

SOME RAMIFICATIONS FROM NCC 2019

Now that NCC 2019 is out and being enforced, a couple of hidden “gems” have surfaced that FTMA members and their customers should be aware of. Unfortunately, neither of them are on the positive side of the ledger this time round.

Deck Fixings

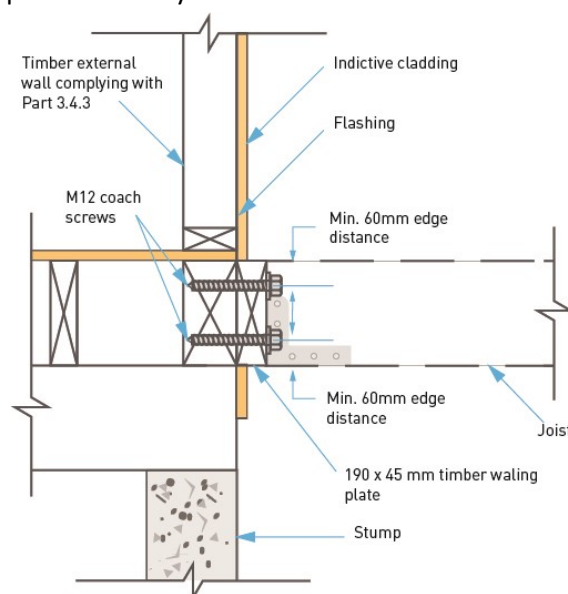
Uncharacteristically, a prescriptive requirement for fixing of deck joists to the supporting structure was added in to the Housing section, via *Part 3.10.6 Attachment of decks and balconies to external walls of buildings*. The provision is aimed squarely at domestic and residential activities as the maximum load applicable is noted as 2kPa, anything with loads over that require a professional engineer.

The provision covers support by timber framing, steel framing and Core-filled masonry. It does not cover masonry veneer i.e.. the deck support is fixed to the brickwork – that also needs an engineer, and isn't really a good idea anyway...

The requirement is deceptively simple – provide a waling plate (min 190 x 45 F5 or MGP10) to attach the deck joists to and attach the waling plate to the supporting wall, all good so far. For timber framing the waling plate simply has to be fixed via two fixings at 300mm centres into a solid joist or bearer framing member that is not less than 190 x 100 F5 or MGP10. No, that is not my typo, that is a direct quote. Notice two things – 100mm thick - not nominal, and solid - not laminates. See picture right:

For the technically minded a couple of pointers – coach screws must be M12 and must embed a minimum of 96mm into the solid framing member. You can use bolts which would then need to be 4.6/S M12 bolts which translates to a “commercial bolt of a strength grade of 4.6 using a snug tight method of tensioning” – refer to AS4100.

Contact with the FWPA has revealed that they were as surprised at this as the first couple of builders pulled up by building inspectors. At the current time the FWPA is working with industry groups to form a submission for an amendment. In the meantime rely on some common sense from the Building Inspector/Surveyor who is attempting to enforce the NCC and unfortunately, the only other resort open to obtain NCC compliance of an alternative solution is to have a professional engineer sign off on a site specific “Performance Solution”. FTMA technical consultants will keep you posted with developments as they occur.



Concrete Tie-Down Bolt capacity

The NCC now calls for the mandatory use of *AS 5216:2018 Design of post-installed and cast-in fastenings in concrete* for the derivation of capacities for concrete Screw bolts. This requirement adds some extra considerations that have significantly reduced the published tie-down capacities. Accordingly, manufacturers are publishing more onerous minimum edge distances and concrete penetration requirements.

In one example a producer that **previously** had allowed capacities up to 9.5kN using a 10mm dia bolt with 35mm edge distance to concrete and 62mm embedment.

However, they now specify for 10mm bolt only 5.8kN capacity but with min edge distance of 60mm and min embedment of 75mm. So the bolt must be a minimum of 125mm long (on a 35mm bottom plate), and will not fit on a 70mm wide timber bottom plate and accommodate the requisite washer size.

Older publications are no longer compliant, it is imperative to check with your current supplier as to what their new published capacities and criteria are. As for pre-existing works – the values relied upon at the time need to comply with the NCC requirements current at the time of construction.



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