



Determination 2012/012

The issue of a notice to fix for a 6-year-old garage addition to a house at 28 Hackett Street, Auckland



1. The matters to be determined

- 1.1 This is a determination under Part 3 Subpart 1 of the Building Act 2004¹ (“the Act”) made under due authorisation by me, John Gardiner, Manager Determinations, Department of Building and Housing (“the Department”), for and on behalf of the Chief Executive of that Department. The applicant is the owner, L Barker (“the applicant”) and the other party is the Auckland Council (“the authority”), carrying out its duties as a territorial authority or building consent authority.
- 1.2 This determination arises from the decision of the authority to issue a notice to fix for a 6-year-old addition to a house (“the garage addition”) because it was not satisfied that the building work complied with certain clauses² of the Building Code (First Schedule, Building Regulations 1992). The authority’s concerns relate to the weathertightness of the exterior building envelope of the garage addition.
- 1.3 The matter to be determined³ is therefore whether the authority was correct in its decision to issue a notice to fix for the garage addition.

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, references to sections are to sections of the Act and references to clauses are to clauses of the Building Code.

³ Under sections 177(1)(b) and 177(2)(f) of the Act

1.4 In deciding this matter, I must therefore consider whether the external claddings to the garage addition (“the claddings”) comply with clauses B2 Durability and E2 External Moisture of the Building Code. The claddings include the components of the exterior building envelope (such as the weatherboards, the doors, the roof deck membrane and the flashings), as well as the way the components have been installed and work together. The notice to fix also cited contraventions of Clause B1 Structure, which I have taken as relating to potential structural implications associated with weathertightness.

1.5 Matters outside this determination

1.5.1 The notice to fix refers to documents ‘required to assist with confirmation of compliance’ and states that the applicant may apply to the authority for a modification of the durability requirements to allow durability periods to commence from the date of substantial completion. I have considered the documents required, in paragraph 7.2, but I leave agreement about when the durability periods started for the parties to resolve.

1.6 In making my decision, I have considered the submission of the applicant, the report of the expert commissioned by the Department to advise on this dispute (“the expert”) and the other evidence in this matter.

2. The building work

2.1 The building work considered in this determination consists of a garage addition to a 1930’s two-storey detached house situated on a sloping site in a medium wind zone for the purposes of NZS 3604⁴. The addition is assessed as having a moderate weathertightness risk (see paragraph 6.2).

2.2 The building consent originally included a significant extension to the upper level, along with a new staircase linking all three levels and various other ground floor alterations. That work was not completed, and amended drawings have been submitted to the authority.

2.3 The existing house

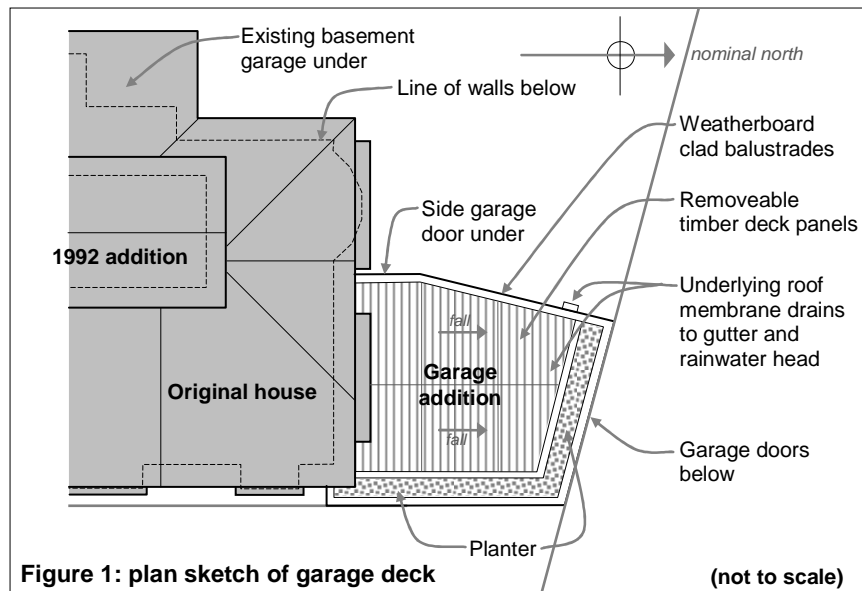
2.3.1 The original 1930’s house was a traditional single-storey two bedroom ‘bungalow’ (“the original house”), with timber-framed walls and subfloor, weatherboard wall claddings, timber windows and profiled metal gable roofs. At some stage, part of the sub-floor was developed to provide a bedroom, bathroom and living area, with separate access provided to the outside.

2.3.2 Along with various minor alterations a small roof addition in the early 1990’s provided a master bedroom, ensuite bathroom and study. A basement garage was added to the northwest corner of the sub-floor in the late 1990’s.

⁴ New Zealand Standard NZS 3604:1999 Timber Framed Buildings

2.4 The garage addition

2.4.1 The building work considered in this determination is limited to the garage addition shown in Figure 1. The garage is at the northeast boundary of the site, and provides a roof deck accessible via new bi-fold doors from the adjacent living room. Construction is generally conventional timber frame, with a concrete slab and foundations and some specifically engineered steel portals and beams.



- 2.4.2 The walls are clad in horizontal bevel-backed timber weatherboards to match the walls of the original house, with the boards fixed through the building wrap directly to the framing. Timber facings border windows and doors, with scribes at the jambs and flashings over the head facings. Garage walls extend to form deck balustrades.
- 2.4.3 The drawings call for wall, roof, planter and balustrade framing to be H3 and the applicant has provided invoices from the timber supplier that describe the timber as 'H3.1 KD PG'. Given this and the date of construction in 2004, I consider that the framing is likely to be treated to a level that will provide adequate resistance to fungal decay.

2.5 The deck floor

- 2.5.1 The original consent drawings called for the deck floor to be a 1.5mm thick EPDM synthetic rubber membrane installed over 21mm H3 plywood substrate, which sloped towards a 20mm deep x 200mm wide channel drain along the north edge. Tiles were adhered to the membrane surface, including to the gutter.
- 2.5.2 Following moisture problems in the tiled deck, the tiles and membrane were removed and a new 'torch-on' membrane was applied. This work appears to have been carried out in late 2009 or early 2010, as the membrane installer provided a producer statement dated 8 February 2010, which specifies the particular membrane installed.
- 2.5.3 The replacement membrane is a 2-layer 'torch on' membrane system applied over a liquid-applied bitumen based primer. Each layer is a polyester reinforced modified waterproofing bituminous membrane adhered using the application of heat, resulting

in a total thickness of 6mm to 7mm. The manufacturer's specification dated August 2010 includes

- Substrate to be minimum 17mm treated plywood, with roof falls at 1:40 minimum and gutters at 1:100. (The manufacturer does not specify minimum falls to be provided to decks.)
- All end and side joints are 'torch sealed', with joints in the top layer offset from those in the bottom layer.
- Membrane should be regularly checked for damage and removal of debris, with a periodic clean down with water.
- When the membrane system is applied by licensed applicators, a 'standard warranty is issued for up to twenty five (25) years.' (I am not aware of any warranty issued for this membrane).

2.5.4 Six removable panels were pre-fabricated using timber panel frames and spaced timber decking. The frames sit directly on the surface of the membrane and are bolted together for stability. The stringers to the frames include slots across the deck fall to allow drainage towards the channel drain. A deck board in each panel is screw-fixed to allow access for removing the panels (see paragraph 5.4.1).

2.6 The balustrades and planters

2.6.1 The walls of the garage extend as parapets; to form balustrades along the east side, and the outer wall of planters on the north (street) and east (boundary driveway). The balustrades are clad in weatherboards on both sides.

2.6.2 The planter is formed between the exterior parapet wall and a parallel wall at the same height, with weatherboards on the deck side and raised framing between forming the planter base. The inside faces are lined with 21mm H3 plywood, with EPDM membrane applied to the substrate and dressed over the top of the wall framing. The resulting planter is 880mm wide and about 400mm deep, with the bottom sloped to the west where it is drained by pipe into the rainwater head.

2.6.3 The consent drawings show planter and balustrade walls capped with a 200mm x 50mm H3 plate, with a 3° slope to the top. This has been replaced with copper cappings, which wrap around and are side-fixed into battens side-fixed into the top plate. The expert has confirmed that the membrane lining the planter extends over top plates, with the building wrap under the weatherboards extended over the top (see paragraph 5.4.1).

3. Background

3.1 The authority issued a building consent (No. BLD 20040953801) on 8 July 2004 under the Building Act 1991. Construction of the garage addition commenced the following month and the authority carried out various inspections of the foundations and floor slab during July 2004.

3.2 Although invoice dates indicate that framing was delivered to the site during August 2004, the inspection records imply that a pre-line inspection was not carried out until

9 August 2005, with the record noting ‘make job weathertight’. However, I note that this could be an error in the date recorded in the inspection record.

3.3 Remaining alterations in the house were delayed, which also delayed the final inspection being carried out on the garage addition. Early in 2007 the authority was advised that the upstairs alterations and extension would be further delayed. At some stage it was decided not to proceed with the upstairs alterations and extension.

3.4 A code compliance certificate was sought for the garage addition alone at the end of 2010.

3.5 The final inspection

3.5.1 The authority carried out a final inspection of the garage addition on 21 February 2011 and identified outstanding documentation, including as-built plans and a producer statement for the deck waterproofing.

3.5.2 The final inspection record also listed the following items:

1. Unable to inspect membrane. Floating timber decking to be cut into removable sections.
2. Flashing above garage door does not extend far enough. Also no scribes.
3. Min barrier height 1m.

3.6 The re-inspection

3.6.1 In an email to the authority dated 23 June 2011, the applicant proposed to install a stainless steel handrail to the balustrades to meet the height requirement and asked the authority to confirm that installing this to the outside of the planters would comply, given the height of the inside wall of the planter.

3.6.2 Further emails followed, with the applicant confirming that the tiles were removed and the membrane replaced and noting that the decking was now in removable sections. In an email to the applicant, dated 7 July 2011, the authority noted that it had ‘no record for an application for a new building consent, for the removal/remediation works for the deck’ and listed ‘documentation/evidence’ it required to ‘determine whether [it] can accept the work as completed’.

3.6.3 The authority met with the applicant’s architect to re-assess the garage deck on 12 July 2011 and the authority became aware that the original membrane had been replaced due to leaks. It was apparently agreed that the following would be done:

- decking lifted to allow inspection of the underlying membrane
- openings cut in the garage ceiling lining to allow inspection of deck framing
- capping sections removed to allow inspection of underlying construction.

3.7 The notice to fix

3.7.1 Despite the apparent understanding reached at the above meeting, the authority issued a notice to fix with an attached ‘photo file’ on 25 July 2011. The notice identified a number of Building Code clauses that the building work was ‘in breach of’ and listed details of the contravention. The authority has advised the notice was

issued after the applicant did not contact it to arrange a ‘time for further investigation’.

3.7.2 The authority identified various areas of concern In regard to Clauses E2 and B2 (including in summary):

- the scupper opening size and sealing
- lack of overflow from the internal gutter
- evidence of moisture penetration
- unknown underlying flashings, with reliance on sealants
- the weathertightness of joinery
- top-fixed and flat cap flashings to parapets
- the deck membrane replaced without consent
- uncertainty on condition of the deck substrate and framing
- unknown fall of the membrane under the decking
- floor clearance from underlying membrane
- clearances of weatherboards to the decking/paving/ground
- overlaps at bottom of cladding
- inadequate sealing of penetrations.

3.7.3 The notice to fix also listed required documentation to ‘confirm compliance with the building consent/code’ and required the applicant to prepare a proposed scope of work to address the areas of non-compliance. The notice also stated that the applicant may apply to the authority for a modification of the requirements to allow durability periods to commence from the date of substantial completion.

3.7.4 The notice to fix also said Smoke detectors ‘were to be installed in or within 3.0m of a sleeping space ...’, and:

The following paperwork is required to enable ... confirm compliance with the building consent / code.

- a) Application for Code of Compliance
- b) B2 Durability Waiver
- c) Site Inspection Records
- d) Drainage as built
- e) Electrical certificate of compliance
- f) Gas Certificate of Compliance
- g) Revised Plans showing the layout changes and variation from the approved building consent documents
- h) Cancellation letter for building work not carried out under this consent
- i) Confirmation of treatment level for timber framing

- j) Installers certificate for the waterproof membrane for internal gutters and wet areas

The notice to fix required the applicant to a 'lodge ... a proposed scope of works outlining how each area of non-compliance is to be addressed and rectified'.

- 3.8 The Department received an application for a determination on 31 August 2011 and sought further information from the parties, which was received by 28 September.

4. The submissions

- 4.1 In a letter dated 19 August 2011, the applicant explained her understanding of the agreement reached at the last site meeting on 12 July 2011, which had been followed by the notice to fix. The applicant noted that there were no known current leaks, all timber was H3 treated, and the balustrade height was being resolved.

- 4.2 The applicant also noted that she had not realised an amendment to the building consent was required for the new membrane and decking; pointing out that the authority's current policy is that access to membranes is required – and changes made to the decking have now achieved that. The applicant also questioned the need for the authority to have issued a notice to fix.

- 4.3 The applicant forwarded copies of:

- the building consent, with the original drawings and specifications
- drawings showing the deletion of the upstairs alterations and extension (annotated on the drawings as 'Rev A [or B] May 2011')
- the producer statement for the 'torch on' membrane system
- invoices for timber framing
- various statements and other information.

- 4.4 The authority forwarded a CD-Rom, entitled 'Property File', which contained some documents pertinent to this determination including:

- the building consents and permits for other alterations on the house
- various consent drawings for other alterations to the original house
- the inspection records
- some email correspondence with the applicant.

- 4.5 Copies of the submissions and other evidence were provided to each of the parties.

- 4.6 A draft determination was issued to the parties for comment on 20 January 2012. The applicant accepted the draft.

- 4.7 The authority accepted the draft subject to comment made to the Department in a letter dated 1 February 2012. In summary, the authority submitted that:

- The 'head flashing did not extend past the garage door jambs nor had scribe/facings been installed'.

- Adequate ground clearances ‘had not been achieved either side of the garage door, in particular the north-western side ...’
- The authority was ‘unable to approve/issue a retrospective amendment to building consent’ in respect of the replacement deck membrane.
- The authority holds site inspection records for the outstanding building consent on the property file. The authority ‘was giving the [applicants] the opportunity to provide documentation confirming the removal and replacement of the membrane’ as part of the consented work.
- The authority was not given any opportunity to inspect the ‘unauthorised replacement’ of the deck membrane or to inspect building elements that ‘may have been compromised by moisture ingress ...’

The authority noted some errors in the draft determination which have been corrected.

- 4.8 I have taken the above comments into account and amended the determination accordingly. In respect of the garage door, the photograph in the expert’s report shows the scribes installed and head flashing projecting past scribes by an acceptable margin.

5. The expert’s report

- 5.1 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 and inspected the garage on 6 and 17 October 2011; providing a report dated 4 November 2011.
- 5.2 The expert described the existing house as an ‘older quality dwelling’, with the garage addition appearing in keeping with that quality. The expert described the changes in the deck floor and the installation of copper cappings.
- 5.3 The expert noted that the existing weatherboards continue behind new walls, with garage weatherboards and copper cappings butted against the older boards and no disruption to the existing building envelope. However, the junction is sealed with surface-applied sealant, with no mechanical protection for the new garage wall.

5.4 Invasive investigations

- 5.4.1 The expert described the construction of the garage addition. He was able to inspect and measure underlying components of various features by removing:
- some deck panels to inspect the membrane and gutter; noting no evidence of ponding on the membrane and a small area with light ponding in the gutter
 - a light fitting in the planter wall to inspect the framing and drainage under the end of the of the planter base; noting the 75mm drain pipe extending through the parapet wall into the rainwater head and no sign of moisture or staining
 - sections of copper capping over balustrades and planter walls; noting the underlying building wrap and membrane over the top of the framing

- light fittings in the garage ceiling to observe the deck framing and plywood; noting dry timber and no signs of deflection or stains in the lining.

5.4.2 Based on his inspections, the expert was able to describe the deck floor, the deck balustrades and the planters. I have included his descriptions of these elements in paragraphs 2.5 and 2.6.

5.4.3 The expert also took non-invasive and sample invasive moisture readings in the house wall adjoining the deck, the garage wall around the rainwater head, the garage deck framing and the other garage walls; with no elevated moisture levels recorded.

5.5 The notice to fix

5.5.1 The expert commented on the items listed in the notice to fix, and the following table summarises his comments:

	Notice to fix items	Expert's summarised comments
2.1	Not to relevant acceptable solutions	
a)	Inadequate scupper size and lip	Scupper opening is 200mm x 75mm and lined with membrane. Gutter membrane extended through opening, with lip forming drip edge into rainwater head.
b)	Membrane sealing at scupper and overflow	Membrane dressed through scupper and sealed against rainwater head. Drain from planter also drains into RWH.
c)	Lack of overflow to internal gutter	No overflow from the deck is provided.
d)	Lack of weathertightness as evidence of moisture ingress	No evidence of moisture in adjacent existing walls, or in new garage walls and roof. Repairs to garage lining relate to past leak before membrane replacement.
e)	Lack of/inadequate flashings	Sealant joint at junction of new and existing weatherboards is performing at present, but may not be durable long-term.
f)	Inadequate window and door junctions	Window and door installation generally satisfactory. Short joint to garage door head flashing is not durable.
g)	Inadequate projections of head flashings	Head flashing projection of 25mm is satisfactory.
h)	Flat tops to copper cappings	Fall to copper capping varies from 0.1° to 0.7°. Some light ponding (due to metal flexibility) but continuous membrane protects top plates of parapets. However laps need sealing.
i)	No consent for alterations to deck floor	No comment.
j)	Unknown performance and durability of deck framing and substrate	Observed substrate and framing is clean and dry, with moisture readings from 15% to 16% and no sign of deflection.
k)	Unknown fall to deck membrane	Deck membrane falls vary from 0.3° to 0.8°, with the membrane gutter falling at 0.3° toward the scupper.
l)	Unknown performance and durability of deck membrane	Deck membrane appears to be performing satisfactorily.
m)	Unknown floor clearances	Floor clearance to membrane 90mm, with level threshold to raised decking .
n)	Inadequate cladding/decking clearances	Decking butts against some areas of weatherboard, but able to be removed for maintaining and cleaning.
o)	Height of and toeholds to deck barriers	Barrier height between 870mm and 900mm. Light fittings installed in barrier are narrow and provide minimal toeholds, also located directly under overlap in weatherboards.
p)	Lack of clearances from floor level to ground or paving level	Floor to ground clearances generally from 50mm to 150mm and considered satisfactory in circumstances. Some areas have raised stones and timber sleepers against bottom of weatherboards.
q)	Cladding overhang at bottom plates	Weatherboards overhang bottom plates by about 90mm.

2.2	Not to accepted trade practice	
a)	Unflashed and/or unsealed penetrations	Various elements fixed to weatherboards. Sealing of cable penetrations not checked by the removal of electrical fittings.
b)	Junctions reliant on silicon sealants	Sealant joint at new to existing weatherboard junction performing at present, but may not be durable in the long-term.

5.6 Weathertightness

5.6.1 Commenting specifically on the external envelope, the expert noted that:

- there is no provision for overflow from the internal gutter
- there are no scribes or flashings at some junctions between new and existing weatherboards and at the ends of copper cappings; with sealant joints not durable in terms of weathertightness
- the joint to the garage door head flashing is not durable in terms of weathertightness
- there is insufficient clearance from the bottom weatherboards at several areas where stones and timber sleepers butt the weatherboards
- the lapped joints in the copper cappings are unsealed
- cable penetrations through weatherboards need to be checked and sealed if necessary.

5.7 The expert noted that regular cleaning of the deck area is needed to ensure debris does not build up against the underlying membrane and concluded that, in his opinion, the garage addition was currently weathertight.

5.8 The expert's report was forwarded to the parties on 25 October 2011.

Matter 1: The external envelope

6. Weathertightness

6.1 The evaluation of building work for compliance with the Building Code and the risk factors considered in regards to weathertightness have been described in numerous previous determinations (for example, Determination 2004/1).

6.2 Weathertightness risk

6.2.1 This addition has the following environmental and design features, which influence its weathertightness risk profile:

Increasing risk

- although simple in plan, the addition includes complex junctions and features
- there are parapets to all walls, with no eaves to shelter wall claddings
- walls have weatherboard cladding fixed directly to the framing
- the deck is fully enclosed by a solid balustrade

Decreasing risk

- the addition is one-storey high in part and in a medium wind zone
- the external wall and deck framing is treated to a level that provides resistance to decay if it absorbs and retains moisture
- the deck is not located above a habitable space.

6.2.2 Using the E2/AS1 risk matrix to evaluate these features, the elevations are assessed as having a moderate weathertightness risk rating. If details shown in the current E2/AS1 were adopted to show code compliance, a drained cavity would not be required for the weatherboards.

6.3 Weathertightness performance

6.3.1 Generally the weatherboards appear to have been installed in accordance with good trade practice and the membrane accords in most respects with the manufacturer's instructions. However, taking account of the expert's report, I conclude that remedial work is necessary in respect of those areas outlined in paragraph 5.6.1.

6.3.2 Notwithstanding that the membrane to the deck and gutter has limited falls, thus inhibiting drainage of rainwater from the deck surface, I note certain factors that assist the performance of the deck in this case:

- The replacement membrane otherwise appears to be installed according to good trade practice and in accordance with the manufacturer's instructions.
- The replacement membrane is thicker than the original membrane, with two layers and offset joints, thus increasing protection against potential damage.
- Decking protects the membrane surface from foot traffic and furniture damage.
- The membrane is readily accessible under removable decking for regular cleaning, monitoring, and maintenance or repairs if required.
- There is no evidence of current moisture penetration through the deck, or of past damage to the deck framing and substrate; indicating that the past moisture problems were attended to promptly.
- Any leaks from the replacement membrane should be readily noticed by visual signs of damage to the plasterboard lining on the garage ceiling.
- All framing is treated to H3 level; allowing time for repairs to be carried out before any timber or substrate is moisture damaged.

These factors can assist the deck and gutter membrane to comply with the weathertightness and durability provisions of the Building Code.

6.4 Weathertightness conclusion

6.4.1 I consider the expert's report establishes that the current performance of the building envelope is adequate because there is no evidence of moisture penetration into the timber framing at present. Consequently, I am satisfied that the addition complies with Clause E2 of the Building Code.

- 6.4.2 However, the building envelope is also required to comply with the durability requirements of Clause B2, which 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 may allow the ingress of moisture in the future, the building work does not comply with the durability requirements of Clause B2.
- 6.4.3 Because the identified cladding faults occur in discrete areas, I am able to conclude that satisfactory rectification of the items outlined in paragraph 5.6.1 will result in the external envelope being brought into compliance with Clauses B2 and E2 of the Building Code.
- 6.4.4 I note the expert's comments on the particular need for monitoring and maintenance to the deck membrane. Effective maintenance of claddings is important to ensure ongoing compliance with Clauses B2 and E2 of the Building Code and is the responsibility of the building owner. The Department has previously described these maintenance requirements, including examples where the external wall framing of the building may not be treated to a level that will resist the onset of decay if it gets wet (for example, Determination 2007/60).

7. The notice to fix

- 7.1 Taking into account the expert's comments, the following table summarises my conclusions on items listed in the notice to fix dated 25 July 2011; referring also to relevant code clauses and related paragraphs within this determination:

Notice to fix		My conclusions	Code Clauses	Paragraph references
	Summarised requirements			
2.0	Issues relating to the cladding			
2.1	Not to relevant acceptable solutions			
a)	Inadequate scupper size and lip	Adequate	E2, B2	5.4.1 and 5.5.1
b)	Membrane sealing at scupper and overflow	Adequate	E2, B2	5.4.1 and 5.5.1
c)	Lack of overflow to internal gutter	Remedial work required	E2, B2	5.6.1
d)	Lack of weathertightness as evidence of moisture ingress	Adequate	E2, B2	5.4
e)	Lack of/inadequate flashings	Some remedial work required	E2, B2	5.6.1
f)	Inadequate window and door junctions	Some remedial work required	E2, B2	5.6.1
g)	Inadequate projections of head flashings	Adequate	E2, B2	5.5.1
h)	Flat tops to copper cappings	Adequate in circumstances	E2, B2	5.4.1 and 5.5.1
i)	No consent for alterations to deck floor	Amended plans prepared	E2, B2	4.3
j)	Unknown performance and durability of deck framing and substrate	Adequate	E2, B2	5.5.1 and 6.3.2
k)	Unknown fall to deck membrane	Adequate in circumstances	E2, B2	5.5.1 and 6.3.2
l)	Unknown performance and durability of deck membrane	Adequate in circumstances	E2, B2	5.5.1 and 6.3.2
m)	Unknown floor clearances	Adequate in circumstances	E2, B2	5.4.1 and 5.5.1
n)	Inadequate cladding/decking clearances	Adequate in circumstances	E2, B2	5.4.1 and 5.5.1
o)	Height of deck barriers Toeholds in deck barriers	Remedial work required Adequate in circumstances	F4	5.6.1
p)	Lack of clearances from floor level to ground or paving level	Adequate in circumstances, but recommend removal of materials abutting underside of weatherboards	E2, B2	5.5.1

Notice to fix		My conclusions	Code Clauses	Paragraph references
	Summarised requirements			
q)	Cladding overhang at bottom plates	Adequate	E2, B2	5.5.1
2.2 Not to accepted trade practice				
a)	Unflushed and/or unsealed penetrations	Sealing of cable penetrations to be checked.	E2, B2	5.6.1
b)	Junctions reliant on silicon sealants	Maintenance item, but some remedial work required	E2, B2	5.6.1

7.2 In respect of the remaining items contained in the notice to fix I note the following:

Notice to fix		My response
	Summarised Requirements	
3.0 Other Building Related Issues		
a)	Provide smoke detectors to adjacent sleeping spaces	Required as alteration to an existing building under section 38(a) of the Building Act 1991.
3.1 Documentation required to assist with confirmation of compliance		
a)	Application for Code of Compliance	-
b)	B2 Durability Waiver	Not a matter for determination, refer paragraph 1.5.1.
c)	Site Inspection Records	The authority has confirmed this is in respect of the removal and replacement of the membrane only (refer paragraph 4.7).
d)	Drainage as built	Recommended.
e)	Electrical certificate of compliance	Not accepted, not a requirement of the consent, not required by the provisions of Building Act 1991.
f)	Gas Certificate of Compliance	Not required as above, no gas work undertaken.
g)	Revised Plans showing the layout changes and variation from the approved building consent documents	Recommended, to be agreed between the parties. However I note it appears that that revised drawings, submitted as part of the determination application, form part of the Authority's records for the property.
h)	Cancellation letter for building work not carried out under this consent	Not required if item g) undertaken.
i)	Confirmation of treatment level for timber framing	Not required. Was detailed on consent documentation, and the authority was able to determine this during construction.
j)	Installers certificate for the waterproof membrane for internal gutters and wet areas	Provided as part of the determination application.

7.3 The notice to fix takes the position that non-compliance with the relevant Acceptable Solution, and installation other than in accordance with 'accepted trade practice' can be taken to mean that compliance has not been achieved. In my view this position does not provide sufficient evidence to establish non-compliance with the performance requirements of the Building Code. An authority's assessment of building work in terms of code compliance must be done against the requirements of the Act and the Building Code that were in force at the time the consent was issued.

7.4 In addition I consider cognisance should have been taken of the fact that the work is a garage addition. While the garage is required to comply with Clause E2, its compliance must be determined against what is considered 'undue moisture ingress' in this case, taking account of the likely effects of damage cause by moisture ingress, and the level of amenity that will be provided.

7.5 The garage doors will allow the ingress of water and water laden air, whether open or closed, and water will be brought into the garage on wet vehicles. The framing to the garage is treated to H3.1 which will provide adequate resistance to decay. As observed by the expert the construction of the garage is also in keeping with the

original dwelling, which is in the order of 75 years old. The dwelling is well maintained and appears to be performing satisfactorily.

- 7.6 I am satisfied that the garage addition does not comply with the Building Code and that the authority made an appropriate decision to issue the notice to fix. The notice should be modified to take into account of the findings of this determination, in particular the matters I consider are adequate in paragraphs 7.1 and 7.2, and the additional items noted herein.

8. What is to be done now?

- 8.1 The notice to fix should be modified to take account the findings of this determination, identifying the items listed in paragraph 5.6.1 and referring to any further defects that might be discovered in the course of investigation and rectification, but not specifying how those defects are to be fixed. It is not for the notice to fix to stipulate directly how the defects are to be remedied and the house brought to compliance with the Building Code. That is a matter for the owner to propose and for the authority to accept or reject. It is important to note that the Building Code allows for more than one means of achieving code compliance.

- 8.2 I suggest that the parties adopt the following process to meet the requirements of paragraph 8.1. Initially, the authority should revise and re-issue the notice to fix. The applicant should then produce a response to this in the form of a detailed proposal as to the rectification or otherwise of the specified matters. Any outstanding items of disagreement can then be referred to the Chief Executive for a further binding determination.

9. The decision

- 9.1 In accordance with section 188 of the Act, I hereby determine that the external envelope to the garage addition does not comply with Clause B2 of the Building Code and the deck barriers do not comply with Clause F4 of the Building Code; and accordingly I confirm the authority's decision to issue the notice to fix.
- 9.2 I also determine that the authority is to modify the notice to fix, dated 25 July 2011, to take account of the findings of this determination.

Signed for and on behalf of the Chief Executive of the Department of Building and Housing on 24 February 2012.

John Gardiner
Manager Determinations