

Gregg's Pest Proofing
Good Practice
(Issue 1 2017)



Aims of pest proofing

The aim is to identify areas of the building that are vulnerable to the ingress of pests from outside. For example, gaps below external doors, gaps around incoming services or holes in the building fabric. You then need to identify areas within the building where pests could harbour if they were introduced, for example access to floor and wall cavities. Finally, you need to restrict the movement of pests between individual rooms with a special focus on food production and public areas.

Fundamentally, the following should be considered:

- Any gap/hole 5mm or less should be sealed with mastic and any gap/hole greater than 5mm should be sealed with stainless wire wool and mortar or reduced to 5mm or less with an aluminum plate shaped to fit and then sealed with mastic.
- Any gap under or around a door greater than 5mm should be sealed with a rubber or brush strip fitted to the external/side pests are likely to gain access from.
- Any ventilation with openings greater than 5mm should be over faced with 5mm wire mesh.

What Good Looks Like

Plasterboards and wallboards - vertical and horizontal open edges must be battened so that pests cannot gain access to the cavity behind the plasterboard or wallboard. No gaps should exist to provide access for a pest to the cavity at any point around the open edge of the stud wall.



Counters and back bars - the flooring to counter services should be fully dressed and grouted so there is no link to any subfloor service trenches. Tiles need to be fully grouted in order to aid cleaning regimes. All penetrations for service pipework and cables must be sealed prior to installing the counter/back bar cupboards, as this is often difficult to achieve retrospectively.



Drainage up stands - must be fully dressed with no exposed screed into which pests can burrow. Where drainage is to a suspended floor, the core-cut hole should be sealed to both sides of the floor to prevent pests accessing any floor cavity that may exist and prevent them moving between floors. Upstands should be fitted with an adapter.



Open wall plates - all open wall plates (to include internal wall plates) should be covered and sealed with metal plate or material that offers equal value of rodent proofing. Good practise is to ensure all these cavities are fitted with rodenticide before sealing



Roller shutters – present a significant risk for mouse ingress. At the closed position there should be no gaps 5mm or greater. Where possible a brush strip should not be used but a combination of rubber boot and proofing blocks.



Doors – ideally use solid materials and not a brush strip where door profile allows. Ideally, the gap between the threshold and the door should be less than 5mm, which can be achieved by the following (in order of preference):

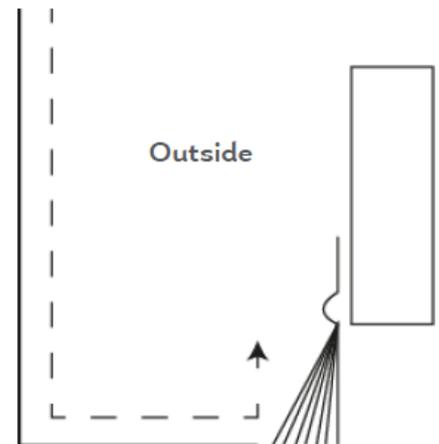


1. Fit an aluminum door threshold

2. Fit a kick plate on the bottom of the door
3. Re-hang the door



4. Fit a brush strip to the outside of the door. When the rodent is running along the wall, the strip acts as an illusion as a solid surface to the rodent. If a rodent feels any gap in the surface it is running along, it will try to push through.



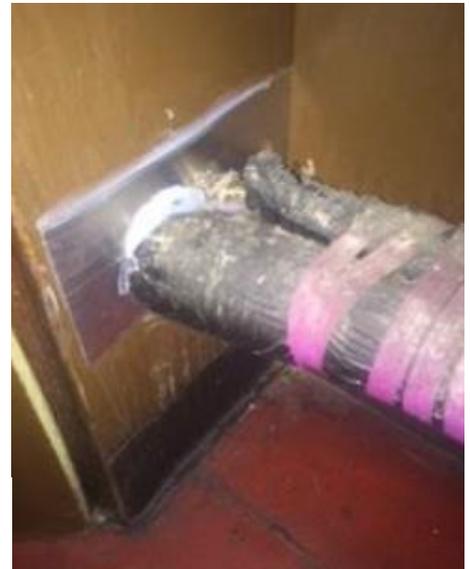
The rodent will run along the brush strip.

Double Doors – a removable sheet of rodent proofing board can be fitted to the inside of double doors which slots into u-shaped carriers fitted to the doors and has two cut out handles to allow for easy removal. This should be a last resort where doors cannot be proofed effectively due to their age or design. This is recommended where rodent activity is evident or suspected from external sources such as streets or communal areas in shopping centres, etc.



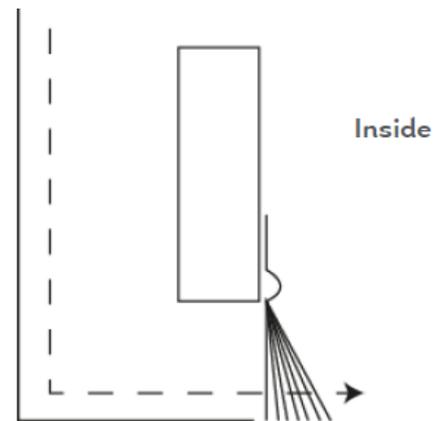
Service penetrations - Xcluder wire wool fitted in gaps around pipe and sealed with silicone. Note that the silicon is used as a sealant and not a proofing substance. It is important to use stainless steel wool, as this material is rust resistant.





Large gaps around service penetrations – aluminium or stainless steel plate contoured around pipes and then sealed with silicon.

What Good Doesn't Look Like



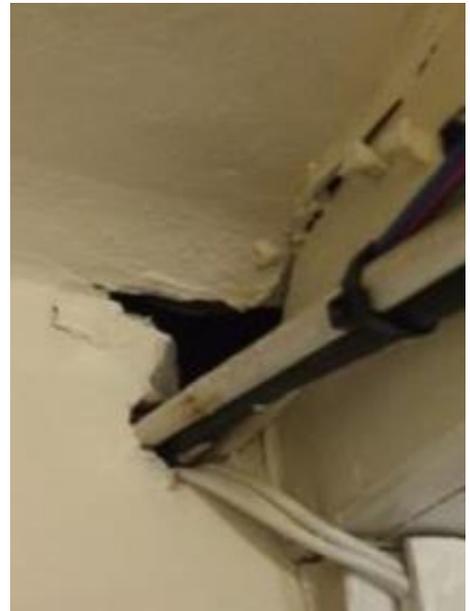
Brush strip fitted to the inside of a door rather than the outside leaving a gap for easy access.

The rodent may push its way through the strip when it feels there is a gap.



External waste pipe with no seal leaving big entry points.

Service cables going through wall with no proofing material filling the holes.



Gap between the base of a wall and the floor plus a gap around a pipework penetration.



Expanding foam, which has not been used correctly leaving big gaps for rodents to gain entry.





Pipe hole in the brickwork with visible gaps for rodents.

Typical Rodent Behaviour

It is important to understand the behaviour of a rodent before carrying out any proofing works as failure to understand the relevant species could result in proofing works being incorrect.

Mice - a mouse can fit through a hole as small as 5mm as they have the ability to flatten their bodies to fit through confined spaces. You can use a pencil as a quick way to measure if a mouse would be able to gain access to your property. If your pencil fits through the hole it is highly likely a mouse can too. Mice have an inquisitive nature, they like to explore and are more adventurous than other rodents. Mice extract water from their food source and therefore need minimal access to water in order to survive.

Rats - a rat can fit through a hole as small as 25mm. Like a mouse, they have the ability to flatten their body to fit through small gaps. Rats are more conservative than mice, enjoying an environment they are familiar with. They tend to stay clear of objects they do not know and mostly use a path they are used to. A rat will nest in any environment and they are able to burrow under the ground. Rats are also able to swim and have been known to swim around the U bend in toilets. They are able to keep afloat for up to 72 hours.

Proofing Essentials

The first area to consider when proofing a building is the external area. Proofing this area first will prevent any further pests gaining entry. This must be carried out in conjunction with a pest treatment to ensure none of the targeted species are trapped inside wall cavities or relocate to another part of the building.

When looking at landscape issues such as overgrowth, it is important the vegetation is not removed completely and that skirts of bedding plants are raised. If grass is cut too low, it will force rodents to relocate, as their ground cover will be destroyed. Ideally, pathways should be cut into heavily overgrown areas in order for bait to be laid safely as well as aiding the pick-up of litter.

Areas for Proofing/General advisory notes

Typical external features to be assessed/checked:

- Walls
- Overhead cable trays
- Overflows
- Ducting
- Air conditioning pipes
- Construction defects
- Waste pipes
- Pipe work penetrations
- Doors

- Soffits
- Fascia
- Extract vents
- Ventilation ductwork
- Louvered vents
- Cladding
- Trickle vents to wall cavities

Walls - all holes through external walls must be sealed using rodent proof materials where possible i.e. wire mesh, stainless steel wool and mortar, metal plate, etc. Expansion joints must be replaced if damaged or worn. Mastics should be avoided for gaps greater than 5mm as mice can easily chew through this.

Doors – gaps greater than 5mm under and between doors must be sealed. If gaps cannot be reduced to 5mm or less using the recommended sealing strategies, then levelling the floor should be considered.

Fascia's and soffits – all boarding must be butted together and sealed so the void behind cannot be penetrated and used as a pest run or harbourage.

Ventilation – 5mm galvanised weld mesh should be used to go over louvers/vent grilles that have a larger opening than 5mm.

Cladding – boards must be cut tight with mastic to seal any gaps 5mm or smaller. For gaps greater than 5mm, pad with wire wool prior to applying mastic or mortar.

Doors – rotten doorframes and broken brush strips must be replaced or spliced in.

Service penetrations through external walls and yard surfaces – use mastic on gaps 5mm or less and wire wool and mortar on gaps greater than 5mm to seal around services. If flexibility is required in yard penetrations then the gap can be stopped with pea gravel.

Typical internal features to be assessed/checked:

- Overhead pipe work
- Ductwork
- Fridge pipes
- Fire walls
- Expansion joints
- Bar shelves
- Kitchen units
- Under floor service ducts
- Cable and pipe droppers from ceiling to shop floor/warehouse/offices
- Open ductwork beneath fridge or freezer cabinets
- Base to internal stud walls

Lifts - ductwork and cable runs within lift pits must be sealed with mastic where 5mm or less and wire wool and mortar where greater than 5mm.

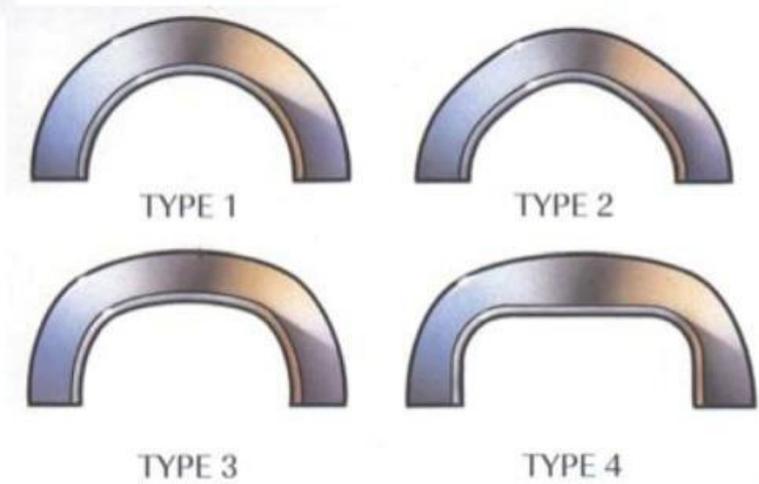
Expansion joints – must be replaced if damaged or worn. Mastics should be avoided where greater than 5mm as mice can easily chew through this.

Penetrations through suspended ceiling tiles – cut the tile as tight as possible to the service pipe/cable and then seal with mastic (where 5mm or less otherwise install a shaped steel plate to reduce gap to appropriate size).

Penetrations through floors – being one of the most likely sources of rodent ingress, flooring should be cut to fit as closely as possible around any penetrations. Any remaining gap should be sealed with mastic if less than 5mm or wire wool and mortar where greater. Note that mice can chew through floor screeds.

Base of internal stud walls – where in poor repair, protect against rodent access by installing a 300mm aluminium or stainless steel plate both sides sealing all edges with mastic.

Typical rodent proofing products

Item	Types/Description/uses
Bristle strip	<p>Bristle Strip - Flat Carrier Bristle Strip - 90 Degree Angled Flange Bristle Strip - 45 Degree Angled Flange Available in 22mm to 100mm bristle heights. Used on outside of exterior doors where the gap between the door and doorframe/threshold is in excess of 5mm can be used on interior doors if wishing to exclude mice from high-risk areas but only to be fitted on sites that have no infestation. Door sweeps will need to be considered for infested sites, as mice will simply chew through bristle strip.</p> 
Concertina Door Kit	<p>Used on concertina doors Available in two sizes to fit 9" and 12" panels. Each kit comprises of four-bristle strip and one nose cone. Each door panel will require two pieces of bristle strip and one nose cone. Fitted to the outside of exterior doors</p> 
Wire Mesh	<p>Mesh Roll - 6.5mm x 6.5mm Galv 6M Roll x1 Mesh Roll - 25mm x 25mm Galv 30M Roll 3Ft 16 Gauge x1 Mesh Roll- 6.5 x 6.5 6M by 300mm Weld Mesh Clips Pack of 50 Used to proof ventilation where air movement is required.</p>

<p>Mousestop</p>	<p>300ml Tube x6</p> <p>A non-toxic proofing which is ideal for filling small holes to prevent mice entering. It can be easily applied using a skeleton/caulking gun. Mousestop is water-repellent and can be painted.</p> 
<p>Weep Hole Protector</p>	<p>The unit fits into mortar joints left in brickwork to allow air movement. The unit will prevent access by Mice and most flying and crawling insects.</p> <p>One Size 65mm x 9mm</p> 
<p>Mouse Vent</p>	<p>Ideal for proofing airbricks or vents against mice and wasps. This easy to fit product has a UPVC frame with a stainless steel mesh insert and is fixed via the screw guide holes at the front.</p> <p>Dimensions: (mm) 245w x 95h.</p> 

<p>Rubber Seal</p>	<p>'T' Bar Roller Door Per M x1 (RUBBERSEAL) 'T' Bar Roller Door Per 5M x1-(RUBBERSEAL) Extruded from high quality commercial rubber, the wrap around seal is designed to fit the bottom T-bar section on roller shutter doors. With no tools required, simply cut the required length and wrap around the bottom of the door.</p> 
<p>Sealant</p>	<p>Silirub 2 Silicone Sealant 300g Tube</p> 
<p>Foam</p>	<p>Soudafoam 1K Cleaner 500ml Can (SOUDAFOAM2) Soudafoam Click & Fix Fire Rated 750ml Can x4 (SOUDAFOAM3) Soudafoam Click & Fix Gun Cleaner 500ml Can x1 (SOUDAFOAM5) Soudafoam 750ml Can (SOUDAFOAM750) Foam can only be used as a 'backing filler' to support other rodent proofing materials. It cannot be used as a proofing agent nor should it be exposed to view.</p> 

<p>Proofing Plates</p>	<p>Ideal for proofing around pipes. Simply cut out the shape required. Made from aluminium and comes in two sizes: SX Proofing Plate 1M x .5M SX Proofing Plate 500 x 250mm x1</p> 
<p>Xcluder</p>	<p>Xcluder single 4 inch roll - XCLUDER is designed to stop gnawing and burrowing pests from entering your home, office or building in a safe and environmentally responsible way. For preventing pest intrusion, XCLUDER is superior and lasts for years and years. XCLUDER contains stainless steel making it highly resistant to rust and corrosion. XCLUDER DISPENSER BOX 4" WIDE 10FT ROLL Xcluder bulk 5 rolls 100mm - A void filling proofing similar to wire wool. Five 10 ft. rolls of 4' wide material. The most economical way to buy XCLUDER for those large exclusion projects. Xcluder Bulk pack =5 x 10ft</p> 
<p>Xcluder strip</p>	<p>3 rolls of 1 inch - Easy to handle 1" x 4' Ft strips. 3 rolls per pack, the perfect size for all those hard to reach areas on the roof line, around chimney flashing, underneath indoor sinks, around outdoor pipes and weep holes.</p> 