

The issuing of a code compliance certificate for the construction of a house

1 THE MATTERS TO BE DETERMINED

- 1.1 The matters before the Authority arise out of a dispute, in the course of the sale and purchase of a house, about the issuing by a building certifier of a code compliance certificate in respect of the construction of the house.
- 1.2 The Authority takes the view that it is being asked in effect to determine whether, in certain particulars, the building complies with Clauses B1-Structure, B2-Durability, E2-External moisture, E3-Internal moisture, F4-Safety from falling and G3- Food preparation and prevention of contamination, of the building code (the First Schedule to the Building Regulations 1992).
- 1.3 In making its decision, the Authority has not considered whether the building complied with any other provisions of the building code.

2 THE PARTIES

- 2.1. The applicant was the purchaser of the house (“the purchaser”) who acted through a building consultant (the “consultant”). The other parties are the building certifier and the territorial authority. Copies of the application and associated documents were also provided to the vendor as an “appropriate person” in terms of section 19(1)(b) of the Building Act 1991.

3 THE BUILDING AND THE SEQUENCE OF EVENTS

- 3.1 The building concerned was described as a two-storey town house. It is of conventional light timber frame construction with some concrete masonry walls, weatherboard and plaster claddings and timber external joinery.
- 3.2 The house was erected in about 1999 under a building consent issued by the territorial authority. In September 1999 the vendor and the purchaser entered into an agreement for the sale and purchase of the property. The building certifier, who had been involved in the approval process and had carried out the inspection processes, issued a code compliance certificate on 10 July 2000.

- 3.3 Prior to final settlement, the purchaser arranged for an inspection by a builder, who identified certain faults that needed rectifying. At a meeting on 14 July 2000, attended by the purchaser, the vendor, and their respective solicitors, it was agreed that certain monies would be withheld to allow for remedial work to be carried out.
- 3.4 The purchaser then engaged the consultant, to make further inspections and provide a detailed report (“the consultant’s report”), which was issued on 5 February 2001.
- 3.5 The purchaser then applied for this determination.
- 3.6 None of the parties in their original submissions requested a hearing, however, the purchaser requested that a draft determination be prepared and issued for acceptance. Submissions on the draft were received from the parties and the vendor and these were considered by the Authority and incorporated in this final determination.

4 THE SUBMISSIONS

Where references are made to certain clauses in the following discussions and elsewhere in this determination, these refer to clauses of the building code.

4.1 The purchaser’s submissions

- 4.1.1 The purchaser’s submissions essentially consisted of the consultant’s report together with background information and correspondence. The consultant’s report was produced on the basis of a site inspection carried out in the presence of the purchaser.
- 4.1.2 Outstanding defects identified in the purchaser’s submissions were:
 - (a) There are possible structural problems in the concrete masonry wall as it did not have control joints at 6 metre centres as required in the architect’s specification and there was exposed reinforcing that was corroding. In addition, as there was no damp-proof course at the junction with adjoining parquet flooring there may also be problems associated with this item. The wall also leaked subsequent to the issue of the code compliance certificate and despite the purchaser’s attempts to remedy the problem, it is still leaking;
 - (b) The plywood soffit, which was exposed to the elements, was not treated. Various coatings had been applied in an attempt to protect the soffit. However, the soffit has developed considerable mildew growth and was already delaminating;
 - (c) Water reached the junction of the exterior wall and the soffit as indicated by watermarks and the gap at the junction growing larger. The water tracked because there was no roof fascia and as the junction was inappropriately detailed it allowed the ingress of water.
 - (d) Water leaked extensively at the timber external joinery during rain and, therefore, it did not comply with the requirements of Clauses B2 and E2. The joinery was not adequate as regards the following:

1. The sealants applied to the windows were not durable and the use of sealants was not specified;
 2. There were no head flashings to two upper level windows;
 3. Several joinery units were installed “out of square”;
 4. There was a crack between a window jamb facing and the adjoining plaster; and
 5. “Some weather grooves were inadequate, and the joinery is not robust enough...The horizontal bars were not screwed or glued and have pulled away from the frames”;
- (e) The rear splash-back of the kitchen sink was 25 mm high instead of the required 150 mm and there was a gap that could allow water ingress and contamination;
- (f) The butynol roofing has a free unprotected edge that is already separating and in another location the butynol roofing has a poor junction detail;
- (g) The concrete topping applied to the lower level roof area was not an appropriate means for shedding water as the water is ponding at the rear of the area and is flowing off the roof into the building. In addition, “the concrete has cracked and looks to be breaking up”;
- (h) Some roof beams had split where there was a change of cross-section and a length of timber to a deck barrier was also split;
- (i) The sill of the ranch slider has been installed with no support. This has resulted in the step breaking away from the side frames and the sill grout becoming damaged. Consequently, it does not comply with the requirements of Clauses B2 and E2;
- (j) The support to a major structural post was amended from that shown on the drawings resulting in inadequate support and subsequent corrosion;
- (k) There was a risk of falling more than 1 metre from a low-level openable window over the garage;
- (l) The beams and posts that are constructed from Lawson Cypress have not been treated and it is believed that most of the timber is sapwood. Accordingly, where these are exposed to the elements they will not be sufficiently durable;
- (m) Reinforcing steel to the exterior masonry block boundary wall (the fence) is exposed and is starting to corrode; and
- (n) There is inadequate fixing of a vanity and a toilet pan, and further there is leaking occurring at the connections of a vanity and a wash hand basin mixer. The purchaser has now remedied these matters.

4.2 The building certifier's submissions

4.2.1 In a submission to the Authority, the building certifier responded in respect of 4.1.2 above as follows:

- (a) Agreed that if it allowed the ingress of water, the concrete masonry wall did not comply with Clause E2, but noted that the “wall had been well painted at the time of final inspection with a flashing installed and no evidence of leaks”. Further “no construction joints were specified on the drawings or on the engineer’s calculations” and it was not uncommon for such feature walls not to have joints. It noted that “the design was processed by [the territorial authority], as the specific design was outside of [the building certifier’s] approval as a Certifier”. The building certifier was not aware of any exposed reinforcing steel in the concrete masonry wall;
- (b) Agreed that the plywood soffit lining was not treated, but considered that this was not an issue because its interpretation of the trade literature and the fact that the soffit is not fully exposed to the weather supports its contention that the untreated plywood complies with Clause B2. The building certifier contested that the plywood was delaminating and noted that it had seen no evidence of this during its site visits;
- (c) Roof fascias were not mandatory, the soffits ranged in width from 400 to 1500mm and that these were wide enough to prevent the ingress of water. In addition, historical evidence supports this contention and there was no evidence of ingress of moisture at the wall/soffit junction;
- (d) With regard to the joinery in question
 1. Agreed that head flashings should have been installed;
 2. Noted that there were insufficient details of weatherproofing to certain units;
 3. Contended that the joinery being out of square was not a building code issue;
 4. Accepted that there were “insufficient details of the weatherproofing”, where the crack between the differing materials occurred, however, there was no evidence of water ingress and the crack was not evident at the time of the window inspection; and
 5. Advised that “the windows should have been made to relevant NZ Standard” and were made to “plans and specifications in regard to component sizes”. However, the glazing could be one reason why the windows leaked;
- (e) Agreed that a gap existed at the sink splash back and that this did not comply with Clauses E3 and G3;

- (f) Conceded that it may have been better practice to put a return on the roofing edge, but contends that “the edge is well glued down without evidence of lifting”, furthermore, there is no leaking at this point. Although the junction detail appears messy, it is “well welded, is flat without ponding and is doing the job of preventing the ingress of moisture”;
- (g) Agreed that the topping was not adequate to shed water but noted that the work was carried out after the issuing of the code compliance certificate to correct an inadequate fall on the original roofing components;
- (h) Had not seen split in timber on the deck barrier, and there was no split in the roof beams at the time of inspection. In any case, the beam design was the responsibility of the territorial authority;
- (i) “Good practice should have provided support under the sill of the ranch slider. However, there was no indication that B2 or E2 is (sic) breached”;
- (j) Accepted that the support was not built in accordance with the consented plans and says that the work was not specifically inspected and that the problem was not visible at a later date. It was also noted that “an engineer would need to calculate whether or not the new construction detail complies with the code”;
- (k) The low level opening window needed a stay to comply with clause F4 and it was conceded that the building certifier missed this;
- (l) “The plans and specifications call for Lawson Cyprus timber, and as far as we know that is what it is and therefore would meet Clauses B1 and B2. [The territorial authority] processed this part of the consent as being specific design and outside of the scope of [the building certifier]”;
- (m) The fence does not require a consent nor is it a code item. The building certifier’s recollection was that there was exposed reinforcing in the fence however “this has been attended to [by the vendor] by way of filling with grout and a masonry flat block cap laid on the whole length of the [fence]”; and
- (n) The building certifier made no comment in respect of the plumbing matters in question.

The building certifier also says that for a project of the size of the building in question only 6 hours would be normally allowed for inspections. It was, therefore not viable to inspect the project on a more regular basis. On the basis of those inspections that were carried out, the building certifier says that it was satisfied on reasonable grounds that compliance had been achieved and that it stood by the issuing of the code compliance certificate.

4.3 The territorial authority’s submission

- 4.3.1 The territorial authority states that they were not involved in the processing of the building consent as the only item not included in the scope of the building certifier’s certification were the engineer’s calculations.

- 4.3.2 A producer statement for the engineering calculations was provided by an expert on behalf of the vendor, and this was accepted by the territorial authority as permitted by section 33(5) of the Building Act. The only condition attached to this acceptance stated that observation forms were to be signed for the excavation of the foundations. This latter requirement should have been attended to at the issue of the code compliance certificate.

4.4 The vendor's submissions

- 4.4.1 The vendor forwarded some background information and submissions to the Authority, which:

- (a) Set out the history of the construction of the house, and detailed the negotiations between the vendor and the purchaser and how certain remedial work was carried out;
- (b) Gave details of a barrister's written opinion advising that it was considered that the vendor had no further responsibility to remedy the alleged defects; and
- (c) Detailed the installation of a stop block as a safety measure to a window over the garage, which the vendor instructed to be carried out on a "without prejudice" basis.

- 4.4.2 In later submissions the vendor stated that:

- (a) The architect and building certifier were of the opinion that the cracks in the concrete masonry wall were only hairline and that the wall was built in accordance with the engineering specification that did not require control joints;
- (b) Sealant had been applied externally to the glass/frame junctions of the external joinery at those locations where leaking had occurred.

The vendor also commented on the aspects of soffit durability and the split beams but did not forward any technical information to substantiate these.

5 DISCUSSION

5.1 The Authority's jurisdiction

- 5.1.1 The building had been completed for approximately 2 years and the code compliance certificate had been issued for almost 15 months when the purchaser applied for this determination. However, that application was the outcome of a continuing discussion between the purchaser and the building certifier. The Authority takes the view that it is not required to reject the application on the grounds of unreasonable delay.

- 5.1.2 The matters that the Authority may determine are limited by the relevant words of section 18 of the Building Act:

An application to the Authority under section 17 of this Act shall be limited to whether or not, or to what extent, particular building work or proposed building

work (including any actual or proposed demolition) complies with all of the provisions, or with any particular provision, of the building code.

- 5.1.3 The Authority takes the view that section 18 means that the Authority has no jurisdiction to determine whether or not the building certifier had reasonable grounds for being satisfied as to compliance with the building code when it issued the code compliance certificate. Furthermore, following the reasoning in Determination 2000/3, the Authority takes the view that it is required to use the most up-to-date information available to it, even when that information was not available at the time that the building certifier in question decided to issue the code compliance certificate.
- 5.1.4 The Authority also has no jurisdiction to determine whether or not the building certifier had the power to withdraw the code compliance certificate on becoming aware that at the time of issue the building did not in fact comply with the building code in respects that were not apparent on visual inspection. Similarly, the Authority cannot rule on the adequacy of the inspections undertaken in any particular circumstances.
- 5.1.5 Section 18 prevents the Authority from determining whether a building certifier has operated outside the scope of its approval or if collectively, a building certifier and a territorial authority have carried out a complete check of all consent items. Accordingly, the Authority has not considered these matters in this Determination.

5.2 Compliance with the building code

5.2.1 General

The Authority was not given any of the plans and specifications approved for building consent.

5.2.2 Particulars of the claims

Turning to the particulars of the claims as set out in paragraph 4.1.2:

(a) Concrete masonry wall

The building certifier accepts that while the wall appeared to comply at the time that the code compliance certificate was issued; more recent developments demonstrate that it does not comply with the requirements of Clause E2. Further, the building certifier did not contest the claim made by the purchaser that the leaking wall and lack of a damp proof course had resulted in water damage to the parquet flooring. There is, accordingly, no dispute that the wall does not meet the requirements of Clause E2.

With respect to the parquet flooring the Authority considers that if it is fixed to a timber substrate that has been damaged, then this is a building code issue that requires fixing. However, if the parquet flooring is fixed directly to a concrete slab it is a decorative feature and not, therefore, a code issue. A further inspection is necessary to ascertain which situation applies.

The submissions indicate that there is conflict within the plans and specifications as to whether control joints were required. The Authority accepts that the lack of control joints in the wall resulted in random cracking but it has not been given any information substantiating that the wall will be structurally unsound as a result. The Authority concludes that it has no reason to believe that the lack of control joints will result in non-compliance with Clause B1.

The Authority believes that any exposed reinforcement will become corroded and if left in this state will eventually affect the structural stability, and hence code compliance, of the wall. There is conflicting information as to whether or not exposed reinforcing exists and this needs to be ascertained by a further inspection.

(b) Plywood soffit

The relevant building code requirement is Clause B2.3.1(b), which requires at least a 15 year durability for building elements that are moderately difficult to access or replace, including the building envelope. Soffits are in this category and, therefore, need to last for at least 15 years.

The Authority has considered the arguments of the parties (which essentially interpret the same trade literature differently) and, in addition, has considered NZS 3602, which is cited in the Authority's acceptable solution B2/AS1. NZS 3602 requires plywood cladding, except when it has a 3 coat paint finish, to be treated to H3 but the Authority is aware that this is not the only way of complying with the building code's requirements.

The Authority is faced with conflicting evidence as to whether the plywood soffits are delaminating. If the soffits are delaminating at such an early stage then this suggests that they will not be sufficiently durable to meet the building code's minimum requirement of 15 years. If they are not delaminating, then an assessment needs to be made taking account of all aspects of design, including required maintenance, if any, and a decision made as to the ability of the plywood to perform as required. In any event further assessment and inspection is required to ascertain the situation.

(c) Exterior wall and soffit junction

The Authority believes that it has not been provided with enough evidence to conclusively prove that there is a problem with regard to the lack of fascias or detailing, or that there has been, or will be, any damaging ingress of water. The Authority notes the building certifier's arguments regarding soffit widths and the historical performance of other similar constructions and considers that it has not been established that the requirements of Clause E2 have not been met. This matter needs to be the subject of further investigation and inspection on site.

(d) External joinery

1 & 2 The Authority notes that the acceptable solution, E2/AS1 in Approved Document E2, requires sealants to be used only in locations where they are not

directly exposed to sunlight or weather and are easy to access and replace. While the acceptable solution is not the only means of complying with the building code, and some sealants are no doubt better than others, any alternative solution involving the use of sealants would need to be justified. The Authority has seen no such justification in this case.

The Authority concludes that the sealant used around the windows and the lack of head flashings could allow the ingress of moisture that, contrary to the requirements of Clause E2.3.2, could cause undue dampness or damage to the building elements.

- 3 The Authority accepts the building certifier's contention that the joinery being out of square is not a code compliance consideration.
- 4 The Authority was not given any details of weatherproofing, flashings or other information as regards this window and accordingly, considers that the work does not comply with the requirements of Clause E2.
- 5 Many possible reasons for the joinery leaking have been put forward. These range from flimsy design and construction to lack of weather grooves to problems with glazing. The Authority has been given insufficient information to ascertain why the joinery leaks but it is not disputed that it does. Accordingly the Authority notes that there is non-compliance with Clause E2.

(e) Kitchen sink splash back and gap

The Authority concludes that the gap at the splash back will allow water ingress and contamination and does not comply with the requirements of Clauses E3 and G3.

(f) Butynol roofing

The Authority is faced with conflicting evidence as to the free edge in question. The purchaser claimed that the butynol edge is lifting and, consequently, water is finding its way under the roofing. The Authority is of the opinion that this aspect of the roofing should be looked at again with other inspections. However, there has been no evidence adduced to support the contention that the junction detail is non-complying.

(g) Concrete roof topping

The Authority has not been given full details but it is agreed that the work is inadequate to shed water to the outside and there is a question over the topping's structural soundness. By the building certifier's own admission the original work "had insufficient fall" and therefore presumably did not comply with the code and should have been excluded from the code compliance certificate. The Authority considers that the remedial work relating to the construction of the concrete topping needs to be looked at and checked for compliance with Clauses B1 and E2.

(h) Split timbers

The Authority considers that it has not received sufficient information in regard to this matter to conclusively assess code compliance one way or the other. Notwithstanding this it is nevertheless concerned that splitting has occurred in structural members and at locations where jointing or cross sectional changes have occurred. The Authority therefore considers that code compliance is in question and considers the structural adequacy of these members needs to be specifically looked at and remedied as appropriate.

(i) Support to the ranch slider

The Authority takes the view that as it is agreed that there is no support under the sill of the ranch slider, then clearly Clause B1 has been breached.

(j) Corner post support

The Authority considers that the information received from the purchaser in regard to this matter casts significant doubt over the adequacy of the support's strength and durability. Further the building certifier itself acknowledges that the detail needs looking at. The Authority agrees and considers this matter needs to be looked at and assessed for code compliance in respect of Clauses B1 and B2.

(k) Risk of falling from low-level window

As the building certifier accepts that the window requires a stay to comply with Clause F4-Safety from Falling, there is no dispute that there is non-compliance as regards this item. The Authority agrees and notes the vendor's advice that this omission has now been attended to. The Authority considers however that this item should be checked to make sure that it is in order.

(l) Lawson Cypress timbers

The Authority has consulted and has held discussions with Forest Research with regard to this matter. It has also obtained documentation, which together with a record of the discussions with Forest Research, has been forwarded to the parties. Based on the acquired information, the Authority is of the opinion that durability for the life of the building, not being less than 50 years, is possible if Lawson Cypress timber is used in an external situation, but only if all the following criteria are met:

- Only full heartwood timber is used;
- There is no contact with the ground;
- There are no unprotected exposed cut surfaces or joints;
- There are no horizontal or other surfaces where water could collect or sit; and
- The timber is able to dry out after being subjected to moisture.

The Authority understands that the sapwood of Lawson Cypress timber is very similar in appearance to heartwood but has negligible durability in exposed situations. The beams and posts need to be checked against the criteria set out above by people with the appropriate skills and experience.

(m) The fence

The Authority notes that irrespective of whether a consent is required or not, the fence is still building work and must therefore comply with the building code. It is possible that the fence was not included in the consent documentation and so may not be part of the consent process, however the building certifier has not put this argument forward. The Authority is of the opinion for the reasons set out in (a) above that any exposed reinforcement will result in non-compliance with Clauses B1 and B2. There is conflicting information as to whether or not exposed reinforcing exists and this needs to be ascertained by a further inspection.

(n) Plumbing

There is no dispute that there is non-compliance as regards these items. The Authority agrees and notes the purchaser's advice that these matters have now been rectified. The Authority considers, however, that these items should be checked to make sure the remedial work is in order.

5.3 Conclusions

5.3.1 The Authority is satisfied that the house does not comply with the building code in the following respects:

- Waterproofing of concrete masonry wall;
- External joinery;
- Gap at the kitchen sink splash back;
- Concrete roof topping;
- Support to the ranch slider; and
- Corner post support.

The Authority therefore considers that the code compliance certificate should not have been issued, and that the above matters will need to be rectified before a new code compliance certificate can be issued.

5.3.2 Furthermore, the Authority has insufficient information to decide whether or not the house complies with the building code in the following respects:

- Exposed reinforcement in concrete masonry wall and fence;
- Parquet flooring;
- Plywood soffit;

- Weatherproofing of exterior wall/soffit junction;
- Butynol roofing;
- Split timbers;
- Risk of falling from low-level window;
- Lawson Cypress timbers; and
- Plumbing.

The Authority therefore considers that these matters will need to be specifically assessed, inspected and rectified as necessary, before a new code compliance certificate can be issued.

5.3.3 It is not for the Authority to direct who is to do the assessments and inspections, nor how defects are to be rectified. That is a matter for the person responsible for such undertakings to propose and for the territorial authority or a building certifier to approve.

5.3.4 It is possible that the house contains other instances of non-compliance that were not discovered in the consultant's inspections but which will become apparent in the course of investigating the items discussed above. This determination is limited to the above matters, but this does not affect the general requirement that before a building certifier or a territorial authority issues a code compliance certificate it must be satisfied on reasonable grounds that all of the building work under the building consent complies with the building code.

6 THE AUTHORITY'S DECISION

6.1 In accordance with section 20 of the Building Act, the Authority hereby reverses the building certifier's decision to issue the code compliance certificate.

Signed for and on behalf of the Building Industry Authority on this 19th day of February 2002

W A Porteous
Chief Executive