



# The finishing touches



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In this final part of our renovation of period and character homes series, we start by looking at external windows then consider how the houses can be made to fit in to our 21st century lifestyles.

**ALMOST ALL** period villas, bungalows and other early dwellings will originally have had timber window joinery. Some can occasionally be found with their original steel window and door joinery, often still in remarkably good condition, but these are few and far between.

## **Timber types and window styles**

The timber windows were originally made from native softwood timbers such as rimu, mataī, tōtara and sometimes kauri. Later, the opening sashes were more often made from western red cedar or redwood – preferred for their stability and lighter weight.

The most common window types up to the 1920s are double-hung sash windows, and side-hinged casement and top-hung fanlight windows from the 1920s onwards. Occasionally, you may find horizontal sliding windows – on metal tracks – and again, these are often in surprisingly good functional condition.

There are often features of these older style windows that surprise homeowners with their efficiency and convenience. For example, double-hung sash windows were originally designed as an early passive air-conditioning system. If you lower the top sash by 50 mm, the bottom sash raises by the same amount, and heat and humidity will leave your house through the high-level top gap while fresh air enters via the lower gap.

## **Whether to replace or not**

If external window joinery units have been



**A period-style timber doorset replaced an original window, transforming the liveability of this period home.**

reasonably well maintained – meaning regularly painted and cracked glass or cracked putty replaced – they can often still be found in extremely good condition.

Renovation may be no more than a thorough cleaning, sanding and repainting, replacement of sash cords and replacement of hardware such as corroded hinges on casement sashes. One other feature to check is the external head flashing, which has often corroded after a century of exposure to the elements and may need to be replaced.

## **Look for rot**

If the timber has been neglected, deterioration or even failure can commonly appear. Rot may occur, typically at junctions in the sashes, sill and frames. Paint deterioration due to UV exposure will allow moisture and movement within the timber.

On the inside face, water staining from condensation or the window leaking will lead to deterioration and ultimately rot in the timber – again, typically at internal corners and junctions. When this water ingress occurs, the damage

– even if apparently relatively limited – must be competently repaired with all rot completely removed. It will not suffice to dig out the soft rotten wood and add filler then paint over.

### **Undertaking repairs**

Typically, this advanced level of deterioration requires the experience and skills of a qualified joiner to undertake the repair work. Fortunately, the construction of timber windows has changed very little in the last century or so. Sashes are still constructed using a mortise and tenon joint, and jamb frames are still housed into the sill.

Therefore, repairs are generally not hindered by the unavailability of forgotten construction techniques, and most joineries will still have a joiner experienced in timber window construction.

The main decision to repair or replace will come down to the extent of damage to the window. Are sashes badly rotted, or does the window frame have rot too? Is the rot localised or widespread? Sashes can relatively easily be removed to be repaired, but this is a far bigger job if the frame has rotted too, and replacement may be the better option.

The best action at this point is to have a builder or a joiner evaluate the degree of repair work required and provide an estimate or quote for the work needed.

Having said that, I recently observed first homeowners Hannah and Alex, a couple in their 20s with no construction experience whatsoever, completely renovate a very tired, slumped 120-year-old bay window containing two non-opening double-hung sash units.

Following the guidance of the detailed online tutorials that are now commonly available and a handful of specialist tools they purchased as they went, they carefully restored the window back to as-new working condition. So it is possible for the homeowner to undertake many of these joinery refurbishment tasks successfully, and on a tight budget if needs be, if you are motivated, determined and patient!

### **Don't use non-timber alternative**

If your original timber window joinery is severely deteriorated, do not be tempted to replace it with a modern non-timber alternative. The period and character houses we are considering here have an intrinsic value that depends upon the conserva-

tion and retention of the aesthetic elements of their period style.

The cost and value of these character and period homes continues to rise steadily, and the design details and native timbers utilised are a huge part of their aesthetic appeal. You may severely compromise the potential value of your home by unwisely substituting modern, non-appropriate materials for original.

### **Do reglaze with IGUs**

One exception where this rule does not apply is glazing. The glass in these old windows is thin, frail and often slightly distorted with a rippled uneven surface. This is the perfect time to reglaze with insulating glass units (IGUs) to improve the thermal performance and acoustic privacy of your windows.

Even original decorative leadlights can now be housed in IGUs. Most sashes have sufficient depth to enable an increased rebate to house the double-glazed unit. This upgrade may well be the single most effective improvement to your

fenestration, with very little aesthetic/visual change but a huge boost to the energy efficiency of the dwelling and the comfort of the occupants.

### **Superior energy performance**

While timber construction may be the oldest form of window joinery commonly available in today's market, it is still one of the best performing. In the new 5th edition of the Building Code clause H1 *Energy efficiency*, the tables in H1/AS1 show the R-value of generic timber windows consistently exceeds all other window joinery options evaluated.

This means the resistance to heat loss from inside the building via the window frames and sashes is superior to and outperforms the other modern non-timber alternatives. Timber joinery also captures and stores carbon, while the alternative materials all have far higher carbon footprints.

With the addition of double glazing (IGUs) as mentioned earlier, eco-friendly timber joinery offers formidable thermal performance, with the bonus of its aesthetic appeal. ➤



**A high-spec modern kitchen in a period home.**



**Open-plan spaces can be created while retaining the character of the original room layout.**

### ***Bringing homes into the 21st century***

Finally, an overarching consideration to all modern renovation work on these early 20th century period and character homes is how can they accommodate our 21st century lifestyles. It is a balancing act, but it is eminently achievable.

#### ***Respect original spaces when opening up***

Firstly, respect the original building. It will have a scale and spatial proportions consistent with its original design. For example, our lifestyles now demand larger open-plan living areas, reflecting our less-formalised use of separate discrete rooms and more-open casual living patterns.

To arbitrarily add large new voluminous spaces or to simply aggregate multiple existing rooms into a large new room risks clashing with the spatial character of the original building.

One technique is to partially acknowledge the original layout of some of the rooms and to retain elements such as decorative features, ceiling bulkheads, cornices, feature lights and different wall treatments.

Not only do these retained features help express the narrative of the evolution of the dwelling, but they add character and interest to

the space. The subspaces can coexist alongside the open-plan nature of the expanded space, which is primarily recognised and defined by the continuous uninterrupted floorplan.

These spaces can be used collectively as one larger, connected space or individually as unique zones. This can be controlled by separate lighting circuits, varying the décor in each zone and creating alcoves.

#### ***Connection with the outside***

Connection with outdoor spaces is another factor that was not done well in traditionally laid out period homes. Something as simple as replacing an original window set with a sympathetically styled new set of French doors can transform the way the room can be utilised.

Outdoor living is now a huge part of our lifestyle, and tweaking the old-fashioned layouts of period homes with less-formal thoroughfare routes can transform the way the home feels and functions. The value gained from these outdoor courtyard or deck spaces usually far exceeds the monetary cost too. A new casual living 'outdoor room' may indeed be the lowest cost but best value you can add to a character home.

### ***Adding modern services and insulation***

Another consideration is the inclusion of modern services and features. In many ways, this is now less arduous than previously. So many electronic systems are now wireless where hard wiring was previously required. Sophisticated audiovisual systems, climate control facilities, security systems, underfloor heating, central heating/radiators, remote control and wifi technology can all be successfully retrofitted into period homes.

Modern thermal insulation can also be retrofitted – there was no insulation incorporated during the original build period for these dwellings. This can be fitted to modern installation standards and performance levels in ceilings, external walls and underfloor to achieve optimal comfort levels for the occupants of a refurbished period home.

### ***Cherishing our character homes into the future***

As I sat down to write this final instalment of our renovation series, I've just finished reading an article suggesting our biggest renovation boom in decades is tapering off.

Nationwide, home improvement work last year hit a record high of \$2.4 billion, driven by property owners unable to travel due to COVID-19 restrictions who channelled their discretionary spending into home renovations. At the same time, we have witnessed finance rates at unsustainably low levels over the last few years, enabling big-ticket items such as home alteration construction projects to be more feasible.

While the environment that has created this record renovation boom may have cooled off, the basic premise that drives our desire to upgrade early character homes will prevail. It is in our Kiwi DNA to upgrade our residential properties – from paths and pergolas through to redecoration and additions or alterations to our homes.

The fact that we still value the honest materials and craftsmanship of these period homes is testament to their valid place in our communities. It behoves us to make whatever effort we can to retain the limited remaining numbers of these homes whenever possible. Making them as attractive and comfortable as possible now will help to ensure they remain for the next generations to enjoy. ◀