

HOW TO IDENTIFY STRUCTURAL PRODUCTS AND NON-CONFORMING BUILDING PRODUCTS

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These questions and answers are from the Know your timber webinar, a joint Queensland Building and Construction Commission and Timber Queensland Limited, event held on Thursday 21 October 2021.

Q1 - I have a client wanting to use hardwood cut off his own property. How would I get timber classed to be used as floor joists?

Answer - The timber would need to be visually stress graded to AS 2082 and the species would need to be known to get an accurate stress grade. The grading should be undertaken by a qualified visual grader. Timber Queensland Limited (TQL) may be able to suggest a qualified grader depending upon where the timber can be graded.

Q2 - If you use an appropriate timber for an intended use and the timber complies with that use, in terms of safety, durability, and compliance. But the timber, as per the Fact sheet 38, shows minor staining that is relatively common. Would it be deemed to be defective if impurities from that timber leach out? Following, as the fact sheet implies, if it's been carefully handled, protected from the weather, appropriately primed, and coated. Can it be termed defective if indeed there is some leeching, or could it be considered a limitation of the product, given that you're stating that staining is common?

What advice would Colin offer to stop impurities leeching from a structural engineering timber member, e.g., glues, impurities, and tannins? And if his recommendations are followed what would his advice be if the impurities continued to leech and be minor? Is it fair to say that it would not be considered defective work if indeed a timber did leech, or could it be considered a limitation of the product?

Listening to ongoing maintenance requirements, if leeching occurs would it be an owner's responsibility to stay on top of coating and painting etc.?

Colin spoke about maintenance in his presentation. Would he endorse that leeching is a maintenance matter if it persists, and something owners should stay on top of?

Answer - this Question was addressed live during the webinar.

TQL fact sheet 38 available from Timber Queensland Limited, contains recommendations regarding how stains occur and how to prevent them for tannin stains, mould stains, iron staining, alkaline stains, and water marks.

Consumers may also wish to make their own enquiries with their suppliers of any warranties they afford, maintenance recommendations, or assurance processes in place for such issues.

For information regarding complaints about defective building works refer to QBCC website [building complaints](#) page. From here you can find information about the compliant process and information about [What is defective work?](#)

Noting that a complaint about a building product may be considered under both the defective works process and the non-conforming building products requirements under certain circumstances.

Q3 - I am building an external deck and the specification states joists to be 140 x 42 LVL H3 and decking sheets to be product XXX, an external grade flooring material. The manufacturers installation data states minimum joist thickness to be 45mm. Subsequently it also states it is up to the designer or certifier to make sure these measurements are met. How should this be addressed?

Answer - Whilst the timber standards (AS 2082, AS/NZS 1748.1, and AS/NZS 4357.0) have information regarding dimensional tolerances, for seasoned, dressed, or LVL timber, they do not have a reduction in size (thickness). If the external flooring product manufacturers published installation requirements nominate that floor joists must be 45mm wide, then the frame is likely to need to meet those requirements to allow the correct installation for the intended use of the product. This is likely required for the product to be in accordance with the manufactures instructions on how the product must be used and associated with a building to ensure it is not a non-conforming building product for the intended use. The product manufacturer may be able to provide some additional details as to why the minimum 45mm joist is required for the external deck, and what, if any, circumstances, that it may be varied. It is recommended that you seek independent expert advice that is specific to your circumstances.

Q4 (a) - If you are relying on building certifiers to detect non-compliant timber, how do you suggest the building certifier approach the non-conforming building product (NCBP) when it is already installed throughout a finished building, especially when engineers are now doing a lot of frame inspections?

Answer - Everyone in the chain of responsibility has a duty in this regard. While a building certifier is not in the chain of responsibility for non-conforming building products, they may need to deal with a product should it not comply with the relevant regulatory provisions under the *Building Act 1975*. Should a building certifier become aware of a non-conforming building product, the building certifier, who in carrying out their duties must act in the public interest, should notify the QBCC, who can assess and consider all persons in the chain of responsibility. This may include the engineer who, in designing a building, specifies the product be associated with the building.

Q4 (b) - Which current form is appropriate to be presented e.g., F16, F15, F43, F30? We note that council does not regard photos of products as a legal record of as constructed works.

Answer – the QBCC does not specify the forms for the *Building Act 1975*. For information regarding forms relating to the *Building Act 1975*, visit the [Building and Plumbing](#) section of the Department of Energy and Public Works or see the [building forms and guidelines page](#) at Business Queensland.

Q4 (c) - Given that compliant products may be shown on the approved plans, then due to the current timber shortages, product substitution is common. What do you suggest regarding proof of product?

Answer – Substitution of materials needs to be carefully considered. First, appropriate evidence of suitability for the proposed product, material, or forms of construction needs to be obtained. This contributes to checking that the proposed product for substitution meets the compliance part of the relevant regulatory provisions of the NCBP definition, when considering the three limbs of safety, compliance, and representation to be checked. The primary duty of all persons in the chain of responsibility, is to ensure as far as is reasonably practicable, the product is not a non-conforming building product for an intended use. Any proposed substitution needs to be checked with the project's designing structural engineer, or, where designed by them, the project architect or QBCC licensed building designer. Appropriate amended design documentation needs to be issued and provided to the building certifier for approval. This allows the proposed substitution of materials to be listed in the approved documents, which are in turn lodged with the local government as holder of the records.

Q4 (d) - What happens if the CodeMark documents are out of date, or the manufacturer is no longer trading?

Answer – If a CodeMark Certificate of Conformity is out of date, that is, it is not current, it does not satisfy the evidence of suitability requirement for NCC Part A5.2 (a) which requires a current CodeMark Certificate of Conformity.

If a product, material, or form of construction has a CodeMark Certificate of Conformity as per the Building Regulation 2021, s.78, the element is, to the extent stated in the certificate, taken to comply with the Building Code of Australia. That is, the product has mandatory acceptance, however, only to the extent stated in the certificate.

Q4 (e) - What happens when the owner or builder provides fraudulent product documentation to the building certifier?

Answer - If you become aware or reasonably suspect fraudulent product documentation, this should be referred to the relevant authorities, which could include the Queensland Police Service and QBCC. The QBCC NCBP unit may investigate matters that involve a building product to determine if the product is a non-complying building product.

Q5 – If a product does not meet Deemed-to-Satisfy (DTS) requirements, does the supplier have to state this and advise that the product can only be used under or potentially under a Performance Solution - an example is a fire coating for timber products / linings. How can an installer practically determine whether a particular building product is non-conforming and will not be safe? If possible, please provide a practical example.

Answer – Compliance with the NCC, as part of the relevant regulatory provisions, is achieved by complying with the NCC Governing Requirements (Part A) and the Performance Requirements.

If a proposed product is not referenced in any NCC Deemed-to-Satisfy Provision, and there are no applicable referenced documents in NCC Schedule 4, that is, there is no Deemed-to-Satisfy Solution available, therefore, to use the product, material or forms of construction requires a Performance Solution. This must follow the NCC Part A2.2 Performance Solution pathway, which includes the mandatory steps as required in NCC Part A2.2, for the relevant Performance Requirements using the appropriate Assessment Methods.

If a product relies on a Performance Solution pathway for compliance with the NCC, then the product required information likely needs to include details that a Performance Solution is required. Misrepresenting the compliance status of a product may form the basis of an offence.

The compliance pathway using a Performance Solution to satisfy NCC Part A2.2 is a site or project specific requirement following the steps required under that part.

If the product has a CodeMark Certificate of Conformity that includes compliance with Performance Requirements, then a Performance Solution is required following NCC Part A2.2 process. The Certificate of Conformity can be used as one of the Assessment Methods, for evidence of suitability, as described in the Australian Building Codes Board (ABCB) article [NCC Provision A2.2\(4\) and CodeMark Certificates](#) from 14 July 2021.

Some product manufacturers/suppliers may have pre-formatted reports available to assist design professionals prepare a Performance Solution.

Some things that may raise suspicions for an installer could include:

- not being provided any required information; or
- no required information is provided when requested; or
- no evidence of suitability is available; or
- the product is not in the approved documents for the building approval

The required information includes information about the suitability of the product for the intended use, how the product is to be associated with the building for an intended use, and how the product must be used to ensure it is not a non-conforming building product for an intended use.

If you are a person in the chain of responsibility, and you become aware, or reasonably suspect, that a building product is a non-conforming building product for an intended use, you have a duty to notify QBCC of the suspected non-conforming building product, as soon as practicable but within 2 days using the approved form.

Q6 – Can you give some examples of some products that you have been made aware of from commercial building projects? Further, can you advise on product types e.g., imported products such as tiles, stone door hardware etc or common product groups which you come across in NCBP complaints?

Answer – QBCC do not publish a list of declared NCBPs unless where required by legislation. This occurs where a product is investigated, determined to be a NCBP, and a Ministerial recall or warning is issued. This is published in newspapers and on the QBCC website to make the public aware.

In other cases, the QBCC's regulatory powers are generally tailored towards remedying the contravention of a duty. This does not necessarily require the NCBP determination to be published, as the cause of the NCBP can be rectified and the product remain conforming for other intended uses.

For example, regulatory action may be required to prevent a particular roof sheeting product being supplied into a cyclonic area and additional information to be provided at point-of-sale, but the product otherwise remains conforming if supplied in non-cyclonic areas. The regulatory action has remedied the breach of duty in balance with the conforming uses of the building product.

Remember to consider when looking at building products, what is the building products intended use? That is, a use for which the building product is intended to be, or is reasonable likely to be, associated with a building.

A common matter raised with the NCBP Unit, is where building products are used in a manner that is not in accordance with the intended use.

Q7 - Can this information (from the webinar regarding timber compliance and NCBP) be added to a building contract, i.e., separate page for material performance?

Answer – While you could add NCBP requirements to your building contracts, the duties under Part 6AA of the QBCC Act, are positive duties, that is, they must be complied with. The requirement of the primary duty for persons in the chain of responsibility is, to ensure as far as is reasonably practicable, the product is not a non-conforming building product for an intended use. Therefore, the NCBP requirements on persons in the chain of responsibility, are already imposed under legislation.

Q8 (a) – How does the QBCC define compliance of timber structures in accordance with force resistance requirements, specifically species of timbers. In NSW some councils are independently deeming the requirements for timber on decks, outside adjoining structures.

Answer – Compliance with relevant regulatory provisions is a key aspect of determining whether a product is a non-conforming building product for an intended use. A timber structure, as building works under the *Building Act 1975*, must comply with the building assessment provisions. These include the Building Code of Australia and commonly the referenced standards unless displaced by Performance Solution. The AS/NZS 1170 series are relevant for determining the resistance to actions and determination of actions, with Construction Timbers in Queensland, Books 1 and 2 also relevant for timber species and uses.

Q8 (b) - What measures are the QBCC taking to ensure importers are complying with the required standards. Approximately three years ago I inspected a recently constructed building where the FC sheeting in the bathroom was found to have asbestos.

Answer – The primary duty of all persons in the chain of responsibility, is to ensure as far as is reasonably practicable, the product is not a non-conforming building product for an intended use. Further, all persons in the chain of responsibility have a duty to notify QBCC, as soon as practicable but within 2 days of becoming aware, or reasonably suspecting, that a building product is a non-conforming building product for an intended use. All alleged or suspected NCBP notifications received are considered.

Q8 (c) - Timbers in wet areas and bathrooms. Is the QBCC looking at the type of timbers used in floors around bathrooms and wet areas. In assessing buildings in the insurance industry, I have found many instances where the engineered timber product has been compromised due to a failure of the water proofing membrane.

Answer – When selecting timber framing products to use, including around wet areas, the products intended use, along with any limitations and conditions of use, need to be considered. The limitations and conditions of use are required to be communicated as part of the required information given with the product. This may be considered in conjunction with the limitations or expectations of other relied upon systems, such as waterproofing, where trying to establish if damage is caused by product non-conformity or because of some other issue, such as a membrane not installed in a trade-like manner,

Q9 – With the proliferation of Oriented Strand Board (OSB) Bracing Panels on sites. With there being no Australian Standards and (OSB) Bracing Panels not being noted within the NCC. Why is this not a non-conforming building product? Why are there not any Performance Solutions for this product?

Does QBCC determine that the Queensland Building Regulation 2021 Section 78 is not applicable for Certificates of Conformity and Performance Solutions need to be completed?

Answer – For the first part of the Question, compliance with the NCC, as part of the relevant regulatory provisions, is achieved by complying with the NCC Governing Requirements (Part A) and the Performance Requirements.

If a proposed product is not referenced in any NCC Deemed-to-Satisfy Provision, and there are no applicable referenced documents in NCC Schedule 4, that is, there is no Deemed-to-Satisfy Solution available, to use the product, material or forms of construction requires a Performance Solution. This must follow the NCC Part A2.2 Performance Solution pathway, which includes the mandatory steps as required in NCC Part A2.2, for the relevant Performance Requirements using the appropriate Assessment Methods.

The compliance pathway using a Performance Solution to satisfy NCC Part A2.2, following the steps required under that part, is a site or project specific requirement.

If a product, material, or form of construction has a CodeMark Certificate of Conformity as per the Building Regulation 2021, s.78, the element is, to the extent stated in the certificate, taken to comply with the Building Code of Australia. That is, the product has mandatory acceptance, however, only to the extent stated in the certificate.

If the CodeMark Certificate of Conformity includes compliance with Performance Requirements, then a Performance Solution is required following NCC Part A2.2 process. The Certificate of Conformity can be used as one of the Assessment Methods, for evidence of suitability, as described in the Australian Building Codes Board (ABCB) article [NCC Provision A2.2\(4\) and CodeMark Certificates](#) from 14 July 2021.

Some product manufacturers/suppliers may have pre-formatted reports available to assist design professionals prepare a Performance Solution.

Q10 – Would rough sawn hardwood that has no markings be deemed a non-conforming building product?

Answer – There are no deemed non-conforming building products. An assessment is carried out, looking at the three limbs of safe, compliance with relevant regulatory provisions and representations. The primary duty of all persons in the chain of responsibility is to ensure as far as is reasonably practicable, the product is not a non-conforming building product for an intended use. If the timber is claiming compliance with AS 2082, each piece needs a grade mark with information as the standard. Refer to the TQL advisory sheet for guidance.

Q11 - I often buy hardwood timber from the mill it gets treated and is graded at the mill. I assume visually. I have never seen a stamp on the timber all I have is the description on the invoice. Also, wouldn't it be difficult to prove a photo of the end of a piece of timber is job specific?

Answer – If the timber is claiming compliance with AS 2082, each piece needs a grade mark with information as the standard. Refer to the TQL advisory sheet for guidance. It is recommended that you seek independent expert advice as to the most appropriate manner to demonstrate satisfaction of your positive duties in your specific circumstances.

Q12 – Can imported structural LVL (with test results etc.) substitute MGP12 framing?

Answer – Substitution of materials needs to be carefully considered. First, appropriate evidence of suitability for the proposed product, material, or forms of construction needs to be obtained. This contributes to checking that the proposed product for substitution meets the compliance part of the relevant regulatory provisions of the NCBP definition, when considering the three limbs of safety, compliance, and representation to be checked. The primary duty of all persons in the chain of responsibility, is to ensure as far as is reasonably practicable, the product is not a non-conforming building product for an intended use. Any proposed substitution needs to be checked with the project's designing Structural Engineer, or, where designed by them, the project Architect or QBCC Licensed building designer. Appropriate amended design documentation needs to be issued and provided to the building certifier for approval. This allows the proposed substitution of materials to be listed in the approved documents, which are in turn lodged with the local government as holder of the records.

Q13 – Why are products deemed non-conforming when the NCC is a performance-based document e.g.: cladding product XXXX versus cladding product ZZZZ (product names removed). Both products can be used in certain circumstances like on a residential dwelling or class 10 shed under a performance-based solution.

Answer – There are no deemed non-conforming building products, an assessment is carried out, looking at the three limbs of safe, compliance with the relevant regulatory provisions, and representations.

The primary duty of all persons in the chain of responsibility is to ensure as far as is reasonably practicable, the product is not a non-conforming building product for an intended use.

Q14 – Is Bracing product XXXX, (product name removed) a non-conforming building product, as there are no Australian standards for the manufacture, no standards referenced in the NCC for this product, no CodeMark certification? How should certifiers deal with this product?

Answer – Compliance with the NCC, as part of the relevant regulatory provisions, is achieved by complying with the NCC Governing Requirements (Part A) and the Performance Requirements.

If a proposed product is not referenced in any NCC Deemed-to-Satisfy Provision, and there are no applicable referenced documents in NCC Schedule 4, that is, there is no Deemed-to-Satisfy Solution available, to use the product, material or forms of construction requires a Performance Solution. This must follow the NCC Part A2.2 Performance Solution pathway, which includes the mandatory steps as required in NCC Part A2.2, for the relevant Performance Requirements using the appropriate Assessment Methods.

A CodeMark Certificate of Conformity is only one form of evidence of suitability under NCC Part A5.2. If a CodeMark Certificate of Conformity is not available, there are other forms of evidence of suitability, or Assessment Methods, that can be used.

Acceptance of these is the decision of the appropriate Authority, that is, the building certifier, who in carrying out their duties, must act in the public interest.

All persons in the chain of responsibility must ensure all building products are not a non-conforming building product for an intended use.