



Determination 2010/88

Second Determination regarding the issue of a notice to fix for a house at 92A Reihana Street, Orakei, Auckland (to be read in conjunction with Determination 2009/62)

Applicant:	Mr L Yang (the owner), represented by an agent
Territorial authority:	Auckland City Council
Site Address:	92A Reihana Street, Orakei, Auckland

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. I have previously described certain matters regarding this house in Determination 2009/62 (“the first determination”) issued on 7 August 2009.
- 1.2 The outcome of the first determination was that the house complied with Clause E2 External Moisture of the Building Code and the authority was to amend a notice to fix (“the first NTF”) in accordance with the findings of that determination. However the authority elected to carry out a further inspection and then to issue another notice to fix (“the second NTF”). The second NTF included a number of matters previously described in the expert’s report completed for the first determination and matters that had been resolved in that determination.
- 1.3 This second determination arises from the decision of the authority to issue the second NTF for the house because it was not satisfied that elements of the building work complied with certain clauses² of the Building Code (First Schedule, Building Regulations 1992).

¹ The Building Act, Building Code, compliance documents, past determinations and guidance documents issued by the Department are all available at www.dbh.govt.nz or by contacting the Department on 0800 242 243.

² 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.

- 1.4 The matter to be determined³ is therefore whether the authority was correct in its decision to issue a second NTF for the building work. In deciding this matter, I must consider whether the house complies with Clause B2 Durability of the Building Code, given the requirements set out in the first determination.
- 1.5 In making my decision, I have considered the submission of the applicant, the second NTF and all evidence pertaining to the first determination.

2. Background

2.1 The first determination

- 2.1.1 The first determination found that that the authority was correct not to issue a code compliance certificate because, although compliant with Clause E2, the house did not comply with Clause B2 Durability of the Building Code, due to two minor items that required attention. In my decision, the authority was therefore instructed to:

... modify the notice to fix, dated 2 May 2008 to take account of the findings of this determination.

Further explanation was provided in paragraph 9.1, which stated:

The notice to fix should be modified and reissued to take into account the findings of this determination, including the remedial work that has been completed, and referring to any further defects that might be discovered in the course of investigation and rectification, but not specifying how these defects are to be fixed.

- 2.1.2 The two minor items requiring attention were set out in paragraph 7.4.1 of the first determination as being:

- there was an area of incomplete cladding at the junction of the foyer roof parapet and the external corner of a short return wall
- the air conditioning pipes through the concrete foundation wall are unsealed (E2/AS1 10.3.3).

and paragraph 7.5.3 of the first determination found that:

satisfactory rectification of the items outlined in paragraph 7.4.1 will result in the house being brought into compliance with Clause B2.

2.2 The second NTF

- 2.2.1 The authority re-inspected the building work on 20 October 2009 and issued the second NTF (No. 3279) dated 5 November 2009.

- 2.2.2 The items listed in the second NTF are summarised as the:

- inadequate clearances between wall cladding and flat surfaces
- lack of details for upper deck balustrade fastenings, with cracks in tiles and possible damage to timber substrate
- lack of detail and drip edge for weatherboards/tile junction to upper deck
- lack of rounded timber fillets to all internal and external corners to membrane
- inability to maintain deck membrane beneath the tiles

³ Under section 177(b)(iii) of the Act (prior to 7 July 2010)

- inadequate deck falls, with ponding evident
- inadequate overlap and clearance to paving at bottom of wall cladding
- lack of details to demonstrate performance of window junctions
- lack of confirmation of drainage coils to retaining walls
- lack of flashings to meter box and extractor fans
- lack of ventilation to large flat areas of membrane roofing
- lack of vertical or horizontal control joints to EIFS cladding.

2.3 The applicant disputed many of the additional items in the second NTF, and the Department received an application for determination on 1 July 2010.

3. The submissions

3.1 The applicant considered that the second NTF included many items that did not correspond with the findings of the first determination and thought that it was not right for the authority to continue to revisit and re-inspect the house looking for additional faults when the house had previously been subject to a specific weathertightness inspection and report.

3.2 The applicant forwarded copies of:

- the authority's letter dated 2 November 2009
- the notice to fix dated 5 November 2009.

3.3 The authority made no submission.

3.4 A draft determination was issued to the parties for comment on 25 August 2010. Both parties accepted the draft without comment.

4. The site visit

4.1 On 28 July 2010, a representative of the Department visited the site with the expert who had provided the inspection report on the house for the first determination. During that visit, the following observations were made:

- The overall quality of workmanship still appears to be very good, with the claddings installed to a high standard.
- The building was well-maintained and still weathertight after about five years (construction started in 2003, final inspection in 2007).
- There were no signs of moisture associated with the minimal clearance from the weatherboards to the deck.
- Two items identified in the first NTF require attention (see paragraph 2.1.2).

4.2 In regard to matters raised in the second NTF, it was observed that:

- the window jamb treatment includes plugs fitted under the jambs to the rusticated weatherboards providing an apparently weathertight detail
- the garden retaining wall at the rear of the house is stretcher bond stacked decorative blocks and, although there is no provision for drainage, there are no signs of moisture seepage from the base of the wall
- the retaining wall along the base of the garage has provision for drainage which can be seen under the grill in the driveway in front of the garage
- the largest flat roof on this house is 34m²; and flat roofs less than 40m² do not generally require ventilation, particularly where the membrane is light in colour, or overlaid with tiles that minimise temperature variation
- there is very slight ponding visible beside a membrane joint which is at right angles to the fall of the roof above the main bedroom
- the meter box is sealed and sheltered by an area of wall cladding overhang.

4.3 However, it was also observed that a tile in the centre of the larger deck had cracked grouting and deflected visibly when pressed by hand. This area will require attention to ensure there is no damage to the deck membrane. There is also a cracked tile at the end of the low kerb wall where it joins the wall and a balustrade post is attached that should be checked for moisture.

4.4 Apart from the above item (paragraph 4.3), I could see no matters raised in the first NTF that have not already been attended to, or otherwise addressed by the first determination.

5. Discussion

5.1 The process followed for the first determination

5.1.1 The following paragraphs consider the process followed in the first determination, including the evidence available to me at that time, and the consideration given to the items contained in the first NTF.

5.1.2 In order to consider the items raised in the first NTF, I engaged an independent expert to provide an independent assessment of the condition of those building elements subject to the determination. The expert was a member of the New Zealand Institute of Building Surveyors.

5.1.3 The expert inspected the building work and provided a weathertightness report on the house, which covered the entire building envelope although it did not specifically comment on the deck membranes. However, the expert's report included a section where the particular matters of concern identified in the first NTF were addressed. The evidence provided in the expert's report was then carefully considered and incorporated into the first determination.

5.1.4 I acknowledged the authority's concerns about the minimal slopes provided to the roofs and decks; giving detailed consideration to the significant issues of drainage and addressing the matter in paragraph 7.4.3 of the first determination. The recent

site visit has confirmed that there are no visible problems, apart from slight ponding beside a membrane joint at right angles to the roof slope above the main bedroom.

5.1.5 As well as the above, I also took into account that:

- the general level of construction was to a good standard
- the monolithic cladding was installed over a cavity
- the expert's report demonstrated compliance with Clause E2
- at least two seasonal cycles demonstrated compliance with the performance requirements of Clause E2.

5.1.6 Contrary to the authority's statement in its letter of 2 November 2009, the first determination did not instruct it to carry out a further inspection (paragraph 2.2.1). I take the view that the authority should have carefully considered the matters covered in the expert's report and the first determination before deciding to initiate a further inspection which raised issues that had already been investigated and addressed.

5.1.7 I am of the opinion that the authority has acted unreasonably by attempting to relitigate the findings of the first determination. Furthermore, the items listed in the second NTF appear to simply repeat the acceptable solutions provided in E2/AS1 rather than to address the underlying performance requirements of Clause E2. It is important to note that the Building Code allows for more than one means of achieving code compliance.

5.1.8 I summarise my conclusions on items in the second NTF in the following table:

Notice to Fix No. 3279	Conclusion about the work required	Paragraph reference
Inadequate clearances between wall cladding and flat surfaces	Adequate Covered in Determination 2009/62 No signs of moisture ingress to two short lengths of wall to lower deck where weatherboards close to deck.	
No details for upper deck balustrade fastenings, cracks in tiles and possible damage to timber substrate	Balustrade fixings/Low kerb wall/to wall junction to be checked.	
Lack of a detail provided for the weatherboards tile junction at upper deck and no drip edge	Adequate – detail not required. Weatherboards overhang membrane with good clearance, weathertight	
Timber fillets required to all internal corners and external corners to be rounded so membrane avoids sharp bends	Adequate Fillets installed to almost all joins, no faults apparent, weathertight to date	
Deck membranes cannot be maintained	Adequate Tile maintenance required	Para 5.2.3
Decks do not have adequate falls and ponding is evident	Adequate Covered in determination 2009/62	Para 4.2
No details provided for junction of weatherboards and windows. Council cannot be satisfied that the junctions will perform	Adequate Plugs inserted in rusticated weatherboards. Windows weathertight	Para 4.2
Council cannot confirm the presence of drainage coils are installed to retaining walls	Adequate Drainage provided	Para 4.2

Notice to Fix No. 3279	Conclusion about the work required	Paragraph reference
The meter box and extractor fans require flashings	Adequate Meter box sealed and protected by cladding.	
Large flat areas of roofing where butyl rubber membranes are used require adequate ventilation. There are no vents	Adequate Not required for small area of the roof	Para 4.2
The EIFS cladding does not have vertical or horizontal control joints	Adequate Covered in Determination 2009/62 No cracking evident.	

5.2 Maintenance of the tiled deck membrane

5.2.1 One matter raised in the second NTF was the inability to maintain deck membranes; and I acknowledge the authority's general concerns regarding tiled membrane decks.

5.2.2 The roofs and decks to this house are clad with an impermeable synthetic rubber membrane, with the decks overlaid with tiles. The dimensions of the two small decks (4.8m² and 11.5m²) are not sufficient to require the installation of movement joints in the tiling. The tiled surfaces require maintenance, rather than the membrane beneath them.

5.2.3 As the membrane substrate cannot be maintained, the BRANZ Good Practice Tiling Guide recommends regular maintenance of tiled floors, which should include:

- regular checks for loss of tile adhesion or tile damage
- regular checks of grouted or movement joints
- immediate repair of any defects such as cracked/crumbling grout or loose/cracked tiles.

5.3 Remaining items in the second NTF

5.3.1 In regard to the other additional items in the second NTF, these were observed during the recent site visit, and I have commented on them in paragraph 4.2. I consider that these areas are adequate in the circumstances.

5.4 Conclusion

5.4.1 Taking into account the expert's report, the first determination and the recent site visit, I am able to confirm the conclusion in the first determination that the house complies with Clause E2 of the Building Code.

5.4.2 I am also able to conclude that, in addition to the two items identified in the first determination, the loose tile described in paragraph 4.3 also requires attention in order to maintain that weathertightness and the area where the low wall where the balustrade post is fixed should be checked.

5.4.3 Providing these four items are satisfactorily attended to, I am satisfied that the building envelope will comply with Clause B2 of the Building Code (insofar as it applies to Clause E2).

6. The decision

- 6.1 In accordance with section 188 of the Building Act 2004, I hereby determine that the authority was correct to issue a second notice to fix, but it is to be modified to take account of the findings of Determination 2009/62 and of this second determination.

Signed for and on behalf of the Chief Executive of the Department of Building and Housing on 20 September 2010.

John Gardiner
Manager Determinations