

Timber recycles carbon



Checklist: inspecting timber decks, verandahs and balconies in houses and units

Regular inspections are essential to ensure structural safety. Managing risk by checking for strength, decay, termites and corrosion is vital.



Step 1 Check your tools.

Using the right tools for the job is essential for a thorough deck check.

During an inspection you will need:

Your eyes.

Look carefully to identify for decay, termites, corrosion (rust), straightness and gaps



Your feel.

Touch and move what you are inspecting: feel for looseness and deflection under force



Your ears.

Listen for creaks, cracks and groans.



Rubber mallet or hammer.

Use a hammer to impact decking boards and handrails and infill (not while leaning on them or being supported by them) to see if they are loose or dislodge.



Probes. Use a small ended standard screwdriver, stout non retractable knife and a drill with small diameter (3-4mm drill bit 150mm long) to probe for decay and check for timber soundness in joints etc.



Mirror. Use a small mirror on a 'stick' to help see into otherwise hidden area/corners etc.



Deck Joist

Deck Bearer

Ensure you check these critical inspection points:

- ✓ Decking boards and butt joints in boards
- ✓ Handrail to post connection
- ✓ Bottom rail to post connections
- ✓ Baluster to rail connections
- ✓ Joists to house and joist to deck bearer connections
- ✓ Ledger pole plate to house connections
- ✓ Bearers to supports
- ✓ Posts to footings/supports

Step 2 Check for Strength

Always check the underside of the deck first (before the top). Make sure you check for decay and termite damage and where necessary probe or drill at all interfaces and joints including a close inspection of main support points and underside of decking for signs of decay.

Decks, verandahs and balconies should be designed and constructed to carry certain loads. Below are examples of types of loads that building regulations (Building Code of Australia) specify decks should support. When you are doing an inspection check:

| | YES | NO |
|---|-----|----|
| <ul style="list-style-type: none"> Will the deck support around 300 kg force per square metre? i.e around four to five people per square metre? | | |
| <ul style="list-style-type: none"> Will the handrails and connections support approximately 110 kg force per metre of length along the whole length? i.e about three burley prop forwards leaning on it every metre? | | |
| <ul style="list-style-type: none"> If somebody trips and falls against the balusters (infill), will they hold in place? Can you pull the balusters off in the inward direction with reasonable force or when impacting with a hammer or mallet? 75 kg force. | | |
| <ul style="list-style-type: none"> If three prop forwards jumped up and down on the end of a joist, would it dislodge? What about four people, per square metre dancing in sync to Tina Turner's "Nut Bush City Limit, 35 is the speed limit"? | | |

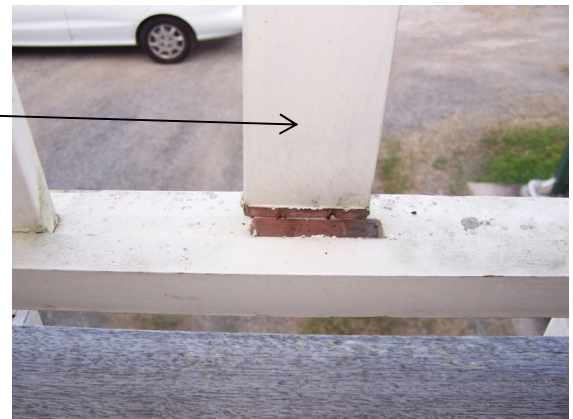
If you answered **NO** to any question you should seek expert advice to establish the implications for the structural integrity of the deck or balcony.

Decayed deck joist and fascia – deck should not be used as dangerous



ALWAYS CHECK THE UNDERSIDE OF THE DECK FIRST TO ENSURE IT IS SAFE

Baluster (infill)



Check the integrity of the baluster and infill connections

Make sure handrail connections are structurally adequate

Handrail (Balustrade)



DODGY LOOKING HANDRAIL CONNECTION



Unlike the above example make sure handrail and balustrade connections are secure

Step 3 Check for decay and termites

All timber construction should have a termite management system in place that should be inspected every six to 12 months.

Things to look for include:

- ✗ Discoloured or blistered paint
- ✗ Depression of timber
- ✗ Termite mud tunnels and nests
- ✗ Any build-up of soil around the base of timber (there should be 75 mm clearance between the timber and the soil or footings)
- ✗ Fine sawdust type material around or below timber

| | YES | NO |
|---|-----|----|
| <ul style="list-style-type: none"> • Make sure decking boards are still sound. In particular check for decay at butt joints. <p>[Reminder: It was decay in just one 90 mm wide decking board that resulted in the tragic death of an infant recently in Central Queensland]</p> | | |
| <ul style="list-style-type: none"> • Are joists free of decay & termites? | | |
| <ul style="list-style-type: none"> • Are joist to bearer connections (in particular at hand rail connection) free of decay & termites? | | |
| <ul style="list-style-type: none"> • Are bearer to support connection (posts or to house) free of decay & termites? | | |
| <p>If you answered <u>NO</u> to any question you should seek expert advice to establish the implications for the structural integrity of the deck or balcony.</p> | | |

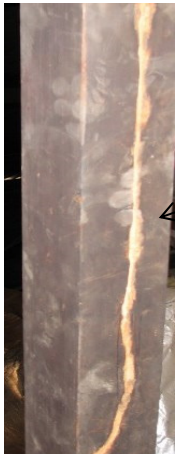
Decay in joists under a supposedly “waterproof” deck



Check for decay at ends of decking boards. In this example, the board is not safe.



Check the base of posts to ensure termites have not accessed timber above.



Termite track ('mud tunnel') on post. Termites attacking timber deck above

Check the base of posts to ensure termites have not accessed timber above.



Step 4 Check for corrosion (rust)

Fixing and connections should be free from rust, bending or fractures.

More regular inspections of these elements should take place on older decks, in coast regions and decks adjacent/near swimming pools and spas. Removal or partial removal of bolts to check for signs of internal corrosion is desirable. Temporary supports may be required if this is undertaken.

| | YES | NO |
|--|-----|----|
| <ul style="list-style-type: none">Can you see any deterioration of nails, screws, bolts, metal brackets etc at connection points? Rusting metal may leave marks on connecting timber or paint. | | |
| <ul style="list-style-type: none">Is there any bending, stress or deterioration in either the connection and/or the part embedded in the timber/steel/concrete at ground level? | | |

If you answered **YES** to any question you should seek expert advice to establish the implications for the structural integrity of the deck or balcony.

Corrosion of galvanised nails close to swimming pool



Severe corrosion in metal bracket supporting deck post



Severe corrosion of bolts removed from deck bearer to post connections

