

MINOR REPAIRS—TIMBER DOORS AND WINDOWS



This technical note outlines the most common damage occurring in timber doors and windows and identifies the repairs approved under the General Exemption Certificate—Queensland Heritage Places. Doors and windows in other materials are discussed in other technical notes.

Background

Doors and windows are often major features in buildings. Their proportions and positions, together with the detail of mouldings and panelling, are important elements of the significance of a building. Doors and windows have special maintenance problems because they are often exposed to the weather and, as the moving parts of a building, are subject to wear and tear. This technical note outlines the most common damage occurring in timber doors and windows and identifies the repairs approved under General Exemption. Doors and windows in other materials are discussed in other technical notes.

Repairs under General Exemption

Under General Exemption, repairs to timber doors and windows must be based on the principle of doing as little as possible and only as much as necessary to retain and protect the element. Repairs must match existing in material, form, dimensions and profile and there must be no damage to significant fabric. Repairs must not involve a high proportion of the fabric of the door or window. Repairs to timber doors and windows approved under General Exemption include:

- refixing loose architraves, decorative trims and mouldings
- cutting out decay and patching damaged door and window fabric
- strapping loose joints with steel or brass angles
- careful hand sanding of window elements in windows binding because of excessive or soft paint layers
- replacing worn cotton sash cords
- replacing deteriorated putty
- replacing missing glazing bars and tongues
- replacing deteriorated sill fronts.

Under General Exemption, replacement of a single door or window that is beyond repair is approved if matching the original exactly.

Removal of inappropriate substitutes and reinstatement of doors and windows matching the original is not covered by General Exemption.

Keep records

Record all repairs, replacements and additions made to timber doors and windows.

Maintenance and cleaning

Regular and consistent maintenance will avoid the need for costly repairs and replacements. It will also conserve significant original fabric.

Moisture penetration causes decay and dimensional change in timber elements, particularly doors and windows. This is best prevented by regular and thorough painting or coating with an appropriate finish. Coatings such as paints, varnishes, waxes and oils are the principal means of controlling swelling as well as protecting and revitalising timbers. Once those coatings start to break down, moisture can penetrate the timber and set up conditions for fungal attack.

Check external paint finishes for splitting or cracking that may indicate water penetration to the timber beneath.

Damage to doors and windows

Identify and fix the cause of the damage before proceeding with repairs to timber doors and windows. Damage may be a result of:

- structural movement or stump subsidence in the main frame (or after the re-levelling of stumps)
- expansion of the joints between elements
- moisture penetration, weathering or decay

- normal wear and tear
- loose hinges and screws.

Do not force timber doors or windows if they are jammed or binding as this can cause further damage.

Structural movement

It may be necessary to rectify stump subsidence or other causes of structural movement if binding doors and windows are a common feature throughout a building. After re-levelling, inspect all openings to reassess their condition and if repairs are necessary. Re-levelling may be undertaken under General Exemption provided the building or structure is not raised or lowered in relation to its original level.

Expansion and loose joints

Loose joints may be caused by expansion due to weathering or biological decay where glues break down and are no longer binding. It can also be caused by general wear and tear.

Moisture, weathering and decay

Weathering includes the effects of exposure to sunlight and the continual variation in moisture content with changes in the weather. Changes in the weather cause alternate shrinking and swelling of the surface fibres and can cause the disintegration and discoloration of the surface of the timber. Weathering most commonly affects jambs, sills and bottom rails of doors and windows especially where water can pond.

Decay often presents as a darkening of the timber or as peeling paint with the underlying timber soft and friable.

Normal wear and tear

As moving components, windows and doors are subject to more wear and tear than other parts of a building. The regular opening and closing of doors and windows may cause hinges and screws to become loose or for sash cords in windows to deteriorate.

Methods of repair

Loose joints

Repair the loose joints in doors and windows. Do not discard doors and windows in this condition. Small components such as wedges may need to be replaced but the joints can generally be reglued and the frame cramped to return it to serviceable use. Rotted joints may be repaired by fixing mild steel or brass angle straps across the loose joint.

Angles used externally should be of a non-ferrous metal.

Decayed timber

Repair decayed timber by cutting back the affected timber and patching or splicing matching timber into the section (see patching and splicing below).

Binding doors

If doors are binding, check for movement caused by subsiding stumps or substructure. Stumps or sub-floor structure may need repairing by packing under bearers or joists. The building may require re-levelling.

Check that hinges are properly fixed and the screws are not pulling out. Check for loose joints in the door frame. Refix screws and repair loose joints.

Windows that do not open

Windows that do not open may have been painted shut or the accumulation of layers of paint may have caused the moving parts to stick. Carefully sand back the layers as far as necessary to allow windows to operate. Replace worn cotton sash cords in double hung windows. A properly corded window will open and close smoothly, reducing the wear and strain on timber members.

Patching

Patches used to repair damaged timber should match the existing timber species, have the grain running the same way and have the same profile. With clear finished work, select patches of a similar grain and colour.

Splicing joints

When joining new timber into existing timber, splice members together to provide a maximum area for fixing. Fix with timber dowel or non-ferrous pins.

Other things to be aware of

Glazing

Take special care with original early glass. Early glass does not have a flat uniform appearance. It is often distinguished by streaking or bubbles in the glazing. Ignore minor cracks in inaccessible places if it means the original glass can be retained.

Cracked, broken or missing glazing

Replace missing glass with glass matching the original or existing. It is often possible to match the original glass exactly with second-hand glass.

Replacement is covered by General Exemption, if the original is known and can be matched.

When replacing glazing, check window sash cords and pulleys as they may need adjusting to counter any difference in the weight of the new glass.

Lead light and stained glass

Repairs to lead light and stained glass are not covered by General Exemption.

Shop fronts

Shop fronts may contain early plate glass that requires special maintenance and repairs. Seek advice before undertaking work on this glass.

Damaged glazing bars and missing tongues

Patch damaged glazing bars where possible. Replace only if matching original exactly.

If tongues of glazing bars have come away, new tongues may be glued and pinned into a groove made in the back of a glazing bar. Match the timber in window and existing profile of glazing bar.

Putty

Remove deteriorated putty with an organic solvent paint stripper or household bleach. Take special care to not damage fine glazing bars when removing the putty. Replace the deteriorated putty with linseed oil putty.

Sills

Sills are prone to deteriorate from weathering and/or water penetration. Damaged portions of sills can be repaired with either patching or splicing. Often, the deterioration to the front section is severe. Replace this part of the sill, matching existing exactly. Sills should be made in durable hardwood.

Architraves and other decorative trims

Neatly refix loose architraves and other decorative trims, matching existing fixings.

If damaged beyond repair, replace only those sections that are damaged, matching existing material exactly.

Sunshades or hoods

Patch the roof sheeting of sunshades or hoods to repair any leaks. Patch or replace damaged framing to match the existing material exactly.

Removing paint

It may be necessary to remove paint to undertake repairs (e.g. to release a binding window or a window that has been painted shut or to do patching). Lightly sand the paint layers back. Do not use mechanical sanders.

Hardware

Retain and reuse where possible.

Replacing doors and windows

There are a number of circumstances in which replacement or reinstatement of doors and windows may be contemplated:

- they may be damaged beyond repair
- they may be missing
- modern and/or inappropriate substitutes may have been installed.

Do not:

- use epoxy patches as this repair method is irreversible and is not allowed under General Exemption
- use boron rods to repair decayed timber as this will weaken the small elements of the frame
- paint the edges of double hung window sashes as this prevents smooth running.

References

Davey, A et al (eds) 1986, *The Care and Conservation of Georgian Houses*, Architectural Press, Oxford.

Evans, I 1989, *Caring for Old Houses*, The Flannel Flower Press Pty Ltd, NSW.

Miles, J 1995, *Conserving the Queensland House* (brochure series, nos. 1–12), National Trust of Queensland, Brisbane.

Disclaimer

While this document has been prepared with care, it contains general information and does not profess to offer legal, professional or commercial advice. The Queensland Government accepts no liability for any external decisions or actions taken on the basis of this document. Persons should satisfy themselves independently by consulting their own professional advisors before embarking on any proposed course of action.