm, the tool uses quantifiable terms including:

- + Cost of maintenance per visit
- + The number of maintenance visits per year
- + Lifespan of the gutter itself
- + Lifespan of the gutter guard

These variables can be inputted to work out generally accepted values for annual maintenance costs in three different scenarios:

1. Without gutter guards
2. With gutter guards installed as a retro-fit and
3. With gutter guards installed at the time of construction.

The tool can be used by property owners and asset managers to assess the economic benefits of installing gutter guards to their property portfolio.

A case study: Installation costs vs. payback period

Details:

- + Yorkeys Knob State School Multi Purpose Hall
- + Building size 1093 square metres
- + 106 meters guttering
- + Annual maintenance visits = 4
- + Annual cost of maintaining gutters = \$4,000 (includes cost of hiring a scissor lift and trained operator to clean gutters and carry out general maintenance tasks e.g. change light fittings due to 8m high roof)
- + The lifespan of the gutter is 35 years
- + The lifespan of the gutter guard is 20 years
- + A typical cost per meter to install Blue Mountain All Steel Gutter Guard is \$34 p/m, ex GST.



- + Based on this example, cost to install gutter protection is approx \$3,604.

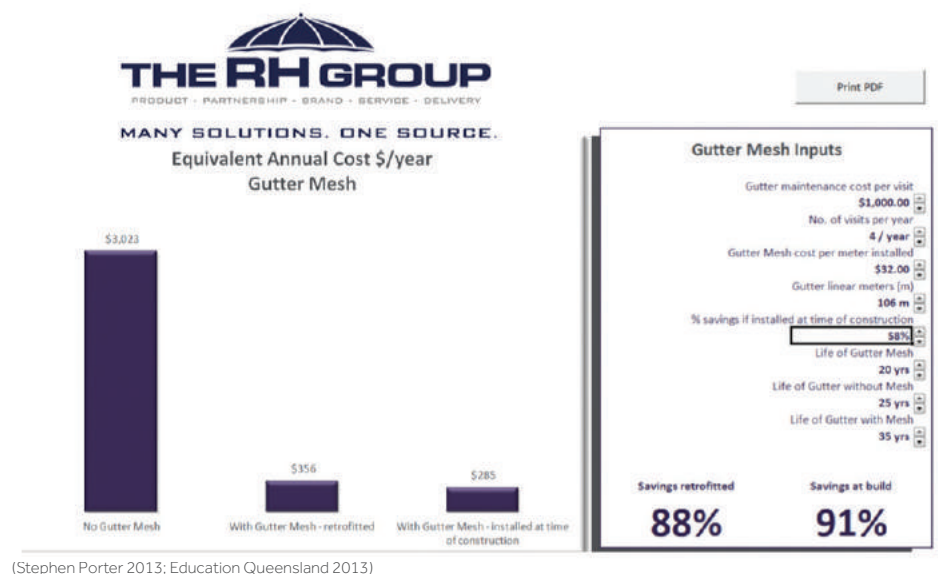
Results:

- + Payback on gutter cleaning alone occurs in less than one year.
- + The annualised maintenance cost is 88% less with gutter guards installed.

OTHER BENEFITS OF GUTTER PROTECTION

There are many further compelling arguments to support the use of gutter guards in the commercial sector, with further important (albeit less quantifiable) economic benefits. Other costs associated with either maintaining – or failing to maintain – gutters can be either intermittent or less tangible, but important nonetheless. These include:

- + Reducing the risk of accidents and falls (from working at height to clean gutters)
- + Helping to eliminate unsafe acts (complying with Workplace Health and Safety regulations)
- + Protection from natural hazards (including storms and bushfire)
- + Saving on insurance claims (increased premiums and payments for costs not covered)
- + Cost of lost business income or rent (if premises is unfit for occupation)
- + Protecting capital values by avoiding damaged gutters
- + Keeping unwanted pests out of your roof spaces.



REDUCING THE RISK OF ACCIDENTS AND FALLS

Safety considerations will always be at the forefront of a risk assessment of any commercial property portfolio. Significant injuries can result if gutter cleaning is undertaken in an unsafe manner – with devastating results for the workers who are injured and expensive claims for the businesses involved.

Apprentice cleaning gutters injured in fall from roof

20 January 2012

"An employer has been convicted for its failure to identify the risk of cleaning gutters and provide a safe system of work for a first-year apprentice plumber [Hillman v Metropolitan Plumbing Pty Ltd [2011] SAIRC 77 (30 November 2011)].

When he started work, the apprentice plumber was shown how to use the equipment in the plumbing van to clean drains and gutters. After three weeks of demonstration, he was expected to do the work unsupervised.

On 28 November 2007, the apprentice was sent to premises where gutters needed cleaning, although he had not yet covered this work in his TAFE course. He climbed onto the roof and started scooping leaves and dirt from the gutters into a bucket. However, he fell from the roof (about 3m) head first onto a concrete path. He fractured his skull, right wrist and cheek bone, dislocated his knee and bruised his face, head and arms. He was off work for three months and, when he returned, was made redundant. He was not able to continue his plumbing apprenticeship.

The employer was charged with breach of s19(1) of the SA Occupational Health, Safety and Welfare Act 1986, namely, with a failure to provide and maintain a safe system of work for cleaning gutters. The employer was convicted and fined \$53,000."

(Workplace OHS 2012)

Installing gutter guards can greatly reduce the maintenance activity (time/money) spent on the roof and gutter, the need to work at height and subsequent risk of falls.



Work Health and Safety Regulation 2011

Part 4.4, section 78 of the Regulation states:

– "the person conducting the business or undertaking must manage risks to health and safety associated with falls from one level to another that is reasonably likely to cause an injury"

• Note: No Height Threshold stated

Safe Work Method Statement (SWMS) section 291

If a person can fall more than 2m:

First thing you must do is prepare a SWMS

– So this would mean that if you are working on the roof structure:

• installing the bracing, placing of battens, placing the roof on, you would be working in accordance with your safe work method statement

SWMS are not just paperwork. They promote on-site consultation and coordination, implement site specific controls and provide a way ensuring the controls work.

(Workplace Health and Safety Queensland 2013)

HELPING TO ELIMINATE UNSAFE ACTS

Cleaning out gutters is a dangerous task, with falls from ladders and roofs a significant cause of severe injuries. A study on the relationship between slips, trips and falls and the design and construction of buildings (Monash University 2008) concluded that falls from ladders, while relatively infrequent (5.8% of falls in buildings) were a significant cause of more severe injuries. The study also noted that older people (45 years+) were more vulnerable. The report makes a number of recommendations, including providing features such as hinged gutters and gutter guards to reduce the risks of a fall from heights injury.

Many of the risks relating to employees, tenants and contractors undertaking maintenance work on commercial sites can be removed altogether through the elimination of unsafe acts.

The law requires, through the Work Health and Safety Act 2011, that any person conducting a business or undertaking must ensure, so far as is reasonably practicable, that the health and safety of other persons is not put at risk from work carried out as part of the conduct of the business or undertaking.

There are a number of ways to control the risks of falls. The Workplace Health and Safety Regulations require duty holders to work through a hierarchy of 'control measures' to choose the control/s that most effectively eliminates or minimises the risk in the circumstances.

The first control measure asks: Can the need to work at height be avoided to eliminate the risk of a fall?

No gutter guard system is maintenance free; however, installing gutter guards greatly reduces the frequency of maintenance activity on the roof and gutter, the need to work at height and subsequent risk of falls.

Eliminating or reducing unsafe acts will inevitably lead to reduced workplace injury and so result in lower workers

compensation costs. If the change in work practices are substantial, and lead to a total review of how work is carried out, then there is potential for a re-classification of the asset providers Workers Compensation Classification and further reduce premium costs.



Photo : MICHAEL ROPER, Jan 2005

PROTECTION FROM NATURAL HAZARDS

Severe weather events tend to dominate Australia's climate. Environmental risks from natural hazards pose real concerns for owners of commercial property in Australia, where natural hazards cost an average of \$1.14 billion damage annually. Storm damage is a particularly significant issue for the insurance industry, with payouts for storm damage topping the list ahead of cyclones, earthquakes, floods or bushfires (ABS 2010). During these events, poorly maintained roofs and gutters can lead to significant damage and put lives at risk as employees and contractors struggle to clear gutters in dangerous conditions.

At the other extreme, Australia is considered the most bushfire prone country in the world. Catastrophic bushfire conditions can affect many parts of Australia at different times of the year.

All new buildings built in designated bushfire-prone areas need to comply with updated Australian Standards for the Construction of buildings in bushfire-prone areas (AS 3959 2009/Amdt 2011). Under the new standard and building regulations all new buildings in bushfire prone areas need to be guarded by using an ember guard.

A Gutter Guard is designed to minimize the access of debris and leaf litter to the gutters of your home. In a bushfire-prone area, it must:

- + be non-combustible
- + except for being non-combustible there is no other requirement of a gutter guard product

An Ember Guard is designed to limit access of embers into areas of risk, like the roof cavity. It must:

- + be non-combustible
- + have an aperture (or gap) of 2mm.
- + be made of corrosion-resistant steel, bronze or aluminium in BAL 12.5 – BAL 29
- + be made of corrosion-resistant steel or bronze in BAL 40 & BAL FZ

An ember guard is not specifically designed to act as a gutter guard, but some gutter guards also meet the requirements to act as an ember guard for your gutters stopping access of embers to the roof cavity. Blue Mountain 2mm Superfine All Steel Mesh has been specifically designed to meet the new Australian Standard requirements for the ember guard protection of sheet roofs for all Bushfire Attack Levels (BAL-12.5 clause 5.6.3; BAL-19 clause 6.6.3; BAL-29 clause 7.6.3; BAL-40 clause 8.6.3; BAL-FZ clause 9.6.3-2011).

The 2mm aperture is the prescribed maximum opening to restrict burning debris from entering gaps and igniting buildings. The products have also undergone rigorous, independent testing by the CSIRO to certify that the materials used meet the definition of non-combustible prescribed in the Building Code of Australia, achieving Spread-of-Flame Index of '0'. (CSIRO,2009)

SAVING ON INSURANCE CLAIMS

In the aftermath of severe weather events (such as floods, storms or bushfire), property owners will turn to their insurance for protection. Even if you are adequately insured, there are always costs involved when making a claim on your insurance. For example, the cost of excess payments or payments for costs not covered. Dealing with these can make an already difficult situation much worse. In the most serious cases, you may be unable to claim for loss if you're found to be at fault due to ineffective repairs and maintenance.

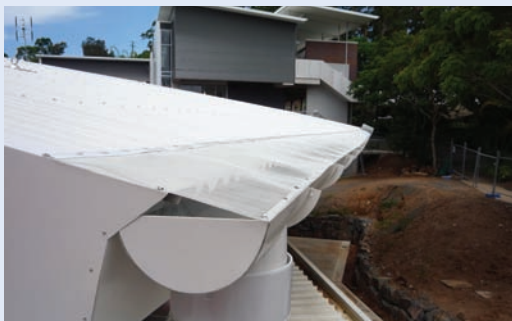
Furthermore, premium costs for building and contents insurance have significantly increased across all of Australia as a direct result of the natural disasters that have been experienced in recent years. If you have to claim on a policy due to an issue with your gutter, the premiums will almost certainly go up in the future.

COST OF LOST BUSINESS INCOME OR RENT

Consider what you would do if your commercial premises were damaged or destroyed in a flood or fire. Would you need to find alternative premises? Would your insurance adequately cover costs of replacing lost equipment and stock? If you have tenants, would you have to cover costs of rent abatement if the premises were substantially unfit for occupation or use?

In many cases, flood or fire damage that results in extensive rebuilding or repair means that businesses will be unable to operate from the property. This can have a devastating impact on any business or organisation that is not adequately prepared or covered by their insurance. Even a minor set back or disruption (e.g. power failure due to overflow flooding as a result of blocked gutters) can be significant, depending on the circumstances and type of businesses involved.

Prevention is better than the cure. The old mantra applies in so many cases where it pays to deal with potential issues before they become problems in real life.



Photos: NEIL CHAMPION, Apr 2011

PROTECTING CAPITAL VALUES BY AVOIDING DAMAGED GUTTERS

Installing a gutter guard acts to extend gutter life by keeping gutters clear of leaf build-up and ensuring gutters dry out quickly after rain. This significantly reduces the potential of the gutter to rust, extending the overall life of the gutter and protecting the capital value of your investment.

All environments are corrosive to some degree, although certain environments create more intense breeding conditions for corrosion than others. This includes areas where there is more water exposure, such as marine or coastal environments. But wherever your premises are, unmaintained gutters that are left to fill with leaves, debris and water have a higher incidence of rust.

While a steel gutter guard has superior strength to other common gutter guard materials including aluminium and plastic, not all steel gutter guards are created equal. Some steel gutter guard products are formed by stretching sheets of steel and cutting small holes in it to make 'mesh'/apertures which leaves a myriad of edges which are not zinc coated and therefore subject to rust.

By contrast, Blue Mountain Mesh is manufactured by weaving and welding steel to form a mesh, before it is put through a process of hot dipped zinc coating, priming, painting and oven baking to deliver a coating thickness that provides superior corrosion resistance, which performs extremely well in independent test results (see Blue Mountain Mesh Information Guide Issue – Corrosion Resistance).

KEEPING UNWANTED PESTS OUT OF YOUR ROOF SPACES

Gutter guards are also very effective at preventing birds, vermin and possums from entering the roof space. Using a system that is firmly secured at the gutter line and on the roof forms a barrier to keep birds, possums, rats and vermin from entering the roof. It can also help eliminate mosquito breeding habitats that thrive in stagnant water, minimising the potential for mosquito borne diseases such as Dengue and Ross River Fever. Altogether this creates a cleaner, safer environment, particularly for properties that use rain water harvesting systems to collect and store water, and can reduce the amount spent on pest-proofing each year (see Blue Mountain Mesh Information Guide Issue – Pest Control).



Photo: ANGUS FRASER, Sept 2012



Photo: JIMMIE, JACKIE, TOM & ASHA



Photo: JJWHATSURFACE, Feb 2004

IN SUMMARY

For owners and managers of commercial property, gutter protection offers a valuable investment to protect and extend the working life of roofs, gutters, drainage systems - important factors in safeguarding the structure of your buildings and valuable contents inside.

The independently researched Equivalent Annual Cost Model provides a useful tool for evaluating the costs of regular cleaning and maintenance against the investment of installing gutter guards (and extending the life of your roof and gutters). Even against the backdrop of many intangibles (such as the risk of natural hazards, subsequent clean up and insurance claims) the results show a strong argument in favour of installing gutter guards for protecting the roofs, walls, windows and other components of 'the envelope' based on savings from maintenance and regular cleaning costs alone.

Finally, a gutter guard can also help meet important employer obligations under the Workplace Health and Safety Act 2011 and keep your workforce safe – surely the biggest single consideration of any risk assessment of a commercial property portfolio. It may also help reduce insurance costs and protect the long term property values of these important assets.

HOW CAN THE RH GROUP HELP?

The RH Group is an Australian company driven to help every person and every community make the most of their environmental assets.

We design, manufacture and wholesale high quality and sustainable water, environmental and trade products for Australian and international markets. We work with governments, retailers, distributors and consumers all over the world to find smarter, more innovative solutions to challenges created by our environment, and in doing so, create more sustainable futures.

Our Blue Mountain Mesh advanced gutter protection system offers property owners protection from a range of environmental hazards, including flooding during storms and ember attack during bushfire.

ABOUT BLUE MOUNTAIN MESH

Born out of fire. The inspiration behind Blue Mountain Mesh's all-steel gutter mesh came from the most tragic circumstances: watching a man trying in vain to save his family home from a savage bushfire, fuelled by an abundance of leaves and debris in the home's gutters.

Blue Mountain Mesh products prevent leaves and debris from entering gutters and downpipes. The all steel, fire resistant gutter mesh minimises gutter maintenance and improves the quality of rain water collected for tanks. The proprietary hot dipped zinc coated and oven baked manufacturing process offers superior corrosion and heat resistance, providing superior protection for homes over the longer term.

We look forward to opportunities to help more Australians reduce risk and protect themselves and their greatest assets. For more information on our all steel, custom-made gutter protection products visit www.bluemountainmesh.com.au or call 1800 612 908.

WHY CHOOSE BLUE MOUNTAIN MESH?

- + Blue Mountain All Steel Gutter Mesh® is hot dipped galvanised, zinc coated steel which provides a corrosion resistant layer.
- + Our zinc coated corrosion resistant steel mesh is strong and durable and will stand the test of time
- + Our entire range is bushfire compliant and conforms to the Australian Standard for the Construction of buildings in bushfire-prone areas (AS3959-2009) and the updated Australian Standard for the ember guard protection of sheet roofs (AS3959-2009/Amdt 2011).
- + Our unique steel profile ensures our steel mesh lies perfectly flat and means the finished product looks like a seamless addition to your roof.
- + Our mesh fits all gutter profiles and can be adapted for all roof types, custom made and available in a choice of over 30 colours.
- + We offer a 12 year warranty based on minimum performance that we expect from our product. Results from independent tests offer a far longer projected life span with 12 years being the most conservative estimate.

**blue
mountain
mesh**

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