



How to Choose Which Compliance Certification is Best for Your Building Product

Do you choose an Appraisal, or Product Compliance Certificate (PCC) or simply a Product Technical Statement?

Councils acting as Building Consent Authorities (BCA's) have been mandated the responsibility of ensuring all building work, including the use of building products or methods, are compliant with "the performance requirements of the New Zealand Building Code".

The question every building product manufacturer or manufacturer's agent needs to answer, is which form of documentation is best to demonstrate compliance. Since each option has different requirements and costs, the answer is important.

While a manufacturer or manufacturer's agent can provide their own documentation, it is common here in New Zealand, for BCA's to require independent, third-party assessment and certification of building products. With this in mind, what are the options?

Described below are the features and benefits of each of the most common forms of third-party certification:

1. An Appraisal.

An "Appraisal" certificate is a document that sets out in a common format, the details of the supplier of the product or range of products, together with a list of performance clauses that the product is claimed to comply with, together with a description of the third-party assessment of evidence and findings.

These findings typically cover the scope and limitations for use of the product, who can install or construct the product, the specified technical and installation documentation supplied and any checklists that need to be completed, before the product warranty can be issued.

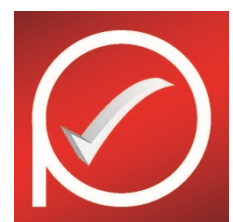
There are many steps involved in completing an Appraisal assessment, resulting in considerable time and effort needed to complete the process.

Timeframes and costs depend on how much testing has been completed by the manufacturer or their agent, and how much new testing or buildability assessment work may be required, to suit New Zealand conditions and regulations. The technical information, including drawings and quality documentation, needs to meet certain standards as well.



2. A Product Compliance Certificate (PCC)

For those manufacturers or agents introducing new and innovative products, a "Product Compliance Certificate" (PCC) may be a better choice. The PCC was developed by BEAL to specifically address the needs of suppliers of products for which there is little or no history from which to evaluate the specified product. Such risks are especially important for BCA's and Design professionals, particularly for larger projects.



The requirements for obtaining a PCC certificate are similar to that of an Appraisal, but with additional assessment work being needed. This additional work includes expert peer reviews for each performance clause of the Building Code, a written and independently approved Site Supervisor training programme, and a higher standard of quality control.

As a result of the addition assessment work, the time to complete the assessment is longer and there are additional costs.

3. A Product Technical Statement (PTS)

Use of a simple “Product Technical Statement” was encouraged by MBIE as a low-cost option for manufacturers or agents introducing traditional building products, often with many years of satisfactory in-service history and demonstrating low risk. Where a product or product range is perceived as not having a low risk or unpredictable performance, often owing to inconsistent quality of workmanship, then BCA’s and design professionals will invariably insist on receiving a more thorough assessment document, such as an Appraisal.

The Table below sets out common features and benefits:

Appraisal	Product Compliance Certificate	Product Technical Statement
Details of the product and supplier required	Details of the product and supplier required	Details of the product and supplier required
List of relevant Performance Clauses required	List of relevant Performance Clauses required	List of relevant Performance Clauses required
List of evidence of compliance supplied by the manufacturer or agent	List of evidence of compliance supplied by the manufacturer or agent	List of evidence of compliance supplied by the manufacturer or agent
Third-party assessment of the evidence	Third-party assessment of the evidence	Self-declaration of compliance
Assessment of buildability	Assessment of buildability	
A Technical Manual with drawings supplied	A Technical Manual with drawings supplied	
Assessment of the Technical Manual to meet certain Standards	Assessment of the Technical Manual to meet certain Standards	
A product quality plan supplied	A product quality plan supplied	
Assessment of the product quality plan to meet certain Standards	Assessment of the product quality plan to meet certain Standards	
Test Reports supplied for each claim of performance	Test Reports supplied for each claim of performance	

In-house assessment of test report acceptability	Assessment of test report acceptability completed by experts	
	Independently approved Site supervisor Training Programme	
Basic auditing requirements	Higher level of quality plan auditing requirements	
Est. time to complete ~10 weeks	Est. time to complete ~16 weeks	Est. time to complete ~2 weeks
Est. fees ~ \$10,000 to \$30,000*	Est fees ~\$15,000 to 50,000*	Fee \$3,000
*Estimated fees depend on testing and expert review fees		

4. PCC+ Declaration (A Product Compliance Certificate Plus a Declaration)

For those manufacturers or agents wanting to emphasise their company's social and environmental responsibilities, use of a PCC+ Declaration is an effective option.



Research has found consumers consider declarations of a company's social and environmental responsibility to be highly valued. The results also suggest that such a declaration used in combination with the promoting of a well-known brand, to be highly effective.

A PPC+ Declaration is a new approach intended for companies focusing on presenting a coherent view of their environmental and ethical efforts. A PCC+ declaration can begin on a small scale using available existing information, then progressively add new programs of conformance as time and resources allow.

The PCC+ Declaration from BEAL covers the following aspects:

- service performance,
- global environmental impact,
- life cycle assessment,
- support to clients,
- ethical management,
- resilience and safety.

Consumers and specifiers are now actively seeking these assurances from suppliers, based on new criteria rather than just compliance. The PCC+ Declaration is an effective option that provides a managed process towards this objective. *A specific brochure explaining the features and benefits is available on request.*

For further details about the requirements for each of the options described above, either visit the BEAL website at www.beal.co.nz or, give us a call at the office on 04 233 6661. Our email is bts@beal.co.nz

Colin Prouse Mob: 021 556 559.

Director

BEAL

Attachment: Determining acceptance of test reports



Determining Acceptance of Test Reports

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Here is an explanation for the basis for determining acceptance of a test report used to verify conformance with a 'performance requirement' described in the New Zealand Building Code.

As mentioned elsewhere, Councils acting as Building Consent Authorities (BCA's) have been mandated the responsibility of ensuring all building work, including the use of building products or methods, are compliant with "the performance requirements of the New Zealand Building Code".

A key part of the evidence for demonstrating compliance, are **Test Reports**.

A Test Report is a document which contains a summary of all testing activities and results of a testing project. Based on a Test Report, stakeholders can see how compliance covering a specific performance of a product was carried out and whether this was appropriate or not.

Test reports are provided by laboratories, either as part of a manufacturing facility or as an independent testing facility. Laboratories rely upon published test methods, usually in the form of Standards, from ASTM in the USA or from an Australian or New Zealand Standards organisation. From Europe, there are numerous building related Standards, such as EN, BS, DIN Standards as well as ETAGs, used to demonstrate compliance within the European Community.

To ensure the method has been carried out correctly, many laboratories have accreditation against the ISO Standard "ISO/IEC 17025 TESTING AND CALIBRATION LABORATORIES". This Standard ensures consistency between laboratories using a given test method.

To be confident that a test report has been provided in an impartial manner, product assessment bodies require evidence of impartiality, usually in the form of accreditation against ISO 17025, or, by assessing the test organisation's quality management system and records. Impartiality is a fundamental requirement, therefore test reports from a manufacturer are not acceptable.

To also be confident that the Test Report is relevant and useful, a product assessment body will rely on either a) the performance requirements set out in a Regulation or relevant Code of Practice or the like, or b) will develop their own performance requirement using first principles of scientific investigation. In some cases, a test method may be relied upon by a manufacturer or their agent that is not suitable for the performance being assessed, and the assessment body will need to determine the method's suitability and any non-acceptance with reasons.

The format of a Test report is also important. It is not uncommon for a Test Report to be presented in summary form without essential detail to enable the reader to determine the reliability of the results. The means of sampling, the method of preparation of test specimens, any pre-testing conditioning, the method of re-conditioning, the assembly of the test specimen, the method for determining the failure mode or pass mode, all have a significant effect on the results. In some cases, photos or videos are essential to determining acceptance of a result. Without sufficient detail in the report, it may be unrealistic for a user of such a report to establish clear

acceptance or interpretation of the result. Product assessment bodies should not have to make assumptions about the way in which the testing project was conducted.

The useful life of a Test Report is another key consideration for acceptance.

A Test Report is in effect, a snapshot of a performance of the supplied sample(s) or specimen(s) at a given point in time. The key question for a product assessment body, is what assurance can a manufacturer or their agent, provide about changes to the product over time. Here is what needs to be weighed up:

Given that all raw material suppliers improve or modify the method of manufacture as the opportunity arises, the question that arises, is whether such changes have had any effect on the raw material they supply to the market. Relevant to this question that requires an answer, is whether such change has any unintended effect, especially when the raw material is used with other materials and or in a new environment not envisioned by the raw material manufacturer.

Experience tells us that a manufacturer cannot realistically anticipate every situation that their raw material will be used in. For this reason, there will always be an element of uncertainty about the use of a raw material over time. This being the case, the question for a product assessment body, is what changes resulting from the use of a raw material over time, may have had on the finished/assembled product, from the time it was first developed. The only way to address this issue, is to have the finished product retested periodically.

For this reason, a product assessment body will need to determine what risk is associated with a finished/assembled product, based on the number and nature of raw materials/components used in its manufacture.

The current rule of thumb used internationally, is that five years is a reasonable life of a Test Report, with some international assessment bodies requiring retesting every year.

Having reliable Test Reports is in everyone's interest. An unreliable Test report or one that can no longer be relied upon, puts the product manufacturer and their agent's reputation and Brand at risk. In a worst case scenario, the Authorities may believe the public has been misled about the performance of a product and prosecutes the matter. Based on the above discussion, it is clear that a reliable Test Report is a key element for a product assessment and demonstrating compliance.

Where it is determined that **retesting is required**, the next issue that needs to be addressed, is what testing is required. For most product assessment bodies the answer is simple – redo all of the tests. However, this assumes that every raw material or component has been subject to improvement or modification of manufacture. A more realistic approach taken by some product assessment bodies, is to retest just the key or critical performances. This can be done by determining which functions are critical or essential to their continuous performance.

For example, in the case of a manufactured stone veneer cladding system, the key performance is the ability of the stone adhesive to maintain its bond between the manufactured stone piece and the sheet substrate. Therefore, and based on there being many raw materials used in the manufacture of the stone adhesive, the adhesive bond strength would be retested, typically on an annual basis.

For some products, several essential performances may need retesting, based on an agreed frequency. This is one of the key roles of a product assessment body when assessing continuous compliance of a building product.

For further details about the requirements for testing described above, either visit the BEAL website at www.beal.co.nz or, give us a call at the office on 04 233 6661. Our email is bts@beal.co.nz
