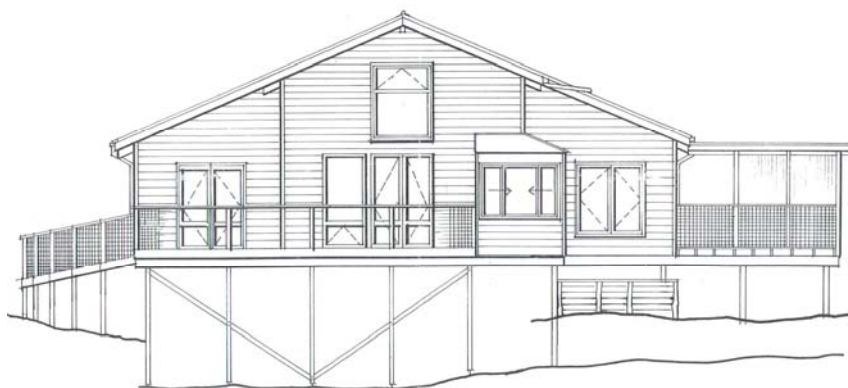


Determination 2008/76

Determination regarding cedar weatherboards and macrocarpa deck timbers to a house at Poike Block, Northland



1. The matter to be determined

- 1.1 This is a determination under Part 3 Subpart 1 of the Building Act 2004¹ (“the Act”) made under due authorisation by me, John Gardiner, Manager Determinations, Department of Building and Housing (“the Department”), for and on behalf of the Chief Executive of that Department. The applicant is the owner, P Hoskins (“the owner”) and the other party is the Whangarei District Council (“the authority”) carrying out its duties and functions as a building consent authority or a territorial authority.
- 1.2 This determination arises from the decision of the authority to refuse to issue a code compliance certificate for a 5-year old house because it is not satisfied that the timber weatherboards, deck posts and deck beams comply with Clause B2 of the Building Code² (Schedule 1, Building Regulations 1992).

¹ The Building Act 2004 is available from the Department’s website at www.dbh.govt.nz.

² The Building Code is available from the Department’s website at www.dbh.govt.nz.

1.3 I consider that the matters for determination are whether:

1.3.1 Matter 1: The weatherboards

The weatherboards as installed to the house comply with Clauses B2 and E2 (see sections 177(a) and 188 of the Act). By “the weatherboards as installed” I mean the components of the system (such as the timber, the flashings and the joints) as well as the way the components have been installed and work together.

1.3.2 Matter 2: The deck timbers

Some of the timber elements as installed to the deck of this house (“the deck timbers”) comply with Clause B2 Durability of the Building Code. By “the deck elements” I mean the components of the deck (such as the posts, the beams and the fixings) as well the type of timber used and the location of the deck timbers in the case of this house.

1.4 I note that there is no dispute as to whether the deck timbers currently comply with Clause B1 Structure of the Building Code and there is no dispute about the other wall and roof claddings. I also note that, while the applicant has noted on the D1 form that there has been a refusal by the authority to issue a code compliance certificate, I have not received any documentation to show that a code compliance certificate was in fact applied for or that any such application has been refused by the authority. This determination is therefore limited to the two matters outlined above.

1.5 I also note that some of the circumstances now under consideration are similar to those considered in Determination 2004/71, which related to the durability of heart macrocarpa veranda posts, and I have therefore consulted the specialist advice received for that determination (“the 2004 expert’s report”), which was supplied by an expert in the preservative treatment of timber. The 2004 expert’s report therefore forms part of the evidence in this matter.

1.6 In making my decision, I have considered the submissions of the parties, the report of the independent expert commissioned by the Department to advise on this matter (“the expert”), the 2004 expert’s report and the other evidence in this matter. I have evaluated this information using a framework that I describe more fully in paragraph 6.1.

1.7 In this determination, unless otherwise stated, references to sections are to sections of the Act and references to clauses are to clauses of the Building Code.

2. The building

2.1 The building work consists of a small cottage, which is situated on a sloping site. While the cottage is essentially single-storey, it includes an open mezzanine level under the central part of the southeast gable roof. Although the site is coastal and only accessible by water, the expert has described it as reasonably sheltered by local topography, and it is therefore likely to be in a high wind zone for the purposes of

NZS 3604³. The construction of the house includes specifically engineered timber subfloor framing, with conventional light timber framing elsewhere, timber strip flooring, timber weatherboards and sheet plywood cladding and aluminium joinery. The house is simple in plan and form, and has a 23° pitch profile metal gable roof with 500mm eaves and verge projections.

2.2 The deck

2.2.1 A deck, with timber balustrades and spaced timber decking, extends from the north corner recess along the northwest elevation. The deck is supported by 100mm x 100mm macrocarpa posts, which extend up to form the balustrade posts. 150mm x 50mm macrocarpa bearers are fixed to both sides of the posts with stainless steel bolts, and support 150mm x 50mm macrocarpa deck joists at 450mm centres. At the south-western half of the deck, the deck joists extend back by about 800mm beneath the exterior walls to meet the house bearers.

2.2.2 At the north-eastern half of the deck, the house joists extend out under the deck by about 400mm, to meet the main deck joists. In this half of the deck, the exterior walls are recessed beneath the roof by 2m, as the north corner of the roof forms a canopy (clad in clear uPVC “Clearlite” roofing) above the deck.

2.2.3 In terms of Matter 2 (the deck timbers), I note that the drawings and specifications call for:

- the deck support posts to be 125mm square radiata pine, treated to H5 and encased, at the bottom, in 450mm diameter concrete
- the bearers supporting the deck joists to be 2/200mm x 50mm macrocarpa at 1950mm centres
- the deck joists to be 150mm x 50mm macrocarpa at 450mm centres.

These timbers appear to be the result of a specific design by a structural engineer, a fact that is relevant to the acceptability (or otherwise) of the smaller dimensioned timbers actually used in the deck construction (refer paragraph 3.2).

2.2.4 The specification calls for the timbers to comply with NZS 3602. Although I understand that there is no dispute that the macrocarpa supplied for the deck framing is heart timber, I have received no evidence of this or whether any timber preservative has been applied to the timber.

2.3 The weatherboards

2.3.1 The cladding that is the subject of this determination is applied to about half of the walls, and consists of horizontal rusticated cedar weatherboards fixed through the building wrap to the framing with timber facings at the corners. The weatherboards have a rough-sawn surface that is not sealed or painted.

2.3.2 The expert noted that he was unable to inspect any of the concealed timber framing, and I note that the specification describes the framing timber as “Chemical free”.

³ New Zealand Standard NZS 3604:1999 Timber Framed Buildings

Given the date of construction and the lack of other evidence, I consider the external wall framing to be untreated.

3. Background

3.1 The authority issued a building consent (No. 55107) on 2 April 2002. I have no records of what, if any, inspections were carried out by the authority during construction although it appears that the project was managed by a firm of civil engineers (“the consultants”).

3.2 A structural engineer (“the engineer”) visited the site on 30 August 2002 and reported on the construction work in a facsimile to the consultant dated 2 September 2002. The engineer noted that construction was at the preline stage, discussed various modifications that required amendments to the approved drawings, including amendments arising from his visit:

...such as ensuring that the macrocarpa posts are 350mm above ground level and adding sub-floor braces, and these should be included on the amended drawings.

I have no information as to the reason for the engineer’s decision to accept a smaller post section and an alternative timber species to what was originally specified as outlined in paragraph 2.2.3. I can only assume that he formed the view that 100mm square posts would satisfy the strength and durability requirements of Clauses B1 and B2, provided that the “macrocarpa posts are 350mm above ground level” and that “sub-floor braces” were added as noted above.

3.3 I have received no further records of inspections until the authority carried out a final inspection on 15 December 2006. The inspection record attached a long list of unfinished items, most of which are not matters in dispute (and are not considered within this determination).

3.4 With regard to the cedar weatherboards (Matter 1), the final inspection record noted (as item 4):

Seal up all cracks and knots in weatherboards and provide means of sealing weatherboards from water penetration.

With regard to the deck timbers (Matter 2), the final inspection record noted (as item 23):

Macrocarpa timber used for structural building eg. deck post, floor joists to decks, continuous floor joists deck to house, all requiring 50 year durability – Macrocarpa is rated in NZS 3602 as 15 year durability. Please note – some existing posts already decaying at bottom.

3.5 The authority issued a notice to fix dated 18 December 2006, which noted the following “Particulars of Contravention or Non-Compliance”:

1. Non-compliance with B2 of NZ Building Code (i.e. Macrocarpa used for structural purpose, deck posts, deck joists, floor joists from under floor extending as deck joists).

2. Non-compliance with E2 of NZ Building Code (i.e. Knotty cedar weatherboards compromising weathertightness which could impact on B2 of NZ Building Code – durability of framing)

The notice to fix required the owner to remedy the non-compliance as follows:

1. Replace all affected timbers or provide means of providing durability for 50 years for item 1 above, and provide means of sealing and waterproofing weatherboards and provide producer statement supporting same for item 2.

3.6 I am not aware of any further correspondence or discussions between the parties. On 16 July 2007, the Department received an application for a determination from the owner.

3.7 As the owner wished to be present during any inspection, the expert's visit to the property was delayed until 24 March 2008.

4. The submissions

4.1 The owner noted in the application that the matters for determination were the "use of macrocarpa timber in the front deck of the dwelling – how much (if any) must be replaced?" and also "Council's objection to use of knotty cedar weatherboards in Notice to Fix".

4.2 The applicant supplied copies of:

- the consent drawings and structural details
- the facsimile from the structural engineer dated 2 September 2002
- the final inspection record dated 15 December 2006
- the notice to fix dated 18 December 2006.

4.3 The authority supplied copies of:

- some of the consent documentation
- the building consent
- the facsimile from the structural engineer dated 2 September 2002
- the final inspection record dated 15 December 2006
- the notice to fix dated 18 December 2006.

4.4 A copy of the application and other evidence was provided to the authority, which made no submission in response.

4.5 The draft determination was sent to the parties for comment on 8 May 2008. The applicant accepted the draft without comment.

4.6 In a letter to the Department dated 23 June 2008, the authority's major concern related to the ongoing durability of the deck joists. It said:

We have real concerns about the effectiveness of "application of any preservative type" to deck members, specifically where the decking lays over the joists and no

coating can be applied successfully to the horizontal edge of the joist. This is an area where, because of long periods of damp exposure, premature decay is very likely to happen in our hot, humid Northland environment.

I have considered the authority's concerns and amended the determination accordingly.

5. The expert's report

5.1 As discussed in paragraph 1.6, I engaged an independent expert to provide an assessment of the condition of those building elements subject to the determination. The expert is a member of the New Zealand Institute of Building Surveyors.

5.2 The expert visited the building on 24 March 2008 (refer paragraph 3.7), and furnished a report that was completed on 26 March 2008. The expert noted that his inspection was limited to the deck timbers and weatherboards, and other elements were not assessed. The expert also noted that, despite the coastal nature of the site, the wind was moderated by local land contours and vegetation.

5.3 The weatherboards

5.3.1 The expert noted that the walls are well sheltered by the eaves, with about half being clad in unsealed cedar rusticated weatherboards that generally appeared to be adequately fixed. Although the weatherboards had a large number of knots in the timber, the expert noted "little evidence of cracking or any sign of failure with the cladding at present". The expert also noted that the aluminium windows are face-fixed over the weatherboards, with metal head flashings.

5.3.2 The expert inspected the interior of the house, taking non-invasive moisture readings internally, and no evidence of moisture was observed. The expert took a sample invasive moisture reading in the exterior wall of the main bedroom and noted that the moisture content was 17% "with no sign of decay".

5.3.3 Commenting specifically on the weatherboards, the expert noted that:

- the windows lack scribes at the jambs
- the unsealed cedar weatherboards have a large number of knots
- the deck boards are hard up against the weatherboards.

5.3.4 The expert considered that "proper and routine maintenance of the boards may be sufficient to ensure ongoing compliance with E2 and B2 of the Code", although he gave no opinion on what type of maintenance that might involve.

5.4 The deck timbers

5.4.1 The expert inspected the deck timbers and could see no sign of decay at the time of inspection, although the bottom of part of some posts were covered with soil and could not be seen (refer paragraph 5.5). Invasive moisture testing was carried out to the sub-floor macrocarpa timbers under the house and moisture contents ranged from 15% to 18%. This was compared with invasive readings of 20% within the

macrocarpa exposed beneath the deck. The expert noted that the readings were similar for both areas.

- 5.5 The expert noted that some of the concrete piles beneath the deck posts were covered with soil, which also covered the bottom of the macrocarpa posts. The expert considered that lowering the ground level was likely to be ineffective in the long-term due to the nature of the slope, and the installation of brackets to separate the bottom of the posts from the ground could be considered. I interpret this conclusion as reflecting agreement with the direction of the engineer outlined in paragraph 3.2.
- 5.6 The expert noted that, while the house floor joists that extended under part of the deck are currently in reasonable condition, durability issues could arise in the future.
- 5.7 A copy of the expert's report was provided to each of the parties on 31 March 2008.

6. Evaluation for code compliance

6.1 Evaluation framework

6.1.1 I have evaluated the code compliance of this building by considering the following two broad categories of the building work:

- The weathertightness of the cedar weatherboards (Clause E2) and durability (Clause B2 in so far as it relates to Clause E2).
- The durability of the macrocarpa deck timbers.

In the case of this house, weathertightness considerations are addressed first.

6.1.2 In evaluating the design of a building and its construction, it is useful to make some comparisons with the relevant Acceptable Solutions⁴, which will assist in determining whether the features of these houses are code compliant. However, in making this comparison, the following general observations are valid:

- Some Acceptable Solutions cover the worst case, so that they may be modified in less extreme cases and the resulting alternative solution will still comply with the Building Code.
- Usually, when there is non-compliance with one provision of an Acceptable Solution, it will be necessary to add some other provision to compensate for that in order to comply with the Building Code.

6.2 Evaluation of weatherboards for E2 and B2 Compliance

6.2.1 The approach in determining whether building work is weathertight and durable and is likely to remain so, is to apply the principles of weathertightness. This involves the examination of the design of the building, the surrounding environment, the design features that are intended to prevent the penetration of water, the cladding system, its installation, and the moisture tolerance of the external framing. The Department and its antecedent, the Building Industry Authority, have also described

⁴ An Acceptable Solution is a prescriptive design solution approved by the Department that provides one way (but not the only way) of complying with the Building Code. The Acceptable Solutions are available from The Department's Website at www.dbh.govt.nz.

weathertightness risk factors in previous determinations⁵ (for example, Determination 2004/1) relating to cladding and these factors are also used in the evaluation process.

- 6.2.2 The consequences of a building demonstrating a high weathertightness risk is that building solutions that comply with the Building Code will need to be more robust. Conversely, where there is a low weathertightness risk, the solutions may be less robust. In any event, there is a need for both the design of the cladding system and its installation to be carefully carried out.

6.3 Weathertightness risk

- 6.3.1 In relation to these characteristics I find that this house:

- is built in a high wind zone
- is a fairly simple, building that is two-storey in part
- has unsealed cedar weatherboards fixed directly to the framing
- has eaves and verge projections that protect the weatherboards
- has external wall framing that is not treated to a level that provides resistance to the onset of decay if the framing absorbs and retains moisture.

- 6.3.2 The house has been evaluated using the E2/AS1 risk matrix. The risk matrix allows the summing of a range of design and location factors applying to a specific building design. The resulting level of risk can range from 'low' to 'very high'. The risk level is applied to determine what claddings can be used on a building in order to comply with E2/AS1. Higher levels of risk will require more rigorous weatherproof detailing; for example, a high risk level is likely to require a particular type of cladding to be installed over a drained cavity.

- 6.3.3 When evaluated using the E2/AS1 risk matrix, the weathertightness features outlined in paragraph 6.3.1 show that all elevations of the house demonstrate a low weathertightness risk rating. I note that, if the details shown in E2/AS1 were adopted to show code compliance, the weatherboard cladding on this house would not require a drained cavity.

6.4 Weathertightness performance: weatherboards

- 6.4.1 Generally the weatherboards appear to have been installed in accordance with good trade practice. Taking account of the expert's report, I conclude that remedial work is necessary in respect of the following:

- the lack of scribes at the window jambs
- the lack of a drainage gap between deck boards and the weatherboards
- the lack of any form of sealing of knots in the unpainted cedar weatherboards.

With respect to the sealing of knots, I note that suitable maintenance might involve regular inspections to identify cross grain cracking within the knots, and timely

⁵ Copies of all determinations issued by the Department can be obtained from the Department's website.

application of an appropriate flexible sealant to areas likely to allow the penetration of water.

6.5 Evaluation framework: the deck timbers

6.5.1 The relevant provision of Clause B2 of the Building Code requires that building elements must, with only normal maintenance, continue to satisfy the performance requirements of the Building Code for certain periods (“durability periods”) “from the time of issue of the applicable code compliance certificate” (Clause B2.3.1).

6.5.2 In the case of the macrocarpa deck framing timbers, this durability period is:

- the life of the building, being not less than 50 years, if the building elements provide structural stability to the building, or are difficult to access or replace, or failure of those elements would go undetected during both normal use and maintenance.

6.5.3 In evaluating the design of a building and its construction, it is useful to make some comparisons with the relevant Acceptable Solution⁶, in this case B2/AS1, which provides NZS 3602⁷ as an acceptable solution for meeting the durability requirements of timber used in the building. NZS 3602 specifies H3.2 treated radiata pine for posts and beams exposed to exterior weather conditions and dampness but not in ground contact. The exposed macrocarpa deck framing in this house must therefore be assessed as an alternative solution.

6.5.4 As discussed in paragraph 1.5, I have consulted the specialist advice included in the 2004 expert’s report, which included the following points with respect to the durability of heart macrocarpa veranda posts:

- Vertical posts shed water, reducing the likelihood of the moisture content of the timber being raised to levels suitable for decay to occur.
- Durability test results of heart macrocarpa have indicated that avoiding ground contact significantly increases the expected durability of the timber (with weatherboards exhibiting no decay after 17 years of exposure).
- It is generally accepted that doubling the lesser cross section dimension will double the average life of the timber.
- The particular posts considered were concluded to have equivalent durability to that conferred to radiata pine by preservative treatment to Hazard Class H3.

6.5.5 I note that the veranda posts considered in the 2004 expert’s report were conservatively sized at 200mm square, which is not the case for the 100mm square deck posts considered in this determination. I also note that the engineer was satisfied with the as built dimensions, providing the posts were installed with 350mm clearance above the ground (refer paragraph 3.2).

⁶ An Acceptable Solution is a prescriptive design solution approved by the Department that provides one way (but not the only way) of complying with the Building Code. The Acceptable Solutions are available from The Department’s Website at www.dbh.govt.nz.

⁷ New Zealand Standard NZS 3602:2003 Timber and wood-based products for use in building

6.6 Durability risk

6.6.1 The approach in determining whether the deck timbers are durable involves an examination of their positions within the building, the surrounding environment, the design features likely to limit water penetration into the timber, and the moisture tolerance of the timber used in the decks. The consequences of an element demonstrating low risks and consequences of moisture penetration and damage is that solutions that comply with the Building Code may be less robust.

6.6.2 In relation to these characteristics I find that the deck timbers to this house:

- are installed in a high wind zone
- are a combination of exposed vertical, horizontal and sloping timber members
- are partly situated beneath decks or roof projections more than 500mm deep
- support a deck to the north, which projects out beyond the roof projections and is more than 3m above the ground
- are visible and accessible
- use macrocarpa timber that is not treated with a surface preservative to provide resistance to the onset of decay if the timber absorbs and retains moisture.

I consider these exposures should be conservatively assessed to take account of wind driven rain, and normal maintenance of the deck which might involve periodic hosing down with water.

6.6.3 When assessed according to the weathertightness features listed in paragraph 6.6.2, I consider that the exposed timbers demonstrate variable durability risks according to their position and exposure. These durability risks are:

- low for the deck area that is recessed beneath the clear roofing
- low for the vertical and sloping timber members
- moderate for the joists supporting the length of deck from the corner bay window and the north corner, where the deck is well above the ground and is exposed to rain.

6.7 Durability performance

6.7.1 Generally the deck timbers appear to have been installed in accordance with good trade practice. Taking account of the expert's report, I conclude that remedial work is necessary in order to:

- provide adequate clearance between the bottom of the deck posts and the ground (including the removal of any decayed timber)
- provide appropriate site-applied preservative treatment to all surfaces of the deck framing (including removal of the deck slats to ensure adequate treatment to the tops of the joists)
- provide confirmation that the deck timbers are heart wood.

- 6.7.2 I note the authority's concerns as outlined in paragraph 4.6 in regard to the potential for decay to the deck joists. I therefore consider that, for the higher risk deck joists, further remedial work is required to protect against the risks of damp wind-blown debris building up at the gaps in the deck slats, resulting in extended periods of dampness and moisture penetration into the joist to deck slat junctions.
- 6.7.3 I therefore conclude that further remedial work is necessary for the particular deck joists that support the deck between the corner bay window and the north corner. If these joists are not replaced with appropriately treated timber, the decking should be removed, the joists treated with a preservative, and waterproof cappings (made of copper or similar) should be installed continuously along the top of the joists as an added protection against moisture penetration.
- 6.7.4 I note the expert's comment in paragraph 5.6 in regard to some of the house joists extending out below the deck. However I also note that this part of the deck appears to be situated beneath the deep roof canopy (refer paragraph 2.2.2). I consider that the protection provided by the roof overhang is likely to ensure that the joist extensions will remain durable in these circumstances.
- 6.7.5 With regard to the particular deck timbers in this house, I understand that there is no dispute that the macrocarpa is heart timber. In that case the deck planking itself is in accord with section A of Table 2 of NZS 3620⁸. The deck joists however can be described as falling between section B and section D of Table 1. Consequently I must consider whether there are factors that compensate for the lack of treatment as specified in NZS 3602. The following can properly be considered in this regard:
- The timbers are exposed to the air to assist in drying.
 - The posts and joists are clearly visible and easily accessible for regular inspections.

Matter 1: The weatherboards

7. Discussion

- 7.1 I consider the expert's report establishes that the current performance of the weatherboards is adequate because they are currently preventing water penetration into the building. Consequently, I am satisfied that the weatherboards comply with Clause E2 of the Building Code.
- 7.2 In addition, the weatherboards are also required to comply with the durability requirements of Clause B2. Clause B2 requires that a building continues to satisfy all the objectives of the Building Code throughout its effective life, and that includes the requirement for the house to remain weathertight. Because the weatherboard faults on the house are likely to allow the ingress of moisture in the future, the building work does not comply with the durability requirements of Clause B2.
- 7.3 Because the faults identified with the weatherboards occur in discrete areas, I am able to conclude that satisfactory rectification of the items outlined in paragraph

⁸ New Zealand Standard NZS 3602:2003 Timber and Wood-based Products for Use in Buildings

6.4.1 will result in the weatherboards being brought into compliance with Clauses B2 and E2.

- 7.4 Effective maintenance of claddings is important to ensure ongoing compliance with Clauses B2 and E2 of the Building Code and is the responsibility of the building owner. The Department has previously described these maintenance requirements, including examples where the external wall framing of the building may not be treated to a level that will resist the onset of decay if it gets wet (for example, Determination 2007/60).

Matter 2: The deck timbers

8. Discussion

- 8.1 The deck timbers are required to comply with the durability requirements of Clause B2. Because the faults in the deck timbers are likely to allow moisture damage to the timber in the future, the deck timbers do not comply with the durability requirements of Clause B2.
- 8.2 I take the view that the expert's report and the other evidence, when considered together with the particular risks and circumstances as outlined in paragraphs 6.7.5, have established that, once the defects outlined in paragraphs 6.7.1 and 6.7.3 are satisfactorily rectified, the deck timbers in this house will meet the durability requirements of Clause B2 of the Building Code.
- 8.3 The authority needs to satisfy itself that the design engineer's requirements have been met, for example, with respect to the additional bracing referred to in paragraph 3.2.
- 8.4 I emphasise that each determination is conducted on a case-by-case basis. Accordingly, the fact that particular timber elements have been established as being code compliant in relation to a particular building does not necessarily mean that the same timber elements will be code compliant in another situation.
- 8.5 Effective maintenance is important to ensure ongoing compliance with Clause B2 of the Building Code and is the responsibility of the building owner. Clause B2.3.1 of the Building Code requires that the elements be subject to "normal maintenance", however that term is not defined in the Act.
- 8.6 I take the view that normal maintenance is that work generally recognised as necessary to achieve the expected durability for a given building element. With respect to the deck timbers used in this house, normal maintenance tasks should include but not be limited to:
- regular inspection of the exposed deck timbers
 - regular cleaning and removal of any debris trapped at junctions, in particular at the gaps in the deck slats
 - regular re-application of timber preservative to the deck framing

- regular inspection of the deck posts to ensure that a clearance of 350mm is maintained between the bottom of the post timber and the ground.

9. What is to be done now?

- 9.1 A new notice to fix should be issued that requires the owners to bring the house into compliance with the Building Code, identifying the defects listed in paragraphs 6.4.1, 6.7.1 and 6.7.3 and referring to any further defects that might be discovered in the course of investigation and rectification, but not specifying how those defects are to be fixed. It is not for the notice to fix to specify how the defects are to be remedied and the house brought to compliance with the Building Code. That is a matter for the owner to propose and for the authority to accept or reject.
- 9.2 I would suggest that the parties adopt the following process to meet the requirements of paragraph 9.1. Initially, the authority should issue the new notice to fix. The owner should then produce a response to this in the form of a detailed proposal, produced in conjunction with a competent and suitably qualified person, as to the rectification or otherwise of the specified issues. Any outstanding items of disagreement can then be referred to the Chief Executive for a further binding determination.

10. The decision

- 10.1 In accordance with section 188 of the Building Act 2004, I hereby determine that the weatherboards and the deck timbers do not comply with Clause B2 of the Building Code.

Signed for and on behalf of the Chief Executive of the Department of Building and Housing on 12 August 2008.

John Gardiner
Manager Determinations