# **Determination 2007/134**

# Determination regarding a code compliance certificate for a house with monolithic cladding at 40 Tasman Heights, Ahipara, Kaitaia



### 1. The matter to be determined

- 1.1 This is a determination under Part 3 Subpart 1 of the Building Act 2004<sup>1</sup> ("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 former owner M Aldrich ("the applicant"), acting through an agent, Kaimamaku Consultancy Ltd ("the consultant"), and the other party is the Far North District Council ("the territorial authority"). The new owners of the house, Mr and Mrs Sharp ("the owners") are also considered parties to the determination.
- 1.2 This determination arises from the decision of the territorial authority to refuse to issue a code compliance certificate for 9-year-old alterations and additions to a house because it is not satisfied that the building work complies with clauses B2 and E2 of the Building Code<sup>2</sup> (First Schedule, Building Regulations 1992).

<sup>&</sup>lt;sup>1</sup> The Building Act 2004 is available from the Department's website at www.dbh.govt.nz.

<sup>&</sup>lt;sup>2</sup> The Building Code is available from the Department's website at www.dbh.govt.nz.

1.3 The matters for determination are whether:

# 1.3.1 Matter 1: The cladding

The cladding as installed on the house ("the cladding") complies with clause E2 "External Moisture" of the Building Code. By "the cladding as installed" I mean the components of the system (such as the backing materials, the flashings, the joints and the plaster and/or the coatings) as well as the way the components have been installed and work together.

#### 1.3.2 Matter 2: The durability considerations

The elements that make up the part of the alterations and additions comply with Building Code clause B2 "Durability", taking into account the age of the building work consented in 1998.

- 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"), and the other evidence in this matter. I have evaluated this information using a framework that I describe more fully in paragraph 7.1.
- 1.5 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 appropriate certificate – certificate of acceptance, or code compliance certificate?

- 2.1 The territorial authority has offered the applicant a certificate of acceptance once outstanding matters are completed (refer paragraph 4.6).
- 2.2 Section 437 of the Act makes transitional provision for the issue of a certificate of acceptance in certain circumstances. One of these is where a building consent was required under the former Act and a building consent was not obtained. A second provision is where a building certifier is unable or refuses to issue either a building certificate under section 56 of the former Act or a code compliance certificate under section 95 of the current Act. In both of these circumstances a territorial authority may, on application, issue a certificate of acceptance. In this instance neither provision applies, and I therefore consider that a certificate of acceptance is not appropriate for this building work.

# 3. The building

3.1 The building work consists of major alterations and extensions to an existing house situated on an excavated north-sloping site, which is in a high wind zone for the purposes of NZS 3604<sup>3</sup>. The original small single-storey concrete block house appears to have been built around the 1960's and extended with timber-framed walls towards the northwest at some later date.

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<sup>&</sup>lt;sup>3</sup> New Zealand Standard NZS 3604:1999 Timber Framed Buildings

3.2 The alterations considered in this determination are as follows:

# 3.2.1 The 1998 building work (building consent No. BC 981020)

The 1998 building work included the addition of an upper level above the original concrete block walls, with the upper floor extended as a wing towards the southwest to provide a garage with open carport space below. On completion, the house had low-pitched metal roof cladding, internal gutters, monolithic-clad parapets to all walls, monolithic-clad deck upstands with top-fixed metal balustrades and a timber pergola above this deck.

#### 3.2.2 The 2006 remedial work (amendment to the building consent No. BC 981020)

The remedial work undertaken in 2006 included the:

- replacement of the roof and parapets with a hipped roof with wide eaves
- removal of the deck pergola
- replacement of the deck upstands with new open balustrades
- installation of a new deck membrane.
- 3.3 The resulting house is two storeys high, with a large deck area to the southeast upper level. The construction of the house is generally conventional light timber frame, with a concrete slab and foundations to the original house, timber pole foundations to the garage wing, aluminium windows, plastered concrete block walls to most of the lower walls and monolithic cladding elsewhere. The house is moderately complex in plan, with a simple 15° pitch asphalt-shingle hipped roof that has eaves projections of more than 900mm overall. Several clear polycarbonate roofs extend as lean-to canopies or sheds from the lower level.
- 3.4 A large upper level deck, with a membrane floor and metal balustrades, sits above the southeast timber-framed living areas of the original house and extends around to the northeast side, where it is recessed beneath the roof. The open metal balustrades are fixed and sealed to small membrane-covered "pedestals". The south end of the deck is bounded with a monolithic-clad stepped wing wall, and similar wing walls extend to the southwest from the upper level garage. Below the deck, timber pergolas extend to the northeast and the southeast, with the latter roofed over with clear polycarbonate sheet.

#### 3.5 Timber treatment

- 3.5.1 Given the apparent age of the original house, I consider that the original timber framing is likely to be boric treated.
- 3.5.2 I have received no evidence as to the treatment of the exterior timber framing used in the 1998 building work. However, I note that the consultant has stated that the 1998 exterior framing was spot-tested and "found to contain boron treatment which was typical of all H1 treated framing available at the time of construction". However, given the date of the 1998 building work, I am unable to determine the particular level and type of treatment that is described as H1.

3.5.3 The specification for the remedial work states that "no kiln-dried timber or its surface treated derivatives will be used in this remediation", and the consultant has stated that the 2006 remedial work used H3.2 treatment for all structural timber, with the trusses treated with "H1.2 wet boron". I am therefore prepared to accept that the framing to the 2006 remedial work is likely to be treated to a level that will provide resistance to fungal decay.

- 3.6 The cladding is a monolithic cladding system that appears to be what is described as stucco plaster over a non-rigid backing. In this instance, the plaster appears to be reinforced with metal lathe and is fixed through the building wrap directly to the framing timbers. The stucco plaster is extended down over the original concrete block walls. The 2006 remedial work included fibreglass mesh reinforced patching to the plaster and complete repainting of the cladding. I have seen no evidence of producer statements or warranties for the stucco cladding.
- 3.7 The new membrane over-laying the 1998 deck membrane is a liquid-applied product which is fibreglass reinforced. The membrane material is guaranteed for 15 years, and the licensed applicator has provided a warranty, dated 31 July 2006, for the membrane installation.

# 4. Background

- 4.1 The territorial authority issued a building consent (No. BC 981020) in March 1998, and carried out two inspections during construction, the second being a pre-line inspection on 23 June 1998. It appears that the building work was completed during 1998, although a final inspection was not undertaken at that time.
- 4.2 There appear to be no records of any further inspections until 26 April 2005 when the territorial authority carried out a final inspection that identified a number of defects, including a number of significant items relating to the cladding. In a letter to the applicant dated 28 April 2005, the territorial authority listed the defects identified during the final inspection, which included the requirement for a "weathertightness expert to review cladding system".
- 4.3 The territorial authority did not issue a Notice to Rectify under the Building Act 1991 or a notice to fix under section 164(2) of the Building Act 2004.
- 4.4 The applicant commissioned the consultant to inspect and report on the cladding. The consultant produced a detailed report titled "Cladding assessment and code compliance issues July 2005", which identified various weathertightness defects, sources of moisture penetration, high-risk details, and an assessment of the house design as having a high to very high weathertightness risk. The report included recommendations for repairs, together with remedial options for design changes to reduce the long-term weathertightness risks for the house.
- 4.5 A detailed proposal for the remedial alterations and repairs was subsequently developed, and the consultant submitted this to the territorial authority for approval on 1 February 2006. The work was subsequently carried out as an amendment to the 1998 building consent. According to the consultant, the territorial authority inspected the remedial work during construction.

4.6 The territorial authority carried out another final inspection on 27 March 2006 and, in a letter to the applicant dated 20 April 2006, stated that a code compliance certificate could not be issued as:

Risk matrix score and Building Code require a cavity system for the monolithic cladding.

Lack of flashings on windows in compliance with E2.

Lack of inspection records - noted

Deck falls not 1:40 for a membrane deck.

Lack of sufficient upstand in deck membrane.

A Certificate of Acceptance can be issued once the following Items have been attended to or a determination from the Department of Building And Housing can be applied for to issue the Code Compliance Certificate.

The territorial authority went on to list 6 other items still outstanding from its first final inspection in 2005 (refer paragraph 4.2), and said that a certificate of acceptance could be issued once the outstanding matters had been attended to.

- 4.7 Following a meeting and further correspondence with the territorial authority, the consultant responded to the territorial authority in a letter dated 15 May 2006. The consultant considered that as the building consent was issued in 1998 "only codes and standards pre-dating 10 March 1998 may be used to assess the compliance of the structure". The consultant raised the following points:
  - Although no risk matrix existed in 1998, the new roof and deck alterations have significantly reduced the weathertightness risk of the house.
  - The stucco cladding was installed to current practice and requirements in 1998, and was not the cause of moisture ingress.
  - The windows included proprietary flashings in 1998, and the recent replastering ensures the long-term integrity of the joinery installation.
  - The inspection records indicate a pre-line inspection in 1998, during which the deck membrane should have been inspected and approved.
  - The original building consent approved the falls to the membrane deck.
  - The cladding assessment in July 2005 established that the deck membrane clearly under-flashes the cladding although it cannot now be seen.
  - The documentation for the amendments to the building consent covers all of the changes to the original consent drawings.
  - The consented building work is not appropriate for a certificate of acceptance.

#### The consultant concluded:

The owners have gone to great lengths and expense to satisfy the requirements of the Building Code and with the information before it the FNDC should be in a position to verify the compliance of the building and thus issue the CCC.

4.8 The territorial authority carried out a further final inspection on 4 September 2006, and, in a letter to the applicant dated 16 October 2006, again refused to issue a code compliance certificate saying:

Our concerns with regard to monolithic claddings and the membrane deck and listed certain weathertightness risk factors identified with the building, together with three items outstanding from the letter dated 28 April 2005 items 2, 5, 10. Due to the risk factors and defects, we could not be satisfied on reasonable grounds that the cladding system complied with clauses E2 and B2 of the Building Code

The territorial authority provided a list of risk factors and defects, which included:

- 525 mm eaves
- an exposed upper level deck
- direct fixed cladding
- untreated timber framing
- the risk matrix score requirement for a cavity system
- lack of fall to the membrane deck
- insufficient upstand in the deck membrane
- lack of inspection records.

#### The territorial authority concluded:

A certificate of Acceptance can be issued once the following three items have been attended to, or a determination from the Department of Building and Housing can be applied for to issue the Code Compliance Certificate.

The following items will need to be attended to:

- 1. Terminal vent to be extended 1.0m above up stair opening window and remove air admittance valve.[item 2]
- 2. Barrier on deck over 1.0m above ground.[item 5]
- 3. Producer statement from decking applicator required.[item 10]
- 4.9 The consultant responded in a letter dated 1 November 2006, noting that the current code clauses do not apply to this building consent and including the following points:
  - The eaves are more than 900 mm wide.
  - The upper deck is sheltered by the roof projections.
  - The stucco cladding was installed to 1998 requirements and predates cavity requirements.
  - The external framing was found to contain boron treatment
  - The risk matrix is irrelevant for the age of the construction 1998
  - The windows included proprietary flashings in 1998, and the recent replastering ensures the long-term integrity of the joinery installation.
  - The falls to the membrane deck were clearly shown and approved in the original building consent.
  - The upstand to the deck membrane cannot now be seen, so cannot be deemed inadequate.

• The inspection records indicate a pre-line inspection in 1998, during which the deck membrane should have been inspected and approved.

• The consented building work is not appropriate for a certificate of acceptance.

The consultant noted that the other remaining items noted by the territorial authority had now been completed.

4.10 The territorial authority issued a certificate of acceptance to the applicant. The certificate of acceptance said:

The territorial authority . . . is satisfied to the best of its knowledge and belief and on reasonable grounds, that, in so far as it can ascertain, the building work below complies with the building code:

- Extension to dwelling excluding monolithic cladding not over a cavity.
- Deck excluding insufficient fall minimum 1:40.

The territorial authority was only able to inspect the following parts of the building work and this certificate is qualified as follows:

• Extension to dwelling excluding above items.

The certificate of acceptance contained the condition:

Code compliance certificate can be issued when the Department . . . issues a determination

It is no known whether the certificate of acceptance was requested by the applicant.

- 4.11 The Department received an application for a determination on 20 April 2007 and sought additional information that was received on 2 May 2007.
- 4.12 In a letter to the Department dated 17 May 2007, the consultant noted that the house had been sold and the applicant was therefore no longer in a position to approve the use of invasive testing during the expert's assessment of the house (refer paragraph 6.5).

#### 5. The submissions

- 5.1 The consultant forwarded copies of:
  - the building consent and inspection summary for the 1998 work
  - the cladding assessment report dated July 2005
  - the consent amendment documentation for the remedial work
  - the correspondence with the territorial authority
  - various warranties, technical data and other statements.
- 5.2 The territorial authority made no submission.
- 5.3 Copies of the consultant's submission and other evidence were provided to the other parties, who made no submissions in response.
- 5.4 The draft determination was sent to the parties on 8 August 2007. The draft was issued for comment and for the parties to agree a date when the building elements,

excluding the elements installed under the amendment to the building consent issued in 2006, complied with Building Code Clause B2 Durability.

- In a letter to the Department dated 21 August 2007, the consultant nominated January 1999 as the date when compliance with clause B2 was achieved and accepted the draft while noting some minor amendments, which included:
  - Spot-testing confirmed boron in the 1998 timber adjacent to earlier leaks.
  - For the remedial work, all structural timber was H3.2 and trusses were wet boron H1.2.
  - The territorial authority could not supply inspection records of the remedial work, although inspections had been carried out.

I have amended the determination as appropriate.

- 5.6 The territorial authority responded to the draft determination in a letter to the Department dated 5 November 2007. The letter accepted the draft and noted that the territorial authority had issued a certificate of acceptance in response to what it believed to be repair work carried out without a building consent. In an email to the Department, dated 17 November 2007, the territorial authority also confirmed that it accepted that compliance with clause B2 Durability was achieved on 1 January 1999.
- 5.7 In correspondence to the Department, dated 7 and 16 November 2007, the consultant disputed that any remedial work had commenced prior to the amendment of the original consent.

# 6. The expert's report

- As discussed in paragraph 1.4, 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.
- The expert inspected the house on 3 July 2007, and furnished a report that was completed on 9 July 2007. The expert observed no evidence of general cracking to the main cladding but noted that the quality of finish to the plasterwork was inconsistent, with the remedial work appearing to be higher quality than the 1998 plasterwork. The expert noted that the roof appeared satisfactory, penetrations through the cladding appeared to be adequately sealed, the new deck balustrades and membrane appeared satisfactory (despite some limited ponding), the lower pergolas had been spaced out from the cladding (as part of the 2006 remedial work), and the house appeared to be well maintained.
- 6.3 The expert observed that the building work varied significantly from the original consent drawings. However, I note that the approved consent drawings for the remedial work have recorded these changes.
- 6.4 The expert noted that most of the windows in timber-framed walls were semirecessed with metal head flashings. The recessed windows in the concrete block walls appeared to be installed into the original openings. The expert did not carry

out destructive testing to investigate flashings, but noted that the consultant had several photographs showing windows with uPVC flashings apparent (prior to the 2006 remedial work).

- 6.5 The expert inspected the interior of the house and no evidence of moisture was observed. The expert was unable to undertake invasive moisture testing (refer paragraph 4.12), so he took non-invasive moisture readings internally and externally around the house and some elevated readings were noted at openings in the timber-framed section of the original ground floor as follows:
  - 26% beside the ranch sliders to the northeast of the lower living area
  - 23% and 50% below the southeast window to lower kitchen
  - 22% beside the doors to the lower northeast bedroom (I note that the walls to this area appear to be concrete block).
- 6.6 Commenting specifically on the cladding, the expert noted that:
  - the windows to the timber-framed southeast end of the ground floor appear to be inadequately flashed, with moisture penetration apparent in some locations
  - the timber slats of the lower decks butt against the plaster, with no allowance for drainage
  - the horizontal inter-storey joint is not continuous around all walls
  - there are cracks at the junctions of the wing walls and the garage.
- 6.7 The expert made the following additional comments:
  - While there is no ground clearance below the plaster to the northwest wall, this wall is concrete block and unlikely to suffer damage as a consequence.
  - While clearances from the upper deck floor to the inside floor level and the bottom of the plaster are limited, the junction is sheltered by the 900mm eaves.
- 6.8 The expert also observed no evidence that vertical control joints had been installed in several walls where dimensions exceed the 4m length limit recommended in NZS 4251<sup>4</sup>. The expert noted that the garage is supported on timber pole foundations, but could see no evidence of movement cracking resulting from the omission of control joints (refer paragraph 7.3.3).
- A copy of the expert's report was provided to each of the parties on 12 July 2007.

# 7. Evaluation for code compliance

#### 7.1 Evaluation framework: exterior cladding

7.1.1 In evaluating the design of a building and its construction, it is useful to make some comparisons with the relevant Acceptable Solutions<sup>5</sup>, which will assist in

<sup>&</sup>lt;sup>4</sup> New Zealand Standard NZS 4251: Solid plastering; Part 1: 1998 Cement plasters for walls, ceilings and soffits

<sup>&</sup>lt;sup>5</sup> 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.

determining whether the features of the building work 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.
- 7.1.2 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 weathertightness risk factors in previous determinations (for example, Determination 2004/1) relating to cladding and these factors are also used in the evaluation process.
- 7.1.3 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.

#### 7.2 Weathertightness risk

- 7.2.1 In relation to these characteristics I find that this house:
  - is built in a high wind zone
  - is a maximum of two storeys high
  - is moderately complex in plan, but has a simple roof form
  - has monolithic cladding fixed directly to the framing, but has concrete block walls to most of the lower level
  - has eaves projections of more than 900mm above all walls
  - has an upper level deck with a membrane floor and open balustrades, situated above living areas below
  - has external wall framing, most of which is likely to be treated to a level that
    provides resistance to the onset of decay if the framing absorbs and retains
    moisture.
- 7.2.2 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

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<sup>&</sup>lt;sup>6</sup> Copies of all determinations issued by the Department can be obtained from the Department's website.

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.

7.2.3 The weathertightness features outlined in paragraph 7.2.1 show that two elevations of this house demonstrate a low weathertightness risk rating and two elevations a moderate risk rating. E2/AS1 requires a drained and ventilated cavity to be provided for stucco cladding irrespective of the risk rating.

#### 7.3 Weathertightness performance: exterior cladding

- 7.3.1 Generally the cladding appears to have been installed in accordance with good trade practice. However, I accept the expert's opinion that remedial work is necessary in respect of the following:
  - the ground floor windows and doors to the timber-framed walls
  - lack of provision for drainage between the cladding and timber decking
  - inadequate horizontal inter-storey joint to some walls
  - the junctions of the wing walls with the garage wall.
- 7.3.2 I note the expert's comments in paragraph 6.7, and accept that these areas are adequate in the circumstances.
- 7.3.3 I note the expert's comment in paragraph 6.8 with regard to the apparent lack of vertical control joints to the cladding of several walls. With regard to the particular cladding to this house, I consider that the following factors compensate for the lack of control joints:
  - While the garage wing is supported on timber pole foundations, and this would not usually be acceptable, these walls are single storey and sheltered beneath very wide eaves of more than 900mm. This wall has met code requirements to date.
  - The stucco cladding has generally been installed according to good trade practice and, at the time of the consultant's cladding assessment in 2005 (refer paragraph 4.4), had been in place for about 7 years with no apparent signs of cracking related to the omission of control joints.
  - During the period since construction, all drying shrinkage in the plaster and supporting framing will have likely occurred, and the cladding's future performance will be governed solely by response to environmental factors such as imposed temperature and moisture effects, wind, earthquake forces and seasonal foundation movements.

I therefore consider that, due to the particular characteristics of this building, the cladding as installed is adequate, without the retrofitting of the omitted control joints that would be required in the general case by NZS 4251, the Code of Practice for solid plastering.

7.3.4 Notwithstanding the fact that the cladding is fixed directly to the timber framing, thus limiting drainage and ventilation behind the cladding, I have noted certain

compensating factors that assist the performance of the cladding in this particular case:

- Apart from the noted exceptions, the cladding is installed to good trade practice.
- The 2006 remedial work has successfully addressed the most significant risks and problems that were apparent in the 1998 building work.
- The house has very generous 900mm eaves above all walls and some additional roof projections, which provide good protection to the cladding areas below them.
- The external wall and deck framing is likely to be treated to a level that will help prevent decay if the framing absorbs and retains moisture.
- 7.3.5 I consider that these factors help compensate for the lack of a drained cavity to the walls, and can assist the building work to comply with the weathertightness and durability provisions of the Building Code.
- 7.3.6 I also note that a door from the upper level garage appears to open out above a lower level polycarbonate lean-to roof, and I draw this to the attention of the territorial authority for investigation of the safety of this situation.

# Matter 1: The cladding

#### 8. Discussion

- 8.1 It is noted that the expert took non-invasive moisture readings (refer paragraphs 4.12 and 6.5). The results from non-invasive testing are not as reliable as invasive testing. However, in this particular case due to the magnitude of the test results, and the close correlation between the observed building defects and the elevated moisture readings, I am of the opinion that the non-invasive moisture readings can be relied upon as indicative of moisture entry in this instance.
- 8.2 I consider the expert's report establishes that the current performance of the cladding is not adequate because it is allowing water penetration into the building at present in isolated instances associated with joinery installation. Consequently, I am satisfied that the building work does not comply with clause E2 of the Building Code.
- 8.3 In addition, the building work is 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 cladding faults on the alterations and additions are likely to continue to allow the ingress of moisture in the future, the house does not comply with the durability requirements of clause B2. I have given further consideration to the question of B2 compliance under Matter 2 of this determination.
- 8.4 Because the faults identified with the cladding system occur in discrete areas, I am able to conclude that satisfactory rectification of the items outlined in paragraph

- 7.3.1 will result in the building becoming and remaining weathertight and in compliance with clauses B2 and E2.
- 8.5 I emphasise that each determination is conducted on a case-by-case basis.

  Accordingly, the fact that particular cladding systems have been established as being code compliant in relation to a particular building does not necessarily mean that the same cladding systems will be code compliant in another situation.
- 8.6 Effective maintenance of claddings (in particular monolithic cladding) 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 durability considerations

#### 9. Discussion

- 9.1 There are concerns about the durability, and hence the compliance with the building code, of certain elements of the building taking into consideration the age of the of the building work completed in 1998. However I note that the territorial authority's inspection records indicate that no final inspection was undertaken in 1998 to verify compliance with clause B2 at that time.
- 9.2 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).
- 9.3 These durability periods are:
  - 5 years if the building elements are easy to access and replace, and failure of those elements would be easily detected during the normal use of the building
  - 15 years if building elements are moderately difficult to access or replace, or failure of those elements would go undetected during normal use of the building, but would be easily detected during normal maintenance
  - 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.
- 9.4 It is not disputed, and I am therefore satisfied that all the building elements, excluding the elements installed under the amendment to the building consent issued in 2006, complied with clause B2 on 1 January 1999. This date has been agreed between the parties, refer paragraphs 5.5 and 5.6.
- 9.5 In order to address these durability issues when they were raised in previous determinations, I sought some clarification of general legal advice about waivers and

modifications. I received that clarification and the legal framework and procedures based on the clarification are described in previous determinations<sup>7</sup> (for example, Determination 2006/85) and are used to evaluate the durability issues raised in this determination.

- 9.6 I continue to hold that view, and therefore conclude that:
  - (a) the territorial authority has the power to grant an appropriate modification of clause B2 in respect of all the building elements
  - (b) it is reasonable to grant such a modification, with appropriate notification, because in practical terms (apart from the 2006 remedial work) the building is no different from what it would have been if a code compliance certificate for the building work had been issued in 1999.
- 9.7 I strongly recommend that the territorial authority record this determination and any modifications resulting from it, on the property file and also on any LIM issued concerning this property.

#### 10. The decision

- In accordance with section 188 of the Building Act 2004, I hereby determine that the cladding does not comply with clauses E2 and B2 of the Building Code, and that the items listed in paragraph 7.3.1 are not code-compliant. Accordingly, I confirm the territorial authority's decision to refuse to issue a code compliance certificate.
- I note the three other non-complying matters raised by the territorial authority (refer paragraph 4.8) that are separate to the matter to be determined, and the possible matter of non-compliance identified in paragraph 7.3.6.
- 10.3 I also determine that:
  - (a) all the building elements installed in the alterations and extensions, apart from the 2006 remedial work and the items that are to be rectified as described in this determination, complied with clause B2 on 1 January 1999.
  - (b) the building consent is hereby modified as follows:

The building consent is subject to a modification to the Building Code to the effect that, clause B2.3.1 applies from 1 January 1999 instead of from the time of issue of the code compliance certificate for all building elements constructed under the original building consent except those items that were constructed under the amendment to the building consent issued in 2006 and including any items to be rectified as described in Determination 2007/134 and contained in the notice to fix arising from the determination.

(c) the territorial authority is to issue a code compliance certificate in respect of the building consent as amended, once the matters set out in paragraph 7.3.1, together with any other outstanding matters (refer paragraphs 4.8 and 7.3.6), have been fixed to its satisfaction.

<sup>&</sup>lt;sup>7</sup> Copies of all determinations issued by the Department can be obtained from the Department's website.

I also note that that the territorial authority has not issued a notice to fix. The territorial authority should now issue a notice to fix that requires the owners to bring the building into compliance with the Building Code, incorporating the defects listed in paragraph 7.3.1 including any other outstanding matters (refer paragraphs 4.8 and 7.3.6) and referring to any further defects that might be discovered in the course of rectification. The notice to fix should not specify how those defects are to be fixed. That is a matter for the owner to propose and for the territorial authority to accept or reject.

I would suggest that the parties adopt the following process to meet the requirements of paragraph 10.4. Initially, the territorial authority should issue the 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.

Signed for and on behalf of the Chief Executive of the Department of Building and Housing on 4 December 2007.

John Gardiner Manager Determinations