# DO IT YOURSELF

## DIY 5 Step Residential Guide

Stainless Steel
**BUSHFIRE MESH**

SHIELDS AGAINST
THE 3 THREATS
OF BUSHFIRE

**SHIELD**
PROTECTION

EMBER ATTACK

RADIANT HEAT

DIRECT FLAME

WHEN CONSIDERING BUSHFIRE MESH, USE THIS FIVE STEP GUIDE TO HELP YOU

1 Identify
2 Select
3 Install
4 Maintain
5 Order

INDEPENDENTLY CERTIFIED

Exceeds AS 3959

2025

Bushfire Mesh stops combustible material entering your building cavities

SILVER MEMBER
FPA AUSTRALIA Fire Protection Association Australia

stainless steel
WIRE & MESH

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## Additional Information

Please access referenced websites to ensure you are utilising up-to-date documents, information and advice.

*Bushfire Mesh is installed to protect against embers from penetrating gaps within a home or building during a bushfire*

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## SSWM Bushfire Mesh

Stainless steel Bushfire Mesh is part of the solution for your bushfire protection against ember attack and radiant heat. Bushfire Mesh is installed to protect against embers penetrating gaps within a home or building during a bushfire. Ember attack accounts for 80% of houses lost during a bushfire.

Stainless Steel Wire & Mesh (SSWM) have designed a Bushfire Mesh to suit any application, from soft to rigid and narrow to wide to protect against embers. The primary use of the mesh is for bushfire protection, how and where you install your mesh, will determine which mesh is most appropriate. SSWM's Bushfire Mesh is easy to handle and install for DIY projects. It is also a cost-effective option.

Once you have selected the most appropriate mesh for your project, it is time to consider your design and install options, this has been driven by AS 3959-2018 Construction of buildings in bushfire-prone areas.

## AS 3959-2018 Construction of buildings in bushfire-prone areas

Following the devastating 2009 Bushfires AS3959 Construction of buildings in bushfire-prone areas was revsied. The standard requires a mesh to be used for screens or closing gaps greater than 3mm.

SSWM Bushfire Mesh range has been independently tested by CSIRO and met the physical properties of AS3959-2018.

- ✓ Mesh with max aperture of 2mm
- ✓ Corrosion resistant steel
- ✓ Non-combustible

**SSWM Bushfire Mesh can be used in all applications:**

- That require a gap of greater than 3mm to be closed by a mesh (as above)
- The gap between the perimeter of the mesh and the building element that it is fitted to, does not exceed 3mm

## Bushfire mesh is part of your solution

Reducing your bushfire risk with Bushfire Mesh is part of your solution for lasting peace of mind for your family and home. The Country Fire Authority (CFA) and Victorian Building Authority (VBA) have aligned to provide practical advice to those wishing to better protect their homes from bushfires.

The CFA & VBA also highlight that reducing the risk from bushfires comprises a number of processes and tasks:

1. Assessing and managing site vegetation
2. Defendable space assessment and maintenance
3. Provision and maintenance of active protection equipment
4. Construction safety measures

## For further information on retrofitting your home refer to

### VICTORIAN BUILDING AUTHORITY (VBA)

> *A guide to retrofit your home for better protection from a bushfire*
> *Mesh is referenced on pages 6 -14*

> *A guide to retrofit class 9 buildings*
> *Mesh is referenced on pages 6 - 9*

### QUEENSLAND RECONSTRUCTION AUTHORITY QUEENSLAND GOVERNMENT

> *Bushfire Resilient Building Guidance for QLD Homes*
> *Mesh is referenced on pages 20, 48 - 89*

### FIRE PROTECTION AUSTRALIA (FPA)

> *Bushfire Planning and Design (BPAD) Accredited Practitioners resource*

### COMMONWEALTH SCIENTIFIC AND INDUSTRIAL RESEARCH ORGANISATION (CSIRO)

> *A bushfire best practice guide*

### BUSHFIRE BUILDING COUNCIL AUSTRALIA

> *Newbuilds & Retrofits*

*SSWM Bushfire Mesh can be used to meet the requirements of AS3959-2018 for BAL 12.5 FZ, where mesh is specified*

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## Further Information from Australian State & Territory Fire Services

This information is to be used as a guide only. SSWM Bushfire Mesh can be used to meet the requirements of AS3959-2018 for BAL12.5-FZ, where mesh is referenced and if the prescribed construction requirements are met. The Australian Standard (AS3959-2018) Construction of buildings in bushfire-prone areas uses a scale referred to as the Bushfire Attack Level (BAL). It is a means of measuring the severity of a building's potential exposure to ember attack, radiant heat, and direct flame contact. The Flame Zone (FZ) is the highest level of bushfire attack.

Installation requirements can vary depending on factors such as application, environment, local planning and building regulations etc. To maintain their currency, all Australian Standards are periodically reviewed, and new editions are published. Between editions, amendments may be issued.

Before commencing your installation, you should consult a Fire Protection Australia (FPA), Bushfire Planning and Design (BPAD) Accredited Practitioner and contact your local council and fire authority to ensure you are meeting all the building and AS3959-2018 requirements.

| Australian State & Territory Fire Services | |
|---|---|
| VIC | > *Country Fire Authority (CFA)*<br>> *Your Guide to Property Preparation* |
| NSW | > *Rural Fire Service (RFS)*<br>> *Best Practice Guide for Bushfire Protection*<br>> *Planning for Bushfire Protection* |
| QLD | > *Fire & Emergency Services (QFES)*<br>> *Prepare For Bushfire Season* |
| WA | > *Department of Fire & Emergency Services (DFES)*<br>> *Prepare for a Bushfire* |
| TAS | > *Tasmanian Fire Service*<br>> *Bushfire Survival Plan* |
| SA | > *Country Fire Service (CFS)*<br>> *Building in Bushfire Prone Areas* |
| ACT | > *Rural Fire Service / ACT Emergency Services Agency (ACT ESA)*<br>> *Bushfire Ready and Bushfire Prepardness Tips* |
| NT | > *Fire & Rescue Service / Police, Fire & Emergency Services (PFES)*<br>> *Prepare and Plan for Bushfires* |

*To assist with your selection you can order samples or watch our product videos*

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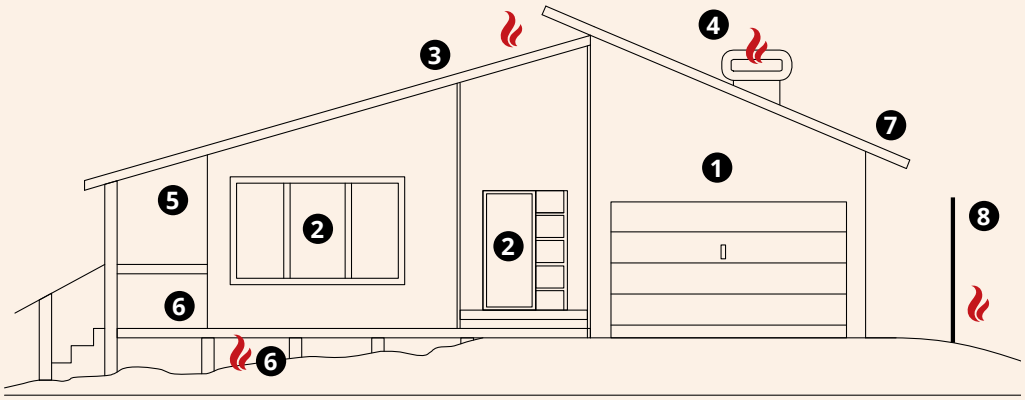
## 1. IDENTIFY APPLICATIONS

Identify your applications as per various sections of AS3959-2018.




## 2. SELECT SSWM BUSHFIRE MESH

SSWM comes in different widths and lengths and allows customisation to protect your space.

| Application | Product Specification |
|---|---|
| **1.** Vents & Weepholes | Flexi or Tough |
| **2.** Screens for Windows & Doors | Flexi, Tough or Extreme |
| **3.** Roofs | Flexi or Tough (determined by flexibility) |
| **4.** Evaporative air cooling system | Tough or Extreme |
| **5.** Eaves & Awnings | Flexi or Tough |
| **6.** Subfloor spaces Verandahs & Decks | Flexi or Tough (determined by flexibility) |
| **7.** Gutter & Valley Leaf Guard | Tough (must be removable for cleaning) |
| **8.** Perimeter Fence | Tough |

# PRODUCT COMPARISON & SELECTION

Stainless Steel
**BUSHFIRE MESH**®

| | FLEXI - Shield | TOUGH - Shield (MOST POPULAR) | EXTREME - Shield | ULTIMATE - Shield |
|---|---|---|---|---|
| | ORDER ONLINE **SSWOB 01230** | ORDER ONLINE **SSWOB 01670** **SSWO 01670** | **SSWOBS 01510** | **SSWO 01640** |
| **BAL Low - FZ** (typically installed) | Low, 12.5 | 12.5, 19, 29 & 40 | 40, FZ | 40, FZ |
| **Secondary Application** | Insect Mesh | Pet Mesh | Security Mesh | Industrial Mesh |
| **PRODUCT SPECIFICATIONS** | | | | |
| **Price Indicator** | $ | $$ | $$$ | $$$$ |
| **Roll or Sheet / Cutting** | | | | |
| **Finish** | ● Black (316) | ● Black (316)<br>● Stainless Steel (304/316) | ● Black (316) | ● Stainless Steel (304/316) |
| **Formabilty** (handling) | Malleable - SOFT | Self Supporting - FLEXIBLE | Self Supporting - RIGID | Self Supporting - RIGID |
| **Aperture x Wire Diameter** | 1.23 x 0.18 mm | 1.67 x 0.45 mm | 1.51 x 0.80 mm | 1.64 x 0.90 mm |
| **Open Area %**<br>*Pre black powder coat finish* | 76 % | 62 % | 43 % | 42 % |
| **QUALITY ASSURED** | ✓Compliant ✓✓ Tested | ✓✓✓Certified | | |
| **AS 3959-2018** Compliant | ✓ | ✓ | ✓ | ✓ |
| **CSIRO FCO-3313 Rev B**<br>Independently verified | ✓ | ✓ | ✓ | ✓ |
| **AS/NZS 1530.3:1999**<br>Ignitability | ✓✓ | ✓✓ | ✓✓ | |
| **AS 2331 1.3.1 2001**<br>Neutral Salt Spray Test | | ✓✓ | ✓✓ | |
| **AS 5041 2003**<br>Knife Shear Test | | SHIELD PROTECTION | ✓✓ | ✓✓ |
| **SHIELD PROTECTION** | | | | |
| **USQ Project 1007952**<br>Ember Attack | ✓✓ | ✓✓✓ | ✓✓✓ | ✓✓✓ |
| **AS 1530.8.1**<br>Radiant Heat | | ✓✓ | ✓✓ | ✓✓ |
| **ASTM E2886**<br>Direct Flame | | ✓✓✓ | ✓✓✓ | ✓✓✓ |
| **DIMENSIONS** W x L | | | | |
| | 610 mm x 30 m | 190 mm x 30 m ✓ | 750 mm x 2000 mm | 915 mm x 30 m |
| | 915 mm x 15 m | 610 mm x 30 m ✓ | 750 mm x 2400 mm | 1245 mm x 30 m |
| | 915 mm x 30 m | 915 mm x 15 m ✓ | 900 mm x 2000 mm | 1550 mm x 30 m |
| | 1220 mm x 15 m | 915 mm x 30 m ✓ ✓ | 900 mm x 2400 mm | |
| | 1220 mm x 30 m | 1245 mm x 15 m ✓ | 1200 mm x 2000 mm | |
| | 1550 mm x 15 m | 1245 mm x 30 m ✓ ✓ | 1200 mm x 2400 mm | |
| | 1550 mm x 30 m | 1550 mm x 15 m ✓ | 1500 mm x 2000 mm | |
| | | 1550 mm x 30 m ✓ ✓ | 1500 mm x 2400 mm | |
| | | 1830 mm x 30 m ✓ | | |

**Australian Standards:**

SSWM bushfire mesh can be used to meet the requirements of AS3959-2018 for BAL 12.5 -FZ, where mesh is referenced and if the prescribed construction requirements are met.

**Independently Verified:**

SSWM Bushfire Shield Mesh range has been independently verified by CSIRO and met the physical properties of AS3959-2018.
✓Mesh with max aperture of 2mm
✓ Corrosion resistant steel
✓Non combustible

*Bushfire Mesh installation is straightforward, using tools that are commonly available*

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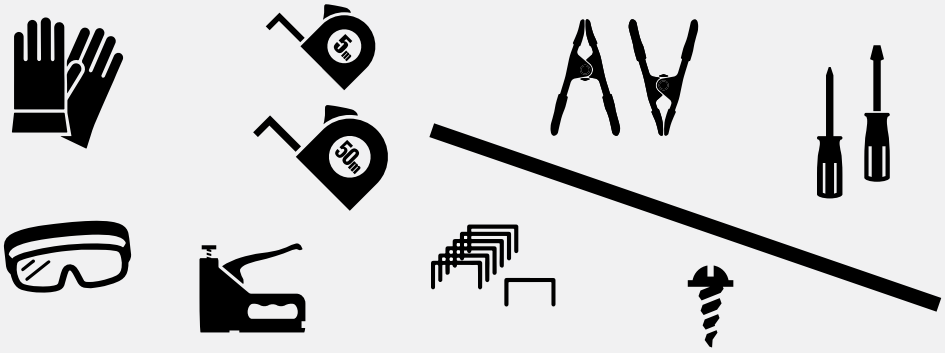
# 3. INSTALL

## 3.1 SELECT APPROPRIATE TOOLS

Your mesh selection will determine the most appropriate tools for ease of cutting and installation:

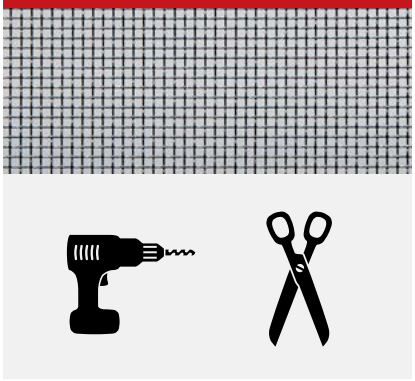
**The following tools are commonly used for installation and are provided as a guide**



- Gloves
- Safety glasses
- Tape measure
- Straight edge
- Staple gun
- Staples
- Clamps
- Screw drivers
- Screws

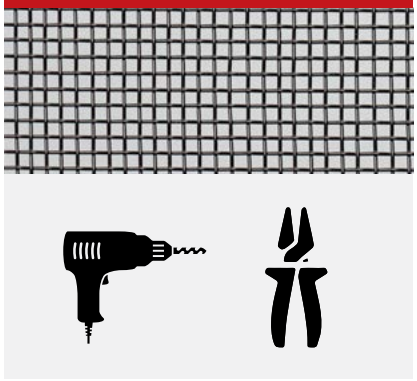
+

**FLEXI - Shield**



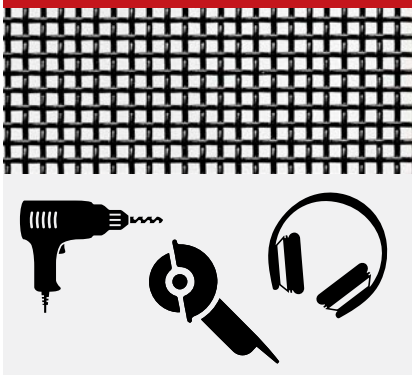
Drill, Scissors

**TOUGH - Shield**



Drill, Tin snips

**EXTREME - Shield**



Drill, Angle grinder, Ear protection

When referring to Residential DIY Guide, make sure you use all equipment, including PPE, safely by following the manufacturer's instructions. Check that the equipment is suitable for the task and that PPE fits correctly. If you are unsure, contact a professional.

*TIP: Measure your Bushfire Mesh twice and cut once!*



## 3.2 MEASURE

Create an effective work area and consider the following options:

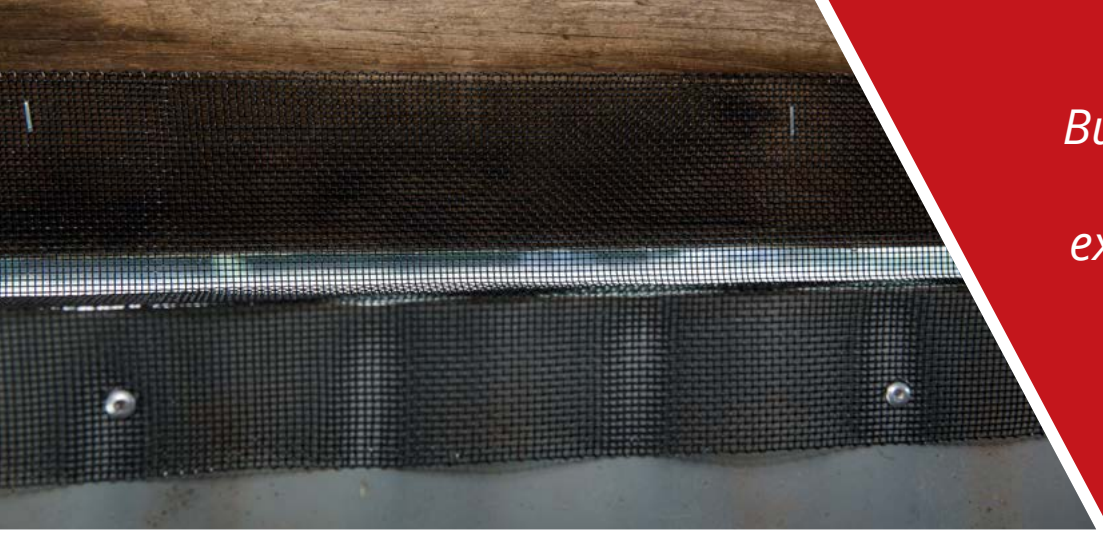
- Homemade stands
- Light background so wire of bushfire mesh is visible for cutting
- Clamps to hold mesh in position

## 3.3 CUT MESH

**FLEXI - Shield**
*Scissors*

**TOUGH - Shield**
*Tin Snips*

**EXTREME - Shield**
*Grinder*



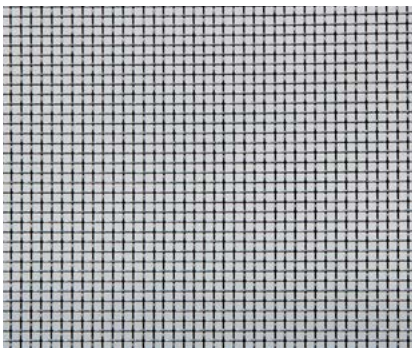
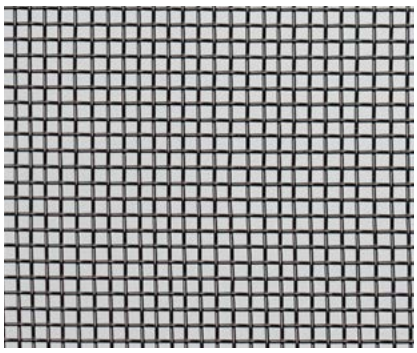
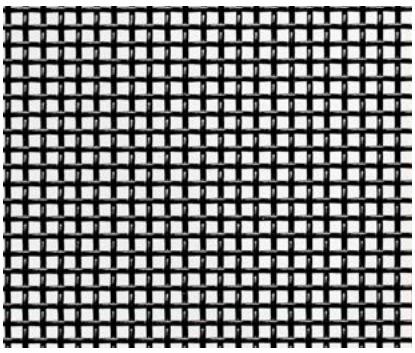
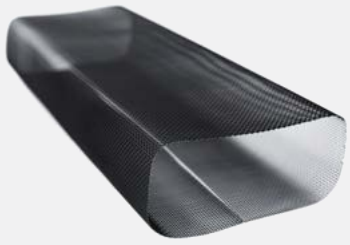
*Bushfire Mesh can be retrofitted to existing structures by bending and folding*



## 3.4 BEND AND / OR FOLD TO FIT SHAPE

Mesh may have to be bent or folded to fit to shape. The below have been bent by hand as examples.

**FORMABILITY RIGIDITY Bend and/or Fold**

| FLEXI - Shield | TOUGH - Shield | EXTREME - Shield |
|---|---|---|
|  |  |  |
| Malleable SOFT | Self Supporting FLEXIBLE | Self Supporting RIGID |
| |  | |

Both FLEXI and TOUGH Shield can be folded to provide additional strength on the fixing points.

All SSWM Bushfire mesh can be buried in the ground and will not corrode.

*Bushfire Mesh is easy to handle and install for DIY projects*

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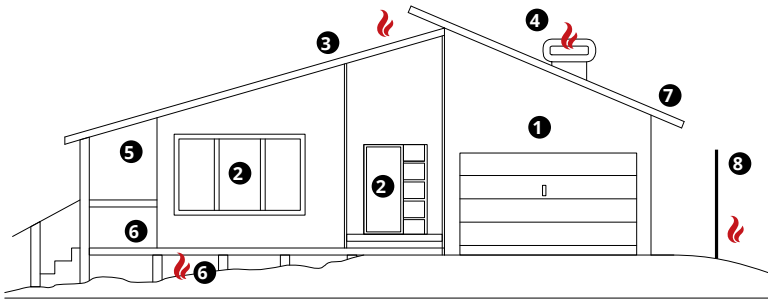
## 3. 5 FIXING OPTIONS

Fixings should be installed to prevent the Bushfire Mesh from sagging, the best results are fixings insatlled every 200mm onto a flat surface to avoid gaps between mesh and fixing surface

The following fixing options are commonly used and provided as a guide only:




*Fixed to Frame

| | APPLICATION | FLEXI | TOUGH | EXTREME |
|---|---|---|---|---|
| 1. | **Vents & Weepholes** | Silicone<br>Nails<br>Screws | Silicone<br>Nails<br>Screws<br>Tie Wire | *Not Commonly Used* |
| 2. | **Screens for Windows & Doors** | Spline | Nails<br>Screws* | Nails<br>Screws* |
| 3. | **Roofs** | Nails<br>Screws<br>Staples | Nails<br>Screws | *Not Commonly Used* |
| 4. | **Evaporative air cooling system** | *Not Commonly Used* | Silicone* | *Installed in areas where hail is a risk* |
| 5. | **Eaves & Awnings** | Nails<br>Screws<br>Staples | Nails<br>Screws | *Installed im areas where secuirty is an issue* |
| 6. | **Subfloor spaces Verandahs & Decks** | Nails<br>Screws<br>Staples | Nails<br>Screws<br>Staples | *Not Commonly Used* |
| 7. | **Gutter & Valley Leaf Guard** | *Not Commonly Used* | Screws<br>Gutter Clips | *Not Commonly Used* |
| 8. | **Perimeter Fence** | *Not Commonly Used* | Tie Wire<br>Screws | *Not Commonly Used* |

*Further installation considerations to be aware of*

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## 3. 6 FURTHER INSTALLATION CONSIDERATIONS

### IMPORTANT STAINLESS STEEL FABRICATION INFORMATION

Stainless steel can be contaminated by carbon steel which will lead to corrosion. Ideally, a fabricator will have a dedicated workshop and tools for stainless steel only.

Contamination can be picked up from:

- Grinding wheels, wire brushes and linishing belts
- Steel storage racks
- Tooling used with other metals
- Contamination from grinding or welding sparks from nearby carbon steel fabrication

### ARCHITECTURAL WOVEN MESH

If the mesh is not black powder coated and is being used externally for aesthetic purposes, to minimise tea staining please evaluate if the mesh is to be pickled, passivated and electropolished.

### HEALTH & SAFETY

Asbestos, lead-based paints and copper chromium arsenic (CCA) treated timber are health hazards you need to look out for when retrofitting older homes. These substances can easily be disturbed when renovating and exposure to them can cause a range of life-threatening diseases and conditions including cancer. For information on the dangers of asbestos, lead-based paint and CCA treated timber and tips for dealing with these materials contact your local council's Environmental Health Office.

*Cleaning is simple! Wash with mild detergent and warm water*



# 4. MAINTAIN

Bushfire Mesh is part of the solution to your bushfire protection and will be protecting your assets once you have completed steps 1-3 - congratulations! It is important to regularly maintain your Bushfire Mesh as part of your bushfire protection against ember attack.

Bushfire Mesh is incredibly durable due to its corrosion resistance and non-combustibility. Bushfire Mesh is manufactured from stainless steel, a low maintenance material, however, not maintenance free. Regular maintenance and inspections of your Bushfire Mesh are essential to ensure it functions as intended to overcome the following that can occur with Bushfire Mesh:

- Acting as a filter and catching naturally occurring airborne deposits such as salt, moisture and dust that can leave stains and marks
- Build-up of debris and dust around applications that require airflow
- Being damaged by machinery for applications that require machinery to be used in close proximity, such as a lawnmower near subfloors & perimeter fencing applications
- Sagging or attachment issues due to pets and balls, for example

The cleaning frequency of stainless steel depends on four points;

1. The environment
2. Position of the Bushfire Mesh
3. Stainless steel surface finish and application use
4. Customer's expectations

A rule of thumb for cleaning external stainless steel is when you clean the surrounding windows also clean your Bushfire Mesh. Cleaning to be undertaken in accordance with the table below.

*Cleaning Equipment*

| Environment | Grade 304 | Grade 316 | Cleaning |
|---|---|---|---|
| Clean inland | 3 – 6 months | 6 – 12 months | - Wash, both surfaces of Bushfire Mesh with soap or mild detergent and warm water<br>- Rinse with clean cold water and dry<br>- Never use abrasive or solvent-based cleaners, as they can damage the stainless steel and powder coat finish |
| Polluted urban / Industrial | Not suitable | 6 – 12 months | |
| Coastal / Marine (not splashed) | Not suitable | 3 – 6 months | |

*Source: Adapted from ASSDA*

*Contact the SSWM sales team for a seamless sales experience*

# 5. ORDER

**Australia's leading stockist & innovator of Stainless Steel Bushfire Mesh**

**Extensive Stock Holding**

Online ordering
*www.bushfiremesh.com.au*

- Freight friendly FLEXI & TOUGH Mesh 15m rolls avaliable for same day despatch to rural areas

*This family now has peace of mind after retrofitting Bushfire Mesh at their property in rural Victoria*

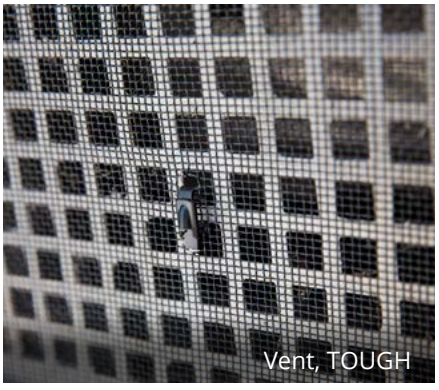
## CASE STUDY 1

**RANGE OF BUSHFIRE MESH APPLICATIONS** *Woodend, Victoria*

Subfloor FLEXI

Subfloor FLEXI

Subfloor FLEXI


Vent, TOUGH

Roof, TOUGH

Roof, TOUGH

*These Bushfire Mesh windows were successfully installed as a weekend project by a handy couple*

## CASE STUDY 2

**BUSHFIRE MESH SCREENS FOR WINDOWS & DOORS** *Gippsland, Victoria*

Screens for Windows & Doors, TOUGH

TOUGH

TOUGH

Screens for Windows & Doors, TOUGH

TOUGH

*This was a simple and straight forward subfloor retrofit*

## CASE STUDY 3 **BUSHFIRE MESH SUBFLOOR** *Hesket, Victoria*

Subfloor FLEXI

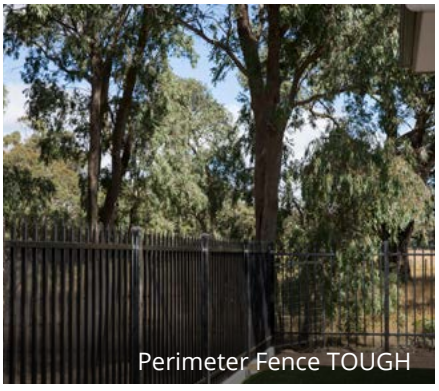
Subfloor FLEXI

Subfloor FLEXI

*Perimeter Fencing is an additional barrier to maintain your defendable space against bushfires*

## CASE STUDY 4

**BUSHFIRE MESH PERIMETER FENCE** *Woodend, Victoria*


Perimeter Fence TOUGH

Perimeter Fence TOUGH

Perimeter Fence TOUGH

5 STAR
PERFORMANCE

### Quality Assured

Designed, tested and proven in Australia to Australian Standards and Australia's harsh environment.

### Product Innovation

We are a major innovator in the uses of stainless steel Bushfire Mesh.

### Versatile Product Range

Our range is versatile and can be customised so there is a mesh to suit any application.

### Extensive Stock Holding

We are Australia's leading supplier of stainless steel Bushfire Mesh.

### Speed to Market

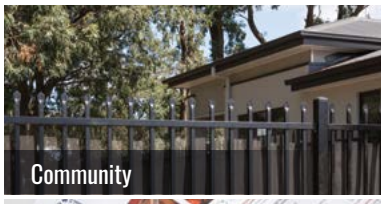
We offer same day despatch and freight friendly rolls quickly despatched to rural areas.

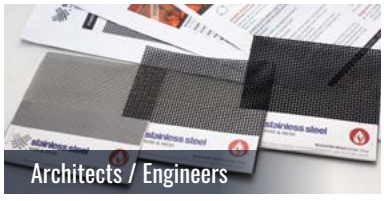
**HEAD OFFICE & WAREHOUSE**
3 Commercial Court, Tullamarine VIC 3043, Australia
**t** 1300 304 316

**POSTAL ADDRESS**
P.O Box 358, Tullamarine VIC 3043, Australia

## AUSTRALIA'S ORIGINAL

Part of your solution for bushfire protection against ember attack and radiant heat. We also have information to assist with community, industrial / agricultural applications and architects / engineers.






## WHY BUSHFIRE MESH?

*"SSWM has worked with Industry & Australian Universities to design a product that will stop embers and reflect radiant heat to reduce the likelihood of house fires. I am proud to be part of the solution for asset protection for the Australian community".*

Andrew Greer
*SSWM Innovator & Director*

# DO IT YOURSELF

## (DIY) Five Step Residential Guide

Stainless Steel
BUSHFIRE MESH®

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SWHEN CONSIDERING BUSHFIRE MESH, USE THIS FIVE STEP GUIDE TO HELP YOU

1 Identify
2 Select
3 Install
4 Maintain
5 Order

SHIELD PROTECTION

2024

SILVER MEMBER
FPA AUSTRALIA Fire Protection Association Australia

stainless steel WIRE & MESH®