



## Determination 2016/012

# Regarding the refusal to issue a code compliance certificate for the retrofitting of urea formaldehyde foam insulation to house with asbestos cladding at 428 Omanawa Road, Tauranga



### Summary

This determination considers the authority's decision to refuse to issue a code compliance certificate: the grounds for the refusal were the authority's concerns regarding weather-tightness, given that the foam was installed through the cladding in some places rather than through the interior as had been approved in the building consent. The determination reviewed the reasons given for the refusal and considered whether the external envelope complies with the Building Code.

### 1. The matters 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 and Assurance, Ministry of Business, Innovation and Employment ("the Ministry"), for and on behalf of the Chief Executive of the Ministry.
- 1.2 The parties to the determination are:
  - the owners of the house, Mr and Mrs D & J Sudmersen ("the applicants"), acting through a licensed building practitioner as an agent
  - Western Bay of Plenty District Council ("the authority"), carrying out its duties as a territorial authority or building consent authority.
- 1.3 This determination arises from the decision of the authority to refuse to issue a code compliance certificate for the retrofitting of urea formaldehyde foam insulation to the house because the installation was not done in accordance with the consent and the authority was also not satisfied that the building work complied with certain clauses<sup>2</sup> of the Building Code (First Schedule, Building Regulations 1992).

<sup>1</sup> The Building Act, Building Code, compliance documents, past determinations and guidance documents issued by the Ministry are all available at [www.building.govt.nz](http://www.building.govt.nz) or by contacting the Ministry on 0800 242 243.

<sup>2</sup> 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 determined<sup>3</sup> is therefore the authority's exercise of its powers of decision in refusing to issue the code compliance certificate.
- 1.5 I have taken the authority's letter to the installer dated 7 August 2013 as being the reasons for its refusal to issue a code compliance certificate for the house (see paragraph 2.6). In that letter, the authority set out its concerns as relating to the weathertightness of the cladding. This determination is limited to compliance with Clauses E2 and B2 of the Building Code and does not consider other relevant clauses.
- 1.6 In making my decision, I have considered the submissions of the parties, the report of the expert commissioned by the Ministry to advise on this dispute ("the expert") and the other evidence in this matter.

## 2. The building work and background

- 2.1 The building work consists of a single-storey detached house situated on a rural site in a high wind zone<sup>4</sup>. It was originally built in the 1960s, and has a timber framed piled floor with painted profiled asbestos sheet wall cladding direct fixed over conventional light timber frame. The subfloor cladding is flat asbestos sheet. The pitched roof cladding is profiled steel, with projecting eaves of 750mm extending to the majority of the perimeter except for a small area at the west elevation entry alcove. The house is simple in plan and form and is assessed as having a low weathertightness risk.
- 2.2 The expert has described the elevation facing the road as east, and I have followed that convention for this determination. There is a conservatory on the east elevation and an open timber deck on the west elevation. The roof and west wall extend on the southern end of the house, providing a carport space, and a detached garage has been constructed nearby. Sometime recently aluminium joinery was installed to the house.
- 2.3 The building work that is the subject of this determination is the retro-fitting of urea formaldehyde foam insulation (UFFI) ("the insulation")<sup>5</sup>. Included in the building consent application lodged by the installer was: a covering letter setting out the "evidence of compliance" that would be supplied with the building consent application, and a "Report of assessment of existing building" ("the installer's assessment report"). The assessment report identified the external cladding as "fibre cement", noting that it was in "excellent condition, free from cracks or defects", and included three invasive moisture level readings. The insulation supplier's manual calls for invasive moisture readings to be taken after the installation, and that they must reach <18% to be confident of compliance with Clause E2.3.6.
- 2.4 On 25 March 2013 the authority issued building consent No. 84446 for the installation of the insulation through the plasterboard linings. Included in the grounds for granting the consent were that an officer of the authority be present when moisture readings were taken at nominated locations (described as a "pre-line" inspection), a final inspection be passed, and that satisfactory moisture level readings were to be provided with the application for a code compliance certificate.

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<sup>3</sup> Under section 177(1)(b) and 177(2)(d) of the Act

<sup>4</sup> As described in the installer's "Report of assessment of existing building"

<sup>5</sup> The retro-fitting of UFFI has been considered in a number of determinations: see for example 2015/048, 2013/078, 2013/050. See also *Guidance on Building Code compliance for retrofitting insulation in external walls*, Department of Building and Housing, August 2011.

- 2.5 The installation of insulation was carried out sometime in April 2013. In areas where there was fixed cabinetry, namely the bathroom and the kitchen, contrary to the methodology approved in the building consent the installers drilled through the exterior cladding to inject the insulation. The installers did not call for the required pre-line inspection, and the penetrations were filled and primed ready for painting.
- 2.6 On 6 August 2013, the authority carried out a “final” inspection for the purpose of issuing a code compliance certificate. As a result, on 7 August 2013, the authority wrote to the installer, advising:
1. The approved building consent has not been completed with regard to a Preline inspection being called for at which [the authority] was to witness moisture levels being taken and recorded.
  2. Moisture level readings have not been supplied to [the authority] to its satisfaction.
  3. The approved consent was for the foam injection to be carried out be (sic) “injection points internally through plasterboard linings”. Instead, some holes have been drilled externally through a fibre-cement sheet cladding, which itself may contain asbestos. Drilling externally may now have compromised the building wrap which separates the insulation from the cladding, thus preventing the requirements of E2/AS1 from being met.
  4. Moisture readings were taken internally at various external wall locations and many were found to be raised with a number being high.
- 2.7 On 14 January 2015 the authority wrote to the applicants to advise that the two year period in which it must make a decision whether to issue a code compliance certificate was coming to an end on 25 March 2015. The authority required the applicants seek an extension of time if the work was not completed, or book a final inspection.
- 2.8 The applicants completed a new application for a code compliance certificate, dated 20 January 2015. I am not aware of whether this application has been lodged with the authority.
- 2.9 On 5 March 2015, the authority wrote to the applicants advising that it was agreeing to an extension of time to 25 March 2016.
- 2.10 On 14 December 2015 the Ministry received the application for determination.
- 2.11 On 29 February 2016 I sought confirmation from the authority on whether it had revisited its decision to refuse to issue the code compliance certificate since 2013, and if so to confirm the reasons for the ongoing refusal. On 7 March 2013 the authority advised it had not reviewed its decision regarding a refusal to issue a code compliance certificate.

### **3. The submissions**

- 3.1 The agent provided a submission with the application for determination, setting out the background and noting that the installer had gone into receivership shortly after the works were completed. The agent noted that
- ...it would not be practical to remove these sections of linings to reinstall the DPC (Building paper) where the injection holes have been drilled [through the cladding] (as directed by [the authority]) as they are asbestos which firstly would need to be removed by a licensed contractor and in return would drag half the insulation with it ... The wall areas where drilled locations are located are facing to the South and are reasonably protected from adverse weather and [by] overhanging soffits and

backdoor enclosure so I do not see the drilled locations to be of a potential leaking hazard area and they have been filled correctly and primer applied.

(I note here that I have received no copies of correspondence between the parties relating to the authority's direction that the building paper be reinstated)

3.2 The applicants provided copies of the following documents:

- The site notice, dated 6 August 2013.
- Correspondence from the authority, dated 7 August 2013 , and 14 January and 5 March 2015.
- The application for a code compliance certificate, dated 20 January 2015.
- Information from the insulation installer.
- Photographs.

3.3 The authority made no submission in response to the application for determination, but acknowledged the application and provided copies of the following:

- The building consent issued on 25 March 2013.
- The building consent application and supporting documents.

3.4 A draft determination was issued to the parties for comment on 7 March 2016.

3.5 In responses received on 11 and 16 March 2016 respectively, the authority and the applicants accepted the draft without further comment or submissions.

## **4. The expert's report**

4.1 As mentioned in paragraph 1.6, I engaged an independent expert to assist me. The expert is a member of the New Zealand Institute of Building Surveyors. The expert carried out assessments on 3 February and 25 February 2016, providing a report dated 25 February which was forwarded to the parties the same day.

### **4.2 General**

4.2.1 The expert noted that the exterior cladding penetrations have been filled and primed ready for painting, and that the remainder of the exterior cladding and interior walls have been painted.

4.2.2 The expert noted that external injection points were visible on two sections of the west elevation cladding, backing onto the bathroom and kitchen cabinetry.

### **4.3 Moisture testing**

4.3.1 The expert took non-invasive moisture readings on the face of the asbestos cladding at a number of locations on the exterior cladding, noting very high readings were typical.

4.3.2 In order to investigate those high readings, the expert then took invasive moisture readings through internal linings at seven locations in bottoms plates and stud framing. The expert noted that the timber shavings all looked to be in good condition, and no elevated readings were observed. The expert noted:

There was no significant difference between internally and externally injected walls, indicating that the low moisture levels in the internally injected walls would be matched in the externally injected walls.

- 4.3.3 Four additional moisture readings were taken through the asbestos cladding below the externally injected walls, with timber shavings in good condition and low moisture level readings.
- 4.3.4 The expert noted that the very high non-invasive surface readings were not reflected in the low invasive readings, indicating that the surface readings were “false positives”.
- 4.3.5 The expert found no evidence of any adverse effects from the installation of the insulation, on either the internally injected or externally injected walls.
- 4.4 On 29 March 2016 I sought further information from the expert regarding the holes made through the cladding. By email on 30 March 2016 the expert advised that the holes had been filled ‘to a high standard and were primed ready for painting’. The expert also confirmed that building paper was visible in the subfloor space.

## **5. Discussion**

### **5.1 General**

- 5.2 As part of the “evidence of compliance” in respect of Clause E2.3.2, the installer referred to the provision of photographs at various stages of the holes drilled to inject the insulation. I note here that as the stated intention was to inject the insulation through the interior plasterboard lining, this evidence would not be relevant to this job if that method was used. This indicates that the installer relied on a form letter and did not review it to ensure that the information provided was relevant to the building work being applied for. I note however that a separate “statement as to how compliance will be met and demonstrated” correctly noted that E2.3.2 would not apply as the installation was to be through the linings.
- 5.3 The installer’s assessment for this job does not appear to include checking whether fixed cabinetry in some locations would restrict the installer’s ability to inject the insulation from the interior. In addition, the installers assessment report (refer paragraph 2.3) did not identify the possibility that the fibre-cement cladding, which the installer later drilled through in places where there was fixed cabinetry, may contain asbestos<sup>6</sup>.

### **5.4 The authority’s refusal**

- 5.4.1 The authority’s letter of 7 August 2013, which I take to be a refusal to issue the code compliance certificate, referred to the fact that the building work was not carried out in accordance with the building consent and that the authority had obtained high moisture readings.
- 5.4.2 In previous determinations I have considered instances where building work is carried out not in accordance with a building consent, but where the building work is compliant with the Building Code<sup>7</sup>. In this case, given that the supporting documents to the building consent did not provide an assessment in respect of the need to inject the insulation from the exterior, I am of the view that the change to the method was one that required the consideration and approval of the authority before it was undertaken.

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<sup>6</sup> Building work involving asbestos products is covered under various legislation including: Health and Safety in Employment Act 1992, Health and Safety in Employment (Asbestos) Regulations 1998, Building Act 2004, and the Resource Management Act 2004.

<sup>7</sup> See for example 2013/069 and 2013/053

- 5.4.3 Given that the subsequent moisture level readings obtained by the authority were also high, it is my view that the authority correctly exercised its powers of decision in 2013 in refusing to issue the code compliance certificate. It is unclear to me whether or not the authority provided any information to the applicants on the sort of investigation or monitoring that would be adequate for the authority to be satisfied as to compliance of the externally injected insulation.

## **5.5 Weathertightness performance**

- 5.5.1 I consider the expert's report establishes that the current performance of the building envelope is adequate, and that the non-invasive moisture readings taken by the authority and repeated by the expert are anomalies.
- 5.5.2 Taking into account the low moisture readings obtained by the expert and the lack of evidence of any weathertightness issues nearly three years after installation, I am satisfied that the injection points through the external envelope have not compromised compliance with Clause E2 of the Building Code.
- 5.5.3 The building envelope is also required to comply with the durability requirements of Clause B2. Clause B2 requires that a building continues to satisfy the performance requirements of the Building Code for the periods specified in Clause B2.3.1. The durability requirements of Clause B2 include a requirement for wall claddings to remain weathertight for a minimum of 15 years.
- 5.5.4 Taking into account the features of the building that make the weathertightness risk low, and that the external injection points are limited in number and area, and my conclusion that compliance with Clause E2 has not been compromised after nearly three years, I conclude that compliance with Clause B2.3.1 at the external injection points will be achieved.
- 5.5.5 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. I note that the external injection points are yet to be painted and I leave this to the applicants to attend to as a matter of normal maintenance.

## **5.6 Conclusion**

- 5.6.1 A determination under section 177 of the Act is in respect of the authority's exercise of its powers of decision, and I have concluded that the authority correctly exercised its power of decision in 2013. Section 188 provides that the determination must confirm, reverse, or modify that decision. Given the time passed and the evidence available I am of the view that the building work complies with the relevant clauses of the Building Code and that the authority's decision should be reversed.

## 6. The decision

6.1 In accordance with section 188 of the Building Act 2004, I hereby determine that:

- the authority correctly exercised its powers of decision in refusing to issue the code compliance certificate in 2013 for building consent No. 84446 on the grounds provided in its letter of 7 August 2013; however
- as I have concluded the exterior building envelope complies with Clauses B2 and E2, the authority's decision is reversed.

Signed for and on behalf of the Chief Executive of the Ministry of Business, Innovation and Employment on 4 April 2016.



John Gardiner  
**Manager Determinations and Assurance**