

Determination 2007/6

Dispute about a code compliance certificate for a building with a monolithic cladding system at 2/48 Te Arawa Street, Orakei



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, Determinations Manager, Department of Building and Housing (“the Department”), for and on behalf of the Chief Executive of that Department. The applicant is one of the joint owners Mr Lawrence (“the applicant”) and the other party is the Auckland City Council (“the territorial authority”).
- 1.2 The matters for determination is whether the territorial authority’s decision is correct with regard to declining to issue a code compliance certificate for an 11-year-old house because it was not satisfied that:

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

- the monolithic cladding to the walls of the house comply with clauses B2 “Durability” and E2 “External Moisture” of the Building Code² (First Schedule, Building Regulations 1992), and
- other elements of the building comply with clause B2.

1.3 The questions to be determined are:

Matter 1: The cladding

Whether I am satisfied on reasonable grounds that the wall cladding as installed to the external walls of the building (“the cladding”), complies with the Building Code (see sections 177 and 188 of the Act). By “the wall cladding as installed” I mean the components of the system (such as the backing materials, the flashings, the joints and the coatings) as well as the way the components have been installed and work together.

Matter 2: The durability considerations

Whether the elements that make up the whole of the building work, other than those items that are to be rectified under Matter 1, and which have 5 or 15-year durability requirements, comply with clause B2 of the Building Code considering the time that has elapsed since the elements were constructed.

1.4 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 dispute (“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. I have not considered any other aspects of the Act or the Building Code.

2. The building

2.1 The building work consists of a detached house situated on a flat site, which is in a high wind zone for the purposes of NZS 3604. The house is three storeys high, with a single-storey hipped roof garage wing to the southwest. Construction is conventional light timber frame, with concrete slabs, concrete block foundations, aluminium windows and monolithic wall cladding. The house roof is stepped, with flat roofs at different levels and sloping lean-to roofs against the upper walls to the south and west elevations. The flat roofs have membrane cladding, internal gutters and monolithic-clad parapets. The 25° pitch garage and lean-to roofs are clad in concrete tiles and have no eaves or verge projections, apart from a 1.0m roof overhang above the garage doors. The house shape is complex in plan and form, with curved walls, stepped parapets, corner windows and projecting faceted windows. The entrance area is recessed into the southeast corner and a pergola, with monolithic-clad columns and flying beams and exposed timber joists, projects above the entry recess.

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

- 2.2 A paved deck projects to the north from the first floor living area, with a smaller paved deck from the master bedroom above. Monolithic-clad columns support the lower deck, and extend up to support monolithic-clad flying beams. Timber joists support the small upper deck and extend out to the flying beams to form a pergola. The outer edges of both decks are curved, with sections of monolithic-clad balustrades at the curves and metal balustrades between, which are fixed to monolithic-clad deck upstands. A tiled staircase with metal balustrades follows the curve of the lower deck to provide access from the ground.
- 2.3 The expert has noted that the applicant showed him receipts describing the wall framing as “wet frame timber”, which indicated that the framing was boracic treated. The specification calls for the framing timber to be “No 1 or No 2 or Building Radiata Pine as appropriate Treated” to comply with NZS 3602. Based on this evidence, and given the date of construction, I accept that the wall framing is likely to be boracic treated.
- 2.4 The cladding is a monolithic cladding system described as solid plaster over a solid backing. In this instance it is a “Duraplast” system by Plaster Systems Ltd (“the manufacturer”), which incorporates 4.5mm thick “Hardibacker” backing sheets fixed through the building wrap directly to the framing timbers. A 19mm layer of insulating plaster is applied over the sheets, followed by a fibreglass-reinforced layer of “Multiplast” plaster and a final “Ezytex” plaster sponge finish. The Duraplast technical information dated March 1995 noted that control joints should be spaced at “20 metres horizontally and two storeys vertically”. The cladding was subject to BRANZ appraisal 309 (1995), which has since been withdrawn.
- 2.5 I have seen no evidence of producer statements or warranties for the cladding.

3. Sequence of events

- 3.1 The territorial authority issued a building consent on 16 September 1994 and made various inspections during the course of construction, including preline in March 1995 and postline in June 1995.
- 3.2 It appears that the house was substantially complete and occupied during 1995, with the owners completing finishing and landscaping work over time. According to the applicant, window leaks led to subsequent removal of most of the windows, which were reinstalled with new flashings.
- 3.3 In 2005, the need to sell the house led to a code compliance certificate being sought, and the applicant was advised that the age of the construction would be a problem. In a letter to the applicant dated 5 April 2005, the territorial authority noted that it could not delegate authority for approving code compliance to any third party and a final inspection was subsequently carried out on 16 May 2005.
- 3.4 In a letter to the applicant dated 23 May 2005, the territorial authority stated that it could not be satisfied on reasonable grounds that the house complied with the building code in a number of respects and recommended:

... that you engage the services of a suitably qualified person to review the attached NTF and to develop a proposed scope of work, which in their view would address all the areas of contravention. Council will then review this proposal and if it agrees with it, will then advise you as to whether a building consent needs to be applied for.

- 3.5 The territorial authority attached a photographic record of the final inspection and a notice to fix dated 23 May 2005. The particulars of contravention identified items that were not installed in accordance with the manufacturer's instructions, the acceptable solutions of the building code or to accepted trade practice. The notice also included a requirement to provide drainage of the cladding or a moisture warning system, and outlined the durability requirements for various elements.
- 3.6 Following a meeting on 23 August 2005 with the territorial authority, concerning the items in the notice to fix, the applicant sought advice from the cladding manufacturer and engaged Dr Kelvin Walls of Building Code Consultants Ltd ("the consultant") to report on the wall cladding.
- 3.7 The consultant provided a report dated 27 February 2006, in which he commented on the items in the notice to fix and recommended remedial work where he considered necessary, including the installation of a moisture monitoring system.
- 3.8 In a letter to the applicant dated 16 March 2006, the manufacturer agreed with the consultant's recommendations and suggested some remedial work on some of the items identified by the territorial authority, but advised that a 6mm gap at the base of the cladding was not necessary and could not be achieved without major alteration. The manufacturer noted:
- In conclusion if these, and all remedial works advised by Building Code Consultants Ltd are carried out and a Plaster Care maintenance program adhered to, there is no reason why the plaster system would not go on performing for a further 15 years.
- 3.9 In a letter to the territorial authority dated 23 March 2006, the applicant attached a scope of remedial work proposed to be undertaken on each item in the notice to fix, which were based on the recommendations of the consultant and the manufacturer.
- 3.10 In a letter to the applicant dated 19 April 2006, the territorial authority responded as follows to the proposed scope of work in relation to the items of the notice to fix:
- 2.1 (a) Control joints – no action required.
 - 2.1 (b) Capillary gap – still required.
 - 2.1 (c) Cladding clearances – proposal acceptable in principle.
 - 2.1 (d) Bottom of cladding – remedial work still required.
 - 2.2 (a) Cracking – proposal acceptable.
 - 2.2 (b) Deck and roof outlets – proposal acceptable in principle.
 - 2.2 (c) Ground levels – proposal acceptable in principle.
 - 2.3 (a) Horizontal to vertical junctions – proposal acceptable in principle.
 - 2.3 (b) Kickout flashings – proposal acceptable in principle.

- 2.3 (c) Roof to wall clearances – further information sought.
- 2.3 (d) Penetration sealing – proposal acceptable.
- 2.3 (e) Cladding finishing – proposal acceptable.
- 2.3 (f) Flat surfaces – slope still required.
- 2.3 (g) Handrails – proposal acceptable in principle.
- 2.3 (h) Deck joists – no action required.
- 2.4 Drainage and ventilation – proposal acceptable.
- 2.5 Durability – proposals do not adequately address age of construction.

3.11 An application for a determination was received by the Department on 19 June 2006.

4. The submissions

4.1 The applicant noted that the matters for determination were in regard to the need to comply with the following items from the notice to fix dated 23 May 2005:

- 2.1 (b) Capillary gap.
- 2.1 (c) Cladding clearances.
- 2.1 (d) Bottom of cladding.
- 2.2 (b) Deck and roof outlets.
- 2.2 (c) Ground levels.
- 2.3 (a) Horizontal to vertical junctions.
- 2.3 (c) Cladding clearance above tiled stairs.
- 2.5 Durability – whether the provisions can date from construction in 1995.

4.2 The applicant forwarded copies of:

- the drawings and specification
- some of the consent documentation
- a summary of the territorial authority's inspections
- the correspondence with the territorial authority
- the notice to fix dated 23 May 2005
- the reports from the consultant and the cladding manufacturer
- various technical information, producer statements and other statements.

4.3 The territorial authority made a submission in the form of a letter to the Department dated 18 July 2006, which noted that the notice to fix related to six clauses of the building code. (However, I note that the items outlined in the notice to fix relate only to clause B2 and clause E2, so this determination is restricted to these two clauses.)

- 4.4 The territorial authority forwarded copies of:
- some of the consent documentation
 - some of the correspondence with the applicant
 - the notice to fix dated 23 May 2005
 - various producer statements and other statements.
- 4.5 Copies of the submissions and other evidence were provided to each of the parties. Neither party made any further submissions in response to the submission of the other party.
- 4.6 The first draft determination was sent to the parties on 24 October 2006. The draft determination was issued for comment and for the parties to agree a date when all the building elements installed in the house, apart from items that have to be rectified, complied with the Building Code Clause B2 Durability.
- 4.7 The territorial authority responded in a letter to the Department dated 7 November 2006, stating that it did not accept the draft and requested a hearing. In particular, the territorial authority was concerned about the conclusion that the Department had reached with respect to the compliance of the cladding.
- 4.8 Following the hearing, (refer section 6) a second draft determination was sent to the parties on 12 December 2006. In an email to the Department, also dated 12 December 2006, the territorial authority accepted the draft, however, it expressed concern about how the determination identified the building's defects.
- 4.9 The applicants responded by email on 14 December 2006 questioning why a new consent might be required for the remedial work and voicing concerns that "an iterative process" could ensue.
- 4.10 In an email to the Department of 14 December 2006, the territorial authority noted that an amendment to the original consent would be the probable course of action. The territorial authority also agreed that an iterative approach was not desirable.
- 4.11 I have considered the comments of the parties regarding the second draft determination and have amended the determination as I consider appropriate.

5. The expert's report

- 5.1 As discussed in paragraph 1.4, I engaged an independent expert capable of providing an assessment of the condition of those building elements subject to the determination. The expert is a member of the Institute of Building Surveyors.
- 5.2 The expert inspected the claddings on 3 August 2006, and furnished a report that was completed on 9 August 2006. The expert noted that the only significant variation to the consent drawings was the addition of a faceted window to the ground floor northwest bedroom. The expert noted that the cladding showed no discolouration, flaking or evidence of failure and that the "standard of much of the finishing was

good”. The expert noted that the cladding included a 19mm basecoat plaster with polystyrene beads, and a 2.5mm mesh-reinforced finishing plaster coat.

5.3 The expert noted that metal sill flashings had been retrofitted, except for windows on the south elevation which have no sill flashings. The expert also noted that there were 8 specialist corner or faceted windows, where the aluminium window frames were mitred to suit the angles and the glass was silicon-jointed. The expert scraped away a small section of coating at the sill to jamb junction of a ground floor window and noted that the standard Duraplast jamb flashing was installed, with uPVC corner soaker, and the sill flashing upstand extending up behind the sill flange with stop ends at the jambs. The expert also noted that the jamb trim stud was not covered with building wrap. I accept that the location examined is typical of similar locations around the building.

5.4 The expert took non-invasive moisture readings through linings of exterior walls throughout the house, and noted several “borderline” readings around windows. Signs of mildew, which the expert considered were probably due to condensation, were noted in ground floor bedrooms. Invasive moisture readings were taken through the wall cladding, below windows, pergola beams, bottom plates and other risky areas, and a number of elevated readings were noted. I note that the framing is likely to be boron treated, so I have adjusted the readings as appropriate in the following elevated readings:

- 19% in the bottom plate of the ground floor bedroom 2.

Pergolas

- More than 80% in the monolithic-clad flying beam below the timber joist.
- 22% and more than 25% in the monolithic-clad flying beam below the timber joist fixed against the wall cladding above the entrance recess.

Windows

- 20% at the sill of the faceted window in bedroom 3.
- More than 70% in the framing below the faceted staircase window.
- 20% in the trim stud at the cut-out to the window to bedroom 2, with soft timber indicating signs of decay.

Moisture levels above 18% recorded after cladding is in place generally indicate that external moisture is entering the structure.

5.5 The expert made comments on the cladding which included the following items requiring attention:

- The plaster finishes below the paving or ground level in most areas, with no gap and base protection to prevent moisture from “wicking” up through the plaster.
- Some of the corner and faceted windows show signs of leaking at the window frame mitres, with the retro-fitted sill flashings proving to be inadequate to stop moisture from entering the wall framing below.

- The cut-out at the window of bedroom 2 showed that there was no building paper around the jamb trim stud, which shows signs of soft rot.
- There were a small number of cracks to localised stress points in the cladding at the corner of windows.
- The apron flashing to the garage roof lacks a kick-out.
- The cladding above the small flat roofs lacks clearance to the membrane.
- The internal gutter to the flat kitchen roof is blocked, and the base of the cladding is green with mould, which indicates regular wetting and there are no overflow provisions for the two small flat roof areas above the master bedroom, living and kitchen areas.
- The upper deck, and the sides of the lower deck are not sheltered, and the cladding butts against the tiles of the deck floors.
- The tops of the monolithic-clad sections of the deck balustrades and deck up-stands are flat, with top-fixed handrails (that the owner has agreed to modify).
- In both pergolas, the joists are embedded into the flat tops of the monolithic-clad flying beams without sealing or flashing and moisture is penetrating the beam framing, and the end joist of the entrance pergola is embedded into the wall plaster.
- Some pipe penetrations through the cladding are unsealed or poorly sealed.

5.6 The expert made the following additional comments regarding aspects of the building envelope that could be cause for concern but that are demonstrating compliance with code requirements:

- Although the cladding butts against the entrance paving, this area is well drained and sheltered beneath the first floor overhang.
- Although there is reduced clearance to the cladding above the garage roof apron flashing, the slope appears sufficient to prevent blockage of the gap provided.
- While the two outlets to the upper deck have reduced area, the deck is very small and there are no signs of moisture penetration or ponding after 10 years.
- The barge and fascia boards to the garage have been installed prior to plastering but as the moisture measurements adjacent were acceptable the details are adequate.

5.7 The expert noted that the electric earth connection at the laundry door is detached from the earth rod leading to a potential electrical hazard.

5.8 Copies of the expert's report were provided to each of the parties.

6 The Hearing

6.1 The territorial authority requested a hearing, which was held on 7 December 2006 before me. I was accompanied by a Referee engaged by the Chief Executive under section 187(2) of the Building Act 2004. The owners appeared on their own behalf and the territorial authority was represented by two of its officers. Two other staff members of the Department attended. The territorial authority and the owners spoke at the hearing and the evidence from those present enabled me to amplify or clarify various matters of fact that were identified in the first draft determination.

6.2 The territorial authority made written and verbal submissions, which I summarise as follows:

- There is conflict between parts of paragraph 8.2 of the first draft determination and the expert's report.
- The determination should reflect that additional investigative work was required to establish all areas requiring rectification.
- The owners should engage the services of a suitably qualified person to carry out this investigation. While the territorial authority was not prepared to nominate a specific person, a member of the New Zealand Institute of Building Surveyors could be suitable.
- The owner should follow the sequence that the territorial authority nominated at the hearing, and which is described in paragraph 6.5, to ensure that the rectification process is successful.

6.3 The owners made verbal submissions, which I summarise as follows:

- Four experts had already inspected the property and the owners would like the territorial authority to name a person that it considers acceptable to carry out a further examination of the building work.
- The owners were prepared to do all that was reasonably necessary to make the building code compliant.

6.4 In response to the submissions, the Department noted that the determination is based on a diagnostic process, which in this case was an element by element exercise rather than a total removal and reinstatement of the cladding.

6.5 The parties agreed that the following process is to be followed for the rectification of the building, once the final determination is issued:

1. The territorial authority is to issue a new notice to fix.
2. The owners are to engage the services of a suitably qualified and experienced consultant, who is acceptable to the territorial authority, to fully investigate the building work and identify areas of non-compliance.

3. The owner is to prepare a fully detailed scope of work to address the matters raised in the notice to fix. This programme is to be based on the investigation of the consultant and is to be prepared after consultation with that person.
 4. The territorial authority is to discuss the proposed scope of work, and once it is approved to its satisfaction, the remedial work can proceed.
 5. The territorial authority is to inspect the remedial work as it proceeds and when it is satisfied on reasonable grounds that the building is fully code compliant, the territorial authority will issue a code compliance certificate.
- 6.6 The parties also agreed that the durability requirements for the building elements, apart from those items that are to be rectified, would commence from 1 September 1995.

Matter 1: The cladding

7 Evaluation for code compliance

7.1 Evaluation framework

- 7.1.1 In evaluating the design of a building and its construction, it is useful to make some comparisons with the relevant Acceptable Solution³, in this case E2/AS1, which will assist in determining whether the features of this house 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 determinations⁴ (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

³ 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.

⁴ Copies of all determinations issued by the Department can be obtained from the Department's website.

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 three storeys high
- is complex in plan and form, with some specialised window joinery
- has parapets and no eaves or verge projections above most walls
- has two enclosed decks with monolithic-clad balustrades and upstands
- has two pergolas, with monolithic-clad flying beams
- has monolithic cladding, which is fixed directly to the framing
- has external wall framing that is likely to be treated, so providing some resistance to the onset of decay if the framing absorbs and retains moisture.

7.2.2 When evaluated using the E2/AS1 risk matrix, 3 elevations of this house demonstrate a high weathertightness risk and one a very high risk rating. The matrix is an assessment tool that is intended to be used at the time of application for consent, before the building work has begun and, consequently, before any assessment of the quality of the building work can be made. Poorly executed building work introduces a risk that cannot be taken into account in the consent stage but must be taken into account when the building as actually built is assessed for the purposes of issuing a code compliance certificate.

7.3 Weathertightness performance

7.3.1 Generally the cladding appears to have been installed in accordance with good trade practice. However, some junctions, penetrations and edges are not well constructed, and these areas are as described in paragraph 5.5. I accept the expert's opinion that remedial work is necessary in respect of the following:

- inadequate cladding clearances above the ground or paving, the lack of an anti-capillary gap and adequate finish to the base of the cladding
- inadequate weatherproofing of some of the mitred window frames
- lack of adequate building paper to the framing around the windows
- cracks to the cladding
- lack of a kickout at the bottom of the garage roof apron flashing

- lack of adequate overlap of barge and fascia boards to the garage
- inadequate cladding clearances above the small flat roof areas
- blocked internal gutter to the kitchen roof and the lack of overflow provisions to the two small flat roof areas
- lack of cladding clearance above the unsheltered areas of deck tiles
- uncapped flat tops of the monolithic-clad balustrades and deck upstands and the top-fixed handrails to the balustrades and deck upstands
- lack of adequate weatherproofing of the junctions between the monolithic-clad flying beams and the pergola joists
- embedded end joist of the entrance pergola
- unsealed or poorly sealed pipe penetrations
- any other building elements associated with the above that are consequently discovered to be in need of rectification.

7.3.2 I note the expert's comments in paragraph 5.6, and accept that these items are adequate in the circumstances.

7.3.3 I also note the expert's comment in paragraph 5.7 on the earth wire disconnection, and draw this to the attention of the territorial authority.

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:

- The monolithic cladding has generally been installed to good trade practice and to the manufacturer's instructions.
- The external wall framing is likely to be treated to a level that will provide resistance to the onset of decay if the framing absorbs and retains moisture.

7.3.5 I consider that these factors help compensate for the lack of a ventilated cavity and can assist the building to comply with the weathertightness and durability provisions of the Building Code.

8 Discussion

8.1 I am satisfied that the current performance of the cladding is not adequate because it is allowing water penetration into the building at a number of locations at present. Consequently, I am satisfied that the building does not comply with clause E2 of the Building Code.

- 8.2 In addition, the building is 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 life, and that includes the requirement for the house to remain weathertight. Because the cladding faults on the building are likely to allow the ingress of moisture in the future, the house does not comply with the durability requirements of clause B2.
- 8.3 I consider that, because the faults that have been 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 should be expected to result in the building remaining weathertight and in compliance with clauses B2 and E2. Work to correct these items may expose additional associated defects not yet apparent.
- 8.4 Effective maintenance of claddings (in particular of monolithic claddings) is important to ensure ongoing compliance with clauses B2 and E2 of the Building Code and is the responsibility of the building owner. Clause B2.3.1 of the Building Code requires that the cladding be subject to “normal maintenance”, however that term is not defined in the Act.
- 8.5 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 cladding, the extent and nature of the maintenance will depend on the material, or system, its geographical location and level of exposure. Following regular inspection, normal maintenance tasks should include but not be limited to:
- where applicable, following manufacturers’ maintenance recommendations
 - washing down surfaces, particularly those subject to wind-driven salt spray
 - re-coating protective finishes
 - replacing sealant, seals and gaskets in joints.
- 8.6 Although the external wall framing of this building is likely to be treated and will provide some resistance to fungal decay, this building demonstrates high weathertightness risks and periodic checking of its moisture content should also be carried out as part of normal maintenance.
- 8.7 It is emphasised that each determination is conducted on a case-by-case basis. Accordingly, the fact that a particular cladding system has been established as being code compliant in relation to a particular building does not necessarily mean that the same cladding system will be code compliant in another situation.

Matter 2: The durability considerations

9. Discussion

- 9.1 As set out in paragraph 1.2, the territorial authority has concerns about the durability, and hence the compliance with the building code, of certain elements of the building, taking into consideration the completion date of the building sometime in 1995.
- 9.2 The building appears to have been substantially completed during 1995. The territorial authority made various inspections, including a preline inspection in March 1995 and postline in June 1995. No further inspections were carried out by the territorial authority until the final inspection on 16 May 2005.
- 9.3 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).
- 9.4 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.
- 9.5 It is not disputed, and I am therefore satisfied that all the building elements installed in the house, apart from items that have to be rectified as described in paragraph 7.3.1, complied with clause B2 on 1 September 1995. This date was agreed at the hearing, refer paragraph 6.6.
- 9.6 In order to address these durability issues, I sought some clarification of general legal advice about waivers and modifications. I have now received that clarification and the legal framework and procedures based on this clarification are described in previous determinations (for example, Determination 2006/85) and are used to evaluate the durability issues raised in this determination.
- 9.7 I continue to hold the views expressed in the previous related determinations, and therefore conclude that:

- (a) The territorial authority has the power to grant an appropriate modification of clause B2 in respect of all of the elements of the building if the applicant applies for such a modification.
- (b) It is reasonable to grant such a modification, with appropriate notification, because in practical terms the building is no different from what it would have been if a code compliance certificate had been issued in September 1995.

9.8 I strongly recommend that the territorial authority record this determination and any modification resulting therefrom, on the property file and also on any LIM issued concerning this property.

10 The decision

10.1 In accordance with section 188 of the Act, I hereby determine that the monolithic cladding system as installed does not comply with clause E2 of the Building Code. There are a number of items to be remedied to ensure that the house becomes and remains weathertight and thus meets the durability requirements of the code. Consequently, I find that the house does not comply with clause B2. Accordingly, I confirm the territorial authority's decision to refuse to issue a code compliance certificate.

10.2 I also find that rectification of the items outlined in paragraph 7.3.1 will consequently result in the house remaining weathertight and in compliance with clauses B2 and E2. Work to correct these items may expose additional associated defects that are not yet apparent. In this case remediation of these defects will be in addition to the proposed work. All rectification work is to be completed to the approval of the territorial authority.

10.3 I also determine that:

- (a) all the building elements, apart from those items that are to be rectified, complied with clause B2 on 1 September 1995
- (b) should the applicant so request, the territorial authority must modify its decision to issue the building consent to the effect that the building consent is amended 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 September 1995 instead of from the time of issue of the code compliance certificate for all of the building elements except those elements set out in paragraph 7.3.1 of Determination 2007/6.

- (c) once the issues set out in this determination and any others subsequently identified, have been fixed to its satisfaction, and following the request and modification set out in (b) above, the territorial authority is to issue a code compliance certificate in respect of the building consent as amended.

- 10.4 I note that the territorial authority has issued a notice to fix dated 23 May 2005, the requirements of which were subsequently reduced in a letter from the territorial authority dated 19 April 2006. I confirm the requirements outlined in that letter, and add a number of additional items to be rectified, as included in paragraph 7.3.1.
- 10.5 The notice to fix dated 23 May 2005 should now be withdrawn and a new notice to fix should now be issued requiring the owner to bring the house into compliance with the Building Code. The notice to fix may list the items to be rectified but it should not specify how compliance is to be achieved as that is for the owner to propose and for the territorial authority to accept or reject. It is important to note that the Building Code allows for more than one method of achieving compliance.
- 10.6 The parties at the hearing agreed at the hearing to adopt the following process to meet the requirements of paragraph 10.5.
1. The territorial authority is to issue a new notice to fix.
 2. The owners are to engage the services of a suitably qualified and experienced consultant, who is acceptable to the territorial authority, to fully investigate the building work and identify areas of non-compliance.
 3. The owner is to prepare a fully detailed scope of work to address the matters raised in the notice to fix. This programme is to be based on the investigation of the consultant and is to be prepared after consultation with that person.
 4. The territorial authority is to discuss the proposed scope of work and once it is approved to its satisfaction, the remedial work can proceed.
 5. The territorial authority is to inspect the remedial work as it proceeds and when it is satisfied on reasonable grounds that the building is fully code compliant, the territorial authority will issue a code compliance certificate.
- 10.7 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 24 January 2007.

John Gardiner
Determinations Manager