



Determination 2009/109

Refusal to amend a building consent and compliance of certain building elements at a house at 10 Tikorangi Road, Opito Bay



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.

1.2 The parties to the determination are:

- the applicant, Far North District Council (“the authority”) carrying out its duties and functions as a territorial authority and a building consent authority.
- Mr and Mrs Stirling (“the owners”) acting through an agent who is also the licensed building practitioner for the remedial work.
- The licensed building practitioner himself (“the LBP”).

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

- 1.3 The determination arises from a dispute over the remedial work required to a two-year-old house. The matters for determination in terms of sections 177(a) and 177(b)(vi)², are therefore:
- whether certain building elements installed in the house comply with the requirements of the Building Code² (Schedule 1, Building Regulations 1992)
 - whether the decision of the authority to refuse to amend a building consent is correct.

I have discussed the inclusion of the second matter in paragraphs 1.5 and 1.6.

- 1.4 The authority has approved remedial work for repairs to the basement walls of the house but is not satisfied that it has sufficient evidence that the balance of the work proposed in the application for the amendment to the building consent will achieve compliance with Building Code Clauses B1 Structure, B2 Durability, and E2 External Moisture.
- 1.5 When considering whether the consent should be amended, I have been asked by the authority to address the following questions:
- (1) The adequacy of the documentation for the structural amendments to the basement floor slab without supporting engineer plans, calculations or specifications.
 - (2) The adequacy of the documentation to replace the basement post and fixings without supporting engineer plans, calculations or specifications.
 - (3) The adequacy of the documentation to amend the balcony/wall flashing details without supporting documentation for the alternative solution proposed.
 - (4) The adequacy of the documentation to amend the flashing details for the external joinery without supporting documentation for the alternative solution proposed.
- 1.6 The owners noted that should the authority's application for a determination be declined, the owners would then apply for a determination. The owners' application would be regarding a request to the authority of 9 March 2009 for a notice to fix, together with a more extensive amendment to the building consent. In correspondence to the Department, the owners noted that the authority had declined this request. While I accept that the owners' concerns (listed in paragraph 1.7) did not form part of the original determination application made by the authority, I consider that section 188 gives the Chief Executive sufficient powers to include these matters in this determination.
- 1.7 Accordingly I will also address the following additional matters that have been raised on behalf of the owners and which question the code-compliance of certain building elements:
- The adequacy of the foundation design.
 - The design of the steel beams and their support posts.
 - The code-compliance of the weatherboards.
 - The joinery installed in the blockwork and weatherboard-clad walls.

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.

- The design of the balcony and its barrier.
- The bracing to the house.
- The roof installation.

1.8 I note that there is agreement between the parties as to the inadequacy of the blockwork wall waterproofing and its rectification, for which notices to fix have been issued. Accordingly I have not directly considered this issue in this determination.

1.9 In making my decision, I have considered the submissions of the parties, the reports of the three independent experts commissioned by the Department to advise on this dispute, and the other evidence in this matter. Various reports have been prepared on behalf of the owners that I have carefully perused, but I have only summarised these briefly in this determination.

2. The building work

2.1 The building work comprises a two-storey free-standing house built on a excavated sloping site that is in a coastal sea spray zone and in a high wind zone for the purposes of NZS 3604³. The house is of timber framed construction on concrete floor slabs or timber-framed intermediate floors. The house is relatively simple in shape and form. The pitched roofs have wall-to-roof junctions, with maximum 600mm wide projections to the eaves and verges. A timber-framed balcony is constructed at the ground floor level outside the building footprint and is supported on timber poles and beams.

2.2 The basement of the house is formed from blockwork walls and the ground floor level has a fibre-cement weatherboard cladding fixed directly to the wall framing over an absorbent synthetic building wrap. The weatherboards are finished with a paint system.

2.3 The house is at present completed to a “lockup” stage with some interior linings, trim, and fittings yet to be installed. The waterproofing to the exterior of the basement has been replaced. The basement slab has been cut away in three places to allow for the installation of sub-floor drainage and in one other location where it is proposed to install a post foundation. The subfloor drains that have been installed are set through the existing foundations. In addition, concrete core samples were removed from three slab locations and one footing location.

2.4 From the tested samples made on behalf of the first expert, I am prepared to accept the laboratory report that the external timber wall framing is made up with a combination of timbers treated to the equivalent of H1.2 and H3.2 applications.

3. Background

3.1 On 17 January 2006, the authority issued a building consent (No.BC-2007-866) under the Building Act 2004 for the house as originally constructed.

3.2 On 19 February 2007, the builder sought three minor amendments to the building consent.

³ New Zealand Standard NZS 3604:1999 Timber Framed Buildings.

- 3.3 The authority issued a notice to fix dated 30 November 2007. The notice stated that the owner was to:
1. Fix the Basement waterproofing to comply the Clause E2 of the compliance documents.
- 3.4 A second notice to fix was issued by the authority on 18 December 2007. The notice stated that the owner was to:
1. Fix the Basement waterproofing to comply the Clause E2 of the compliance documents.
 2. Remove excavated material off watertanks.
- 3.5 The owners referred the defects in the house to the Department's Weathertight Services Group. An assessor prepared a report on the house on behalf of the Weathertight Services Group that was completed on 9 April 2008. The conclusions reached in the report were:
- The house was leaking because of inadequate blockwork installation and inadequate waterproofing of the blockwork and the pipe penetrations.
 - The house might leak in the future due to the poor installation of the basement windows and the inadequate kick-outs to the apron flashings.
- 3.6 The LBP prepared an "Assessment of Construction and Remediation Design of Dwelling" dated 30 September 2008 that set out the background and a comprehensive summary of the house's construction. The report described the condition of:
- the foundations and drainage
 - the blockwork walls and waterproofing
 - the waste pipe installation
 - the joinery installed in the blockwork and weatherboard-clad walls
 - the balcony and its balustrade
 - the wall cladding and the roof flashings.
- 3.7 The LBP prepared an "Assessment of Deficient Elements" dated 1 October 2008 that included a commentary and photographs. The report related to the following:
- Assessment of the concrete floor.
 - A geotechnical assessment from a firm of consulting engineers engaged on behalf of the owners ("the owners' engineers").
 - A survey of the blockwork wall.
 - An assessment of the balcony and balustrade.
 - An assessment of the joinery installation in the basement walls.
 - An assessment of the weatherboard cladding.
 - An assessment of the joinery installation within the weatherboards.
 - An assessment of the roof flashings.

The geotechnical assessment included a copy of an email from a testing laboratory to the owners' engineers dated 2 October 2008, stating that the slab was founded on two different soil types.

- 3.8 On 2 October 2008, the LBP forwarded four concrete cores to a testing laboratory for testing. Three samples were from the slab and one from the footings.
- 3.9 On 6 October 2008, the authority wrote to the owners noting that at a pre-line inspection undertaken on 16 October 2007 moisture penetration through the basement blockwork walls had been detected. There was still evidence of this at an inspection carried out on 8 October 2008. It was noted the house was incomplete and still under construction and the authority listed items that were to be addressed or supplied to the authority.
- 3.10 On 16 October 2008, the LBP wrote to the authority submitting a list of remedial work to be considered. The letter referred to the detailed information supplied to the authority.
- 3.11 On 26 November 2008, the authority again wrote to the owners noting that the two outstanding major issues related to the moisture penetration in the basement and the roof and flashings. The authority also listed items of a minor nature that required attention and noted that the owners must comply with the two notices to fix that had been issued.
- 3.12 Between December 2008 and February 2009 correspondence took place between the LBP and the authority regarding the remedial work. A meeting attended by the owner, the LBP, and the authority also took place on 22 December 2008.
- 3.13 Following a site inspection, the owners' engineers produced a "Geotechnical Report" dated 5 February 2009. The report described the site ground and noted that the drainage and waterproofing installed at the rear of the basement blockwork wall was assumed to be inadequate. The report recommended how remedial waterproofing work could be carried out (paragraph 6 of the report, items 1 to 4). It also noted that cuts be made in the basement slab to accommodate under-slab drains if water ingress was still occurring after the waterproofing had been carried out. In addition, the surfacewater should be collected and piped to the authority's surfacewater system.
- 3.14 Another firm of civil and structural consultants ("the owners' structural consultants") produced a "Structural Condition Report No 1" for the owners dated 10 February 2009. The report noted that, following an inspection of the house, the following conclusions were reached:
- The foundations could be inadequate considering the bearing pressures and existence of expansive clay soils.
 - The beam in the garage required cold galvanising treatment and the timber support post should be replaced with a steel post bearing on a slab thickening.
 - The balcony design should be reviewed.
 - The balcony balustrade, including the glass infill, was non-compliant and should be replaced.
 - The bracing calculations do not conform to the drawings (or visa versa), therefore neither is acceptable.

- 3.15 On 19 February 2009, the LBP wrote to the authority querying why the information that had been provided to the authority was considered to be inadequate.
- 3.16 On 25 February 2009, the authority received a request for an amendment to the building consent relating to the basement drainage, the structural supports, the re-cladding, the balcony structure, and the roof flashings.
- 3.17 On 27 February 2009, the authority wrote to the owners and the LBP advising that the only items from the amended consent building consent 2007-886/0/A were approved by the authority to be completed:
- Basement waterproofing as outlined in the WHRS assessor's report (clause 15.6.2, items 1-14) and [the owner's engineers] report (clause 6.1 items 1 to 4 only).
- 3.18 The authority refused to consider the proposed amended structural supports and building structure through lack of detail, and did not consider that an amendment was required to re-clad the building or to complete remedial work on the roof flashing. As no further information had been supplied the authority would make an application for a determination.
- 3.19 On 9 March 2009, the LBP forwarded the "Structural Condition Report No 1" (as described in paragraph 3.14) to the authority. The LBP also requested that a notice to fix be issued covering the foundation, the balcony balustrade, the bracing, the fibre-cement weatherboard cladding, and the roof flashings. Also requested, was an amendment to the building consent covering the design of the steel beams and post and items listed in the notice to fix request.
- 3.20 The application for a determination was received by the Department on 19 March 2009.
- 3.21 On 25 March 2009, the authority wrote to the LBP noting that a notice to fix would not be issued for strengthening the foundations or for the lack of a specific design for the balcony and its balustrade. If the beam and column amendments were to be pursued, an amendment form was required, together with engineer's signed plans and a PS1 regarding anomalies found in the bracing design. A notice to fix would not be issued unless the owners refused to complete remedial work to the cladding and roofing systems. The authority stated that no work was to be completed outside of the scope of the approved plans and specifications, the Building Code compliance documents, or manufacturers' instructions.
- 3.22 Following a request from the LBP, the firm of consultant engineers that had carried out the original structural calculations for the house ("the builder's engineers") faxed the LBP on 15 April 2009. In the fax the builder's engineers stated that they had not been requested to provide a geotechnical report but had made two site visits. The initial visit included the installation of a borehole to view the soil structure and the second reviewed the soft soil encountered during construction. A structural detail, a copy of which was attached to the fax, was given showing the installation of piles. The builder's engineers had not been asked for, and had not provided, a PS4 construction review.
- 3.23 On 18 May 2009, the LBP wrote to the authority and provided copies of correspondence, drawings, and photographs regarding proposed reinstatement of the drainage trenches cut into the basement floor slab, the modification to the steel beam and post and the underpinning to the southwest corner of the building.

- 3.24 On 21 May 2009, following the issue of a “Field Advice Notice” dated 8 May 2009, the authority wrote to the LBP stating that work was to stop on the garage slab thickening and support column and the excavation of earth around the pencil piles. In addition, the LBP was to engage an engineer to comment on aspects of the work relating to the foundations and the cut through the slab thickening near the garage entrance. The authority noted it had not approved any amendment to carry out modifications to the steel beam or the installation of the sub-floor drainage. The authority also listed items for which further information was required.
- 3.25 The authority noted that it was engaging an independent suitably-qualified engineer to peer review and comment on the structural matters.
- 3.26 The authority wrote to the LBP on 30 June 2009, noting that there were still items to be addressed regarding the property. The items of concern can be summarised as:
- Due to insufficient information being provided, the authority could not be satisfied on reasonable grounds that the reinstatement of fill under the engineered designed foundations will be “to a suitable and justifiable design”.
 - A review of the three penetrations through the foundation footing that have been cut through the horizontal reinforcing steel was required by a suitably qualified person.
 - The proposed repairs to the basement slab membrane.
 - The encroachment of the proposed slab thickening on the drainage cavity.

4. The submissions from the parties

- 4.1 In a covering letter dated 9 March 2009, the authority set out the issues that it considered should be determined, together with a background and timetable of the matters arising in the determination.
- 4.2 On 6 May 2009, the authority further clarified certain items of its determination application.
- 4.3 The authority forwarded copies of:
- the contractual documentation, including the plans, specifications, and the engineering design
 - the building consent and consent documentation
 - the application for a building consent amendment
 - the remediation design details
 - the two notices to fix
 - the WHRS assessor’s report of 9 April 2008
 - the “Assessment of Construction and Remediation Design of Buildings” dated 30 September 2008
 - the “Geotechnical Report” of 5 February 2009
 - the builder’s engineers’ information
 - some of the authority’s inspection documentation

- the correspondence between the parties and other involved persons and organisations
 - some manufacturers' details and instructions
 - a set of photographs showing aspects of the house construction.
- 4.4 In a letter dated 14 April 2009, the LBP noted that should the authority's request for a determination be declined, then the owners would request a determination based on the LBP's reports. The LBP also noted that the documentation provided by the authority was not complete.
- 4.5 On 16 April 2009, the LBP wrote to the Department noting that the structural engineers engaged by the builder had not verified the 'specific engineering design' of the original structure or the various amendments. The LBP wished this matter to be considered within the determination process.
- 4.6 The LBP wrote to the Department on 1 May 2009, setting out some of the background to the dispute and requested that the matter to be determined be modified to reflect the LBP's submission of 9 March 2009 (refer paragraph 3.19) and subsequent correspondence.
- 4.7 The LBP forwarded copies of:
- the contractual documentation, including the plans, specifications, and the engineering design
 - the building consent and consent documentation
 - the remediation design details
 - the two notices to fix
 - the "Assessment of Construction and Remediation Design of Buildings" dated 30 September 2008
 - the "Assessment of Deficient Elements" dated 1 October 2008
 - the "Geotechnical Report" dated 5 February 2009
 - the "Structural Condition Report No 1" dated 10 February 2009
 - various reports relating to the remediation process recommended by the LBP
 - some of the authority's inspection documentation
 - the correspondence between the parties and other involved persons and organisations
 - some manufacturers' details and instructions.

5. The experts' reports

The first expert

- 5.1 As mentioned in paragraph 1.9, I engaged an independent expert ("the first expert") to provide an assessment of the condition of certain of the building elements that are subject to the determination. The expert is a member of the Institute of Building Surveyors and is experienced in the field of building inspections.

5.2 The expert visited the site on 30 May 2009 and produced a report that was completed on 7 June 2009. The expert set out the background to the dispute and described the construction and present state of the house. In the expert's view, the general standard of workmanship with respect to the weather board installation could not be defined as "substandard" as was contended by the LBP. However, a number of specific items require attention and the joinery installation to the basement wall was seriously deficient.

5.3 The expert established an equilibrium moisture content of the exterior wall framing of some 17% from invasive probes taken from the inside of the house. There was only one excessively high reading obtained, from the bottom plate on the south elevation under a roof/wall junction. The expert also took four samples from the external wall framing as follows:

Sample 1 – bottom plate, south elevation, under roof/wall junction

Sample 2 – stud by door, east elevation

Sample 3 – house boundary joist of which balcony is hung

Sample 4 – strapping to underside of boundary joist

The samples were tested as described in paragraph 5.12. The expert also removed one smaller sized window and found details that matched those of a window that had previously been removed. I am prepared to accept that the details obtained from these two inspections are representative of the other windows installed in the house.

5.4 I have summarised the expert's conclusions regarding the various building elements as set out in the following paragraphs.

5.5 Regarding the weatherboards:

- These had been fixed in line with requirements for timber weatherboards rather than the manufacturer's instructions for the fibre-cement weatherboards installed. The weatherboards, including the scribes, were generally carefully fitted, however;
 - the bottom weatherboards lack "cant slips" and the substituted cut timber was not satisfactory
 - the cut ends of the weatherboards were not sealed at the wall corners; however, as confirmed with the manufacturer, it was not necessary to seal the running joints in the weatherboards
 - the nail heads required to be filled and painted.
- While there were high-risk intersections on the North and South elevations, this did not rule out direct-fixed exterior cladding (if E2/AS1 was to be used as the means of compliance).

5.6 Regarding the windows set in the weatherboards:

- There were gaps in the air seals.
- The ends of the sill and head flashings had been sealed. The present requirement for bent-up ends was introduced after these windows had been installed.

- While there was no additional support for the sill flashing, the carefully cut weatherboard under the sill was an adequate substitution.
- It was doubtful whether any ingress of moisture would be adequately channelled away from the perimeters of the larger exposed windows, so that any water entering the jambs would not be drained out.

5.7 Regarding the windows set into the blockwork:

- No head flashings had been installed.
- There were gaps in the air seals.
- There were no drip edges or capillary breaks provided to the lintel blocks.
- The jamb blocks were roughly laid.

5.8 Regarding the balcony:

- Solid timber packers were required at the fixing points of the deck framing to the ground floor framing. The timber wedges and packers used were inadequate.
- It was unclear how the balcony boundary joist was fixed to the joists of the house.
- Water could track along the balcony boundary joist fixings and into the building.
- The timber balusters were not properly attached to the boundary joist and the timber top rail was nailed through the cladding.
- The posts supporting the glazed sections were only screwed into the decking and not into the framing.

5.9 It was noted that three different approaches to the bracing requirements had been taken, namely:

- the builder's consultants' calculation
- the computer-generated "Bracing Plan"
- the bracing actually installed.

5.10 There were three wall-to-roof junctions with roof terminations within the cladding and a lack of kick-out flashings. One of these junctions had caused a major leak into the building.

5.11 There was moisture passing through the concrete blockwork retaining walls and it was noted that the membrane had been damaged where the drainage slots had been cut in the basement slab.

5.12 A biodeterioration consultant tested the four timber samples provided by the expert (refer paragraph 5.3). In a report dated 5 June 2009, the biodeterioration consultant was of the opinion that the sample removed from the saturated area of wall framing, sample 1, was treated to the equivalent of H1.2. This sample contained active fungal growths but there was no structurally significant established decay, and no definitive incipient brown rot or toxigenic mould was detected. In the opinion of the biodeterioration consultant the other three samples were probably treated to a H3 level and did not display any fungal growth.

- 5.13 On 2 June 2009, the LBP wrote to the Department regarding his attendance at the site visit made by the first expert.
- 5.14 In a letter to the Department dated 15 June 2009 and a further submission of 31 August 2009, the LBP commented on various aspects of the first expert's report. I have carefully considered these comments in formulating this determination.
- 5.15 In a letter to the Department dated 23 June 2009, the authority commented on the first expert's report. In general terms, the authority accepted the report's findings but also raised the following matters:
- The authority was concerned about the effect on the foundations of cutting the slab for the sub-floor drains, the under-slab membrane, and on the proposed slab thickening.
 - It was expected that the LBP would address remedial works to the balcony safety barrier.

The second expert

- 5.16 A second independent expert, who is a registered building surveyor, was engaged by me to report specifically on the condition of the fibre-cement weatherboards. The expert produced a report dated 29 June 2009, together with some photographs. I summarise the second expert's comments as follows:
- The house was in a very high wind zone.
 - The second expert was able to inspect some boards that had been removed and noted that the face-driven nails had resulted in spalling immediately around the nail penetrations at the rear face of the boards.
 - The boards are fixed with 60mm x 3.15mm stainless steel jolt-head annular-grooved nails, some of which are driven flush or just below the surface of the weatherboards. Filling of nail heads and painting of the exterior was in progress.
 - No sealant has been applied to the running joints of the boards, and no "cant strip" has been applied under the bottom weatherboards. The bottom edges of the weatherboards lack adequate support.

The third expert

- 5.17 I engaged a third expert, who is a chartered professional engineer, to conduct a structural review based on the application documentation supplied to the Department. The expert produced a report, dated 5 July 2009, which discussed the following matters in detail.
- 5.18 Commenting on the plans the expert noted that:
- the ground floor wall bracing showing on the plans differs substantially from that in the calculations
 - an assessment of earthquake demand has not been provided for the basement bracing
 - as the ground floor is not specified to act as a diaphragm, the maximum distance between bracing lines is exceeded in the across direction. However, this is mitigated by the cantilever action of the rear basement retaining walls,

although the bracing lines were not covered by the builder's engineer's calculations.

- 5.19 In respect of the ground floor wall bracing the expert re-assessed the demand based on a High Wind Zone from NZS 3604 and the demand is satisfied by the bracing shown on the plans but the expert had not sighted any documentation as to the bracing actually constructed on site.
- 5.20 The expert checked the bracing provided for the basement by the blockwork walls and there is sufficient overall capacity in both directions to meet both the wind and earthquake demands.
- 5.21 In checking the support for the steel beam over the garage, it was noted that:
- the support studs to the end of the garage beam to the Bedroom 3 wall are close to maximum capacity
 - the 8mm thick baseplate to the 89 x 89 rolled hollow section ("RHS") post should be 12mm thick and is also undersized. However, the plate could be stiffened.
- 5.22 The third expert was of the opinion that there should be a slab thickening under the support studs or that alternative measures could be taken to spread the load along the slab. In addition, no consideration had been given for the slab to accommodate the point load at the lintel and beam junction at bedroom 3, which was not designed by the builder's engineers.
- 5.23 The report also noted that:
- while the structural design incorporated high-density poles beneath the balcony/kitchen area, they were not specified on the drawings
 - the size of the steel beam shown on sheet BC-A-07 is incorrect, but is shown correctly on the floor plans
 - there was insufficient detail on the consented drawings for the expert to assess the adequacy of the balcony balustrades.
- 5.24 The third expert also reviewed the foundation design taking into account the Geotechnical Report described in paragraph 3.13. The expert had no concerns about the foundation design apart from the slab thickenings. It was noted that the design required the footings to be 500mm deep into 'good ground'. However, the Geotechnical Report gives no recommendation regarding the depth of foundations taking into account the existence of expansive clay soils.
- 5.25 The expert disagreed, in part, with conclusions reached by owners' engineers regarding the subsoil drains, noting that the waterproofing used was crucial in protecting water ingress into the basement.
- 5.26 The expert concluded that the only significant matter not covered in the original engineering design, and which did not satisfy the requirements of Clause B1, was the slab thickening under the studs supporting the garage beam.
- 5.27 The LBP has requested that I amend some of the observations made by the experts to better reflect the conclusions that the practitioner has reached. The determination summarises the conclusions reached by the experts and I consider that their comments should not be amended as requested.

6. The draft determinations and hearing

6.1 The first draft determination

- 6.1.1 The first draft determination was issued to the parties for comment on 8 July 2009. The authority had not responded up to the date of the hearing (held on 16 July 2009, refer paragraph 6.2).
- 6.1.2 The LBP, on behalf of the owners, did not accept the draft determination. As the points raised by the LBP were also discussed at the hearing, I have not summarised them at this juncture.

6.2 The Hearing and the site visit

The Hearing

- 6.2.1 A hearing was held at Kerikeri on 16 July 2009 before me. I was accompanied by a Referee engaged by the Chief Executive under section 187(2) of the Act. The hearing was attended by:
- the owners, assisted by the LBP and a representative of the owners' structural consultants
 - four representatives from the authority
 - two other officers from the Department.
- 6.2.2 All the parties spoke at the hearing and the evidence presented enabled me to amplify or clarify various matters of fact and was of assistance to me in preparing this determination.

The authority's submission

- 6.2.3 The submissions on behalf of the authority were presented at the hearing and I summarise the main points as being:
- No full supporting documents were originally provided by the LBP as requested. Subsequent information has been 'drip fed', and some was sent after the determination application was made.
 - It was not until February 2009 that an application was made for an amendment to the building consent. At the November 2008 meeting, it was noted that details were lacking for the:
 - support columns
 - flashings systems
 - handrail to the balcony
 - balcony structure.

The authority also noted that it disagreed that the weatherboards needed to be completely replaced or that the proposed alterations were required to the balcony other than the strengthening of the balustrades.

- The authority listed some 20 items of a minor nature that required rectification in its correspondence of 26 November 2008 to the owners, but had not issued a notice to fix for these. The two notices to fix had been sent to the owner and

the builder. Builders are the authority's first point of contact in respect of notices to fix.

- The authority does not enforce requests for PS4 documents until considering the issuing of a code compliance certificate at the conclusion of the building process.
- The LBP had not provided documentation to support his claim that the proposed flashing system had been approved by another building consent authority.
- The authority had no issue with the proposed slab thickening but needed more information. It did not accept that the proposed beam support amendment could be a repeat of the other structural support. A registered engineer's design was required as the LBP was not a registered engineer.

The owners' submission

6.2.4 The submissions on behalf of the owners were also presented at the hearing and I summarise the main points as being:

- The owners noted that they had reiterated to the builder and architect that there were water problems on the site and had been assured that these were to be taken into account.
- If the authority has received a request for an amendment to the building consent, then it must issue a notice to fix. Sufficient details have been provided to the authority for notices to fix to be issued and these should be sent to the person directly responsible for the building work at issue and not to the owners.
- The building work that requires rectification was the:
 - basement drainage
 - support columns
 - windows in the blockwork walls
 - balcony and balustrade, for which no specific engineering design had been provided
 - exterior envelope
 - bracing
 - footing to the rear retaining wall.
- The cladding had been incorrectly installed and every weatherboard required replacing. Accordingly, a full re-cladding was required.
- No PS4 documents have been obtained for the foundations and one pencil pile was founded in poor ground. The original foundation design was based on "good ground" but as is prevalent in Northland, it was likely that the site contained expansive clay soils. The Geotechnical report concluded that the site could not be considered to be "good ground".
- While the studs supporting the beam were adequate, what was really required was a solid post. The engineering design had shown a slab thickening under

the post but this was not constructed. No additional reinforcing had been installed in the slab at this location, which was only 80 mm thick, and there was inadequate bottom cover to the slab reinforcing.

- The LBP intended to replicate the details from the steel support post design to replace the timber beam supports.

The window flashing demonstration

- 6.2.5 The LBP demonstrated the proposed flashing system, which was installed in two mock-ups illustrating a window and a door set into a fibre-cement weatherboard-clad wall. The LBP also pointed out that some of the fibre-cement weatherboard technical manual details were replicated in the proposed systems.

The additional engineering report

- 6.2.6 The authority produced copies of a report from a firm of consulting engineers at the hearing, and I note that this had not previously been forwarded to the owners or to the Department. The report, which was dated 18 June 2009, reviewed and commented on the builder's engineers' original design. I list below the conclusions reached by the consulting engineers:

- The proposal to cut in a new post foundation pad is the preferred solution. However, as the sub-soil drain that runs past this location is below the proposed pad, the pad should be extended below the trench level unless it has been specifically designed to sit on the trench filling.
- There was agreement that, as the Geotechnical Report advised that the site contained expansive clays, the foundation design is outside of "Scope 3604".
- If the concrete and reinforcing is in the state described by the owners' structural consultants, then some remedial work should be undertaken.
- Insufficient details have been provided as to rectifying the ground adjacent to the pencil piles.
- The installation of subsoil drains under the slab should only be a last resort option. It is better to stop water from entering behind the wall. The owners' structural consultants' solution should have been adopted, rather than that detailed by the LBP.
- The damage caused to the footings by the installation of the sub-floor drains requires rectification based on an engineering design. No details have been submitted as to how the polythene membrane under the basement is to be made good where the slab has been cut away.

The site visit

- 6.2.7 Following the hearing a site meeting attended by all the hearing attendees was made to view the house in question. At the site the LBP reviewed the situation, pointing out his concerns with the weatherboards and provided more detail about the sub-floor drainage work that had been carried out. The area had been subject to heavy rain and wind and I was able to make the following observations:

- The identified faulty flashing had not been repaired and was still leaking.

- There were signs of moisture coming through the south basement bedroom wall below the window. The remainder of the house appeared dry with no signs of leaks and the insulation, where still exposed, seemed dry.
- The balustrade deflected when pushed, indicating the post fixings needed strengthening.

Sections of concrete that had been cut from the basement floor showed the reinforcing steel to have an approximately 20mm cover.

6.3 The second draft determination

- 6.3.1 Subsequent to the hearing and site visit, a second draft determination was forwarded to the parties for comment on 12 August 2009.
- 6.3.2 The authority accepted the second draft determination subject to three non-contentious amendments that I have considered herein.
- 6.3.3 The owners did not accept the second draft determination and in an accompanying submission commented in detail. The bulk of the submission related to the actions of the various parties involved in the construction and inspection processes in regard to the house. I have carefully considered those issues raised by the owners and I have summarised those comments that I believe are relevant to the matters to be determined:
- The repairs required to be carried out on the weatherboards are such that a total re-cladding is required.
 - The under-slab membrane was defective prior to the work undertaken to provide sub-floor drainage.
 - The sub-floor drainage was required as the re-installed perimeter drains did not solve the water ingress problems.
 - The flashings to the ground floor windows are inadequate and the flashing details provided by the LBP should be accepted.
- 6.3.4 The LBP provided a fully detailed submission in response to the second draft determination, which I have carefully considered and have amended the determination accordingly.

6.4 The third draft determination

- 6.4.1 The third draft determination was forwarded to the parties for comment on 17 September 2009. The authority accepted the third draft without comment.
- 6.4.2 The owners responded advising they did not accept the third draft determination. In summary the owners submitted that:

In General

- The deck/wall flashing and the proposed flashing details for the external joinery system would provide a code compliant solution.
- The determination's statement that the standard of workmanship was 'acceptable' was disputed.

- The owners considered they ‘have a right to have the house completed in accordance with the consent, not just to achieve code compliance’. The owners should not need to ‘redo’ an approved bracing plan.
- A lesser standard condones the builder’s activities. The notice to fix should have been issued to the builder (refer paragraph 9).
- The owners consider the determination minimised the amount of remedial work actually required.

Defects to the linear cladding

- All the linear boards were centre nailed. The repairs are sufficient in number to warrant the replacement of the cladding.
- ‘Failure to re-clad deprives [the owners]’ of the manufacturers’ guarantee for the product.

The authority’s responsibility

- ‘The authority has failed in its duty to ensure there were no defects in the building’. The authority had the opportunity to ascertain that the cladding was not being installed to the manufacturer’s requirements. The owners questioned what redress they had for any future problems.
- The owners questioned the authority’s apparent acceptance of the roof when their earlier advice was that should be replaced.

6.4.3 The LBP also did not accept the third draft determination. In summary the LBP submitted that:

- The determination as drafted would not provide any relief to the owners.
- The effectiveness of the proposed window and flashing details was proven, and cited acceptance of the details by two other authorities. The LBP did not agree that the use of WANZ⁴ details would ensure compliance.
- The defects were substantial requiring a greater degree of remedial work than was indicated in the draft.
- The balcony and balustrade had been ‘condemned by the engineers’.
- Any notice to fix should be issued to the ‘specified person’ and not the owners.

6.4.4 The LBP in a letter dated 13 November 2009 submitted a fax from the manufacturer dated sent to the LBP dated 6 November 2009. The fax recorded the findings of a site visit completed on behalf of the manufacture, and outlined the defects that were seen and how most of these could be rectified. The fax considered the nailing, the priming of exposed edged, the cant strips, and the required gaps associated with the flashings to the windows.

6.4.5 The fax described in detail how the weatherboards should be nailed saying ‘the installation of these boards must be rectified by fixing a nail through the lap’. The fax concluded by saying ‘in general the workmanship is not to the desired standards but this can certainly be improved’.

⁴ The Window Association of New Zealand

- 6.4.6 I have considered the submissions and amended the determination as appropriate. I note the following in response to the submissions made:
- The nailing of the weatherboards is not in accordance with the manufacturer's installation instructions and this might have an impact on the manufacturer's 25 year guarantee of the product. However, the manufacturer has now detailed how the nailing can be remedied.
 - The manufacturer's installation instructions also describe window and flashing details. It is not known how the manufacturer's guarantee will be affected by the use of the window and flashing details proposed by the LBP.
 - The LBP did not provide evidence of the acceptance by two other authorities (refer paragraph 6.4.3).

7. Discussion

7.1 The supporting documentation

- 7.1.1 The authority has questioned whether the LBP's application for building consent amendments relating to the proposed pad in the basement floor and the removal of the timber load-bearing wall in the basement are acceptable without supporting evidence, such as a suitably qualified engineer's calculations, producer statement or specifications (being questions 1 and 2 from the authority's application, refer paragraph 1.5).
- 7.1.2 These two questions relate to the LBP's application for an amendment to the original consent. As such, the requirements of section 45(1)(b) apply and the application must be accompanied by plans and specifications sufficient to establish code-compliance in terms of section 49(1). I am of the opinion that the plans and specifications described must be accompanied by supporting documents, which could include such items as geotechnical reports and structural design calculations.
- 7.1.3 Based on the above reasoning I accept the authority's contention that the documentation that the authority has requested should be supplied before it can be satisfied as to the code compliance and accept the proposed amendments. The same would also apply to any proposed rectification of the structure where the basement slab has been cut away for drainage and slab thickening.
- 7.1.4 The authority has indicated that it has received further information since the application for a determination was made. In this respect I note that the owners' structural consultants have provided information as to the rectification of the floor slab. The authority should carefully consider all the information that it has received to date to ascertain whether any further documentation is required.

7.2 The proposed flashing details

- 7.2.1 The authority has questioned whether the supporting documentation for the balcony and window flashings, proposed by the LBP, provide reasonable grounds for the authority to form a view that balcony and window flashings will be code-compliant (questions 3 and 4 of the authority's application).
- 7.2.2 At the hearing, the LBP stated that he did not consider that the details set out in E2/AS1 were adequate and demonstrated the proposed flashing system that he wished to use. I make the following comments in regard to the proposed system:

- The design contains components that are intended to follow the principles of weathertightness contained in E2/AS1 so that moisture is deflected and drained away from the window-to-wall junctions.
- The design is an alternative solution with a degree of complexity in the flashing and assembly detailing. The proposed system also differs from the manufacturer's installation details.
- The system has not been subject to any acceptable independent verification process, nor has any documented evidence been provided that it has been approved by another authority, or has demonstrated compliance by proven in-service performance.
- If the authority was satisfied that the proposed system was at least as good as E2/AS1, then it would be required to approve the detail as an alternative solution.

7.2.3 Based on these observations, I am of the opinion that the proposed flashing system is not supported by a sufficiently robust peer review to demonstrate compliance. I would therefore suggest that any flashing remediation be undertaken in line with E2/AS1, the weatherboard manufacturer's recommendations, or the details recommended by WANZ. These details are freely available, have been used and tested in-use throughout New Zealand.

7.3 The sub-floor drainage

7.3.1 The LBP has arranged for the basement concrete slab and adjacent foundations to be cut to allow for the installation of sub-floor drains. This was to accommodate the spring water ingress through the slab. In this respect, I note that the sub-floor drains were recommended in the Geotechnical Report only if the basement waterproofing was not functioning. Based on the LBP's submission and verification from the owners, I accept that the installation of the sub-floor drains was justified. However, as described in the additional engineering report (refer paragraph 6.2.6), the cutting of the slab and foundations has raised questions as to the structural integrity of these elements and also of the sub-floor membrane.

7.3.2 Finally, I note that the sub-floor drainage work described above, which is not related to any of the original construction, was carried out without the issue of a building consent or an amendment to the original building consent. The letter of 27 February 2009 from the authority to the LBP and the LBP's response of 9 March 2009, clearly refer to rectification of the basement waterproofing only. While the work can be considered as essential and has apparently been subject to discussion with the authority, I note that no building consent was obtained for the work and it may be considered illegal building work in terms of section 40.

7.4 The code-compliance of the remaining building elements

7.4.1 The authority and the LBP have raised matters relating to the code-compliance of some of the remaining building elements. Based on the three experts' reports, I comment as follows:

7.5 The foundation design

- 7.5.1 The third expert has confirmed that, apart from the garage beam support thickening and the matters concerning the balcony balustrade and the bedroom 3 beam junction, the requirements of Clause B1 were met in the original structural design (if it was built on good ground). However, the question of the adequacy of the foundations in respect of expansive clays has not been fully addressed.
- 7.5.2 The owners' structural consultant noted at the hearing that the engineering design had been based on "good ground" and that the house in question may not be founded on such ground. This concern is also raised in the engineering report undertaken on behalf of the authority that is described in paragraph 6.2.6. I also note that, as described in the Geotechnical Report, there are expansive clays present on the site.
- 7.5.3 Based on these observations, I suggest that a review of the original structural design be undertaken to ascertain whether the foundations as designed and the other minor structural elements are adequate. In this respect, I have noted in paragraph 3.22 that the builder's engineers were engaged to carry out some investigations of the site when soft soils had been encountered during the foundation excavations, and provided a foundation design for use in areas where the soft ground was encountered. It should be confirmed that these extra foundations were founded on good ground.
- 7.5.4 I also note that the owners and the LBP have raised concerns as to the efficiency of the basement floor membrane. However, since the installation of the floor drains appears to be effective, there does not appear to be any concern that there will be further water ingress into the building through the slab. In addition I do not believe that the positioning of the slab mesh reinforcing in the concrete slab itself raises any structural issues.

7.6 The design of the steel beams and their support posts

- 7.6.1 The third expert has raised concerns regarding the design of the support to the garage beam in respect of the capacity of the supporting studs and the baseplate. While the studs are close to maximum capacity, they do not appear to be failing. However, the third expert has concerns about the baseplate to the steel beam to the garage, and has recommended that it be stiffened. In addition the expert considered that a thickening should be provided under the beam supports, or some other alternative solution provided that would spread the load.
- 7.6.2 The third expert has also questioned the ability of the basement floor slab to accommodate the loads imposed by the beam junctions at Bedroom 3. At the hearing, the owners' structural consultant was also of the opinion that the timber supports had only marginal strength.
- 7.6.3 Based on these observations, I accept that the supporting studs to the garage beam currently comply. However they are close to their capacity and it may be prudent for the owners to consider remedial work to replace, or strengthen the timber support studs. However, I do not accept the LBP's opinion that the details for the replacement can replicate those of the other structural steel beam support and base. The LBP is not registered as a New Zealand Chartered Professional engineer and, in line with my comments set out in paragraph 7.1, the authority is correct in requiring a design from a New Zealand Chartered Professional engineer for this work.

7.6.4 In addition, I refer to the report described in paragraph 6.2.6, which raised concerns about the depth of the thickening in relation to the sub-floor drains.

7.7 The bracing

7.7.1 The first expert has noted that there are anomalies between the three different methods used to establish the bracing required for the house. The third expert has verified that the basement bracing is adequate and that the ground floor wall bracing shown on the plans satisfies the required demands placed on it. However, there is doubt as to whether the bracing has been installed in accordance with the plans.

7.7.2 I suggest that owners arrange for the provision of a bracing proposal for the authority's consideration and approval.

7.8 The weatherboards

7.8.1 In the Weathertight Services Group assessor's report the assessor made no suggestion that the weatherboards should be replaced but the first expert has listed the following non-compliant elements which require remediation:

1. The lack of "cant slips" to the bottom weatherboards.
2. The lack of sealant at cut ends of the boards adjoining the wall corners.
3. The proper filling and painting over of the nails.

7.8.2 The second expert raised the same comments regarding the weatherboards, and also noted that there was spalling around the nail holes in the back face of the boards that had been removed. The authority is of the opinion that the external corners that are covered by boxed facings do not require priming. The second expert also noted gaps between the weatherboards.

7.8.3 The LBP is of the opinion that because of the faulty nailing and the spalling at the back of the boards, the entire weatherboard cladding should be removed and replaced incorporating the LBP's flashing design. This is also the owners' opinion.

7.8.4 The weatherboard manufacturer has visited the site and provided detailed advice about how the nailing of the weatherboards should be corrected (refer paragraph 6.4.4). The manufacturer did not recommend that the weatherboards be removed and replaced.

7.8.5 I am therefore prepared to accept that, provided the weatherboards are re-nailed in accordance with the manufacturer's requirement, despite the spalling at the nail holes at the back face of the weatherboards, they will meet the durability requirements of the Building Code.

7.8.6 Regarding any replacement of the weatherboards or the windows installed in them, I refer to my comments in paragraph 7.9.4 regarding the existing exterior joinery flashings.

7.9 The windows installed in the blockwork and weatherboard-clad walls

7.9.1 The first expert has noted the following non-compliant elements regarding certain of the windows, which require remediation:

1. The installation of the larger exposed windows fixed in the weatherboard-clad walls, which prevents moisture ingress being channelled away from the window perimeters.

2. The windows set in the weatherboards showed installation faults including:
 - the sealed ends of the sill and head flashings
 - gaps in the air seals.
3. The windows set into the block-work also showed faults including:
 - gaps in the air seals
 - the lack of head flashings
 - the lack of drip edges or capillary breaks provided for in the lintel blocks
 - the roughly-laid jamb blocks.

7.9.2 In respect of the windows set into the block-work, the roughly laid jamb blocks allow for the ingress of moisture and therefore do not comply with Clause E2.

7.9.3 In respect of the windows set into the weatherboards, I have examined the details that were shown on the consented documentation regarding the window flashings in the weatherboard-clad walls, and I consider that these details comply with E2/AS1. In addition, I note that the windows in general have, to date, not displayed any defects arising from moisture ingress. However, in my view the window jambs have the potential to allow moisture ingress and consideration should be given to improving the weathertightness of such junctions. The first expert has also noted that there are gaps in the window air seals and that there are problems with the larger window's ability to shed moisture away from the building envelope. I consider that the windows set into the weatherboards do not comply with Clause B2 insofar as it relates to Clause E2.

7.9.4 However, I am of the opinion that the windows can be removed and re-fixed and remedial work can be undertaken that would not necessitate the replacement of the existing flashing systems.

7.10 The balcony and its barrier

7.10.1 The first expert has noted, and I accept, that the following non-compliant elements regarding the balcony and its barrier require remediation:

- The inadequate timber packing at the fixing points between the deck framing and the ground floor framing.
- The inadequately attached timber balusters and the timber top rail nailed through the cladding.
- The inadequately fixed posts supporting the glazed sections.

7.10.2 In regards to the rectification of the solid timber packers, I note here that the joint will need to be made weathertight in order to comply with Clause E2. Suitable details are contained in E2/AS1.

7.10.3 Verification is required of the adequacy of the structural connection between the balcony stringer and the floor framing of the house.

7.11 The roof installation

7.11.1 As noted by the first expert, kick-out flashings are required to be installed at the ends of three apron flashings.

7.12 Conclusions

- 7.12.1 My observations are that the work required to make the house code compliant is not as extensive as that which has been proposed by the LBP. The owners may wish to exceed the requirements of the Building Code, however section 18 of the Act clearly states that there is no requirement ‘to achieve performance criteria additional to or more restrictive than [the] building code’. If the following faults listed below are rectified to the approval of the authority, the building elements in question would become code-compliant:
- The amendments to the studs supporting the garage beam, together with a slab thickening or acceptable remedial solution.
 - The fixing of the weatherboards in accordance with the manufacturer’s requirements.
 - The lack of “cant slips” to the bottom weatherboards.
 - The lack of sealant at cut ends of the weatherboards adjoining the wall corners.
 - The proper filling and painting over of the existing nails to the weatherboards.
 - The remedial work to fix the deficiencies of the windows as described in paragraph 7.9.1, which may not necessarily require the removal and subsequent re-fixing of the windows themselves.
 - The remedial work to fix the deficiencies of the balcony and its balustrades as set out in paragraphs 7.10.1 and 7.10.2.
 - The remedial work required to the roof flashings and associated elements.
- 7.12.2 There are other matters that I bring to the attention of the parties that require verification as follows:
- The bracing as installed to the ground floor.
 - The adequacy of the foundations taking into account the expansive clay soils on site.
 - The baseplate to the 89 x 89 RHS post.
 - The adequacy of the structural connection between the balcony stringer and the floor framing of the house.
- 7.12.3 The owners, in consultation with appropriately qualified person, should provide adequate documentation to the authority for any remedial work that is considered to be necessary (refer also paragraph 7.1). I strongly suggest that agreement about how the defects to the cladding are to be fixed is reached expeditiously in order to limit the effect of any on-going non-compliance on the building envelope.

8. Summary

8.1 The following table summarises my conclusions on the items discussed within this determination and refers to the relevant code clauses and related paragraphs within this determination:

Item	Code clause(s)	Conclusion	Ref.
Supporting documentation			
Supporting documentation for an amendment to the building consent		Required	7.1.3
Proposed flashing details			
Proposed flashing details	E2	Insufficient evidence to establish compliance	7.2.3
Sub-floor drainage			
Sub-floor drainage & basement floor membrane	E2	Complies	5.11, 7.3.1, 7.5.4
The weatherboards			
Items requiring remedial work: <ul style="list-style-type: none"> Securing of the weatherboards "Cant slips" to the bottom weatherboards Sealant at cut ends of the boards adjoining the wall corners Filling and painting over of the nails 	B2*	Remedial work required to bring the weatherboard cladding system into compliance with the durability requirements	5.5, 5.16, 6.4.5 7.8.1, 7.8.5, 7.12.1
The windows			
Windows installed in the weatherboards Items requiring remedial work: <ul style="list-style-type: none"> The ends of head flashings The gaps in the air seals The installation of the larger exposed windows fixed in the weatherboard-clad walls, which prevents moisture ingress being channelled away from the window perimeters Window jambs 	B2*	Does not comply. Remedial work required to bring the installation of the window joinery into compliance with the durability requirements	5.6, 7.9.1 7.9.2, 7.11.1
Windows installed in the blockwork Items requiring remedial work: <ul style="list-style-type: none"> The lack of drip edges or capillary breaks provided for in the lintel blocks The lack of head flashings The gaps in the air seals The roughly-laid jamb blocks 	E2 & B2*	Does not comply	5.7, 7.9.1, 7.11.1
The balcony and its barrier			
The lack of a solid timber packer between the stringer and the weatherboards and the possibility that the threaded fixing rod could track moisture into the building	E2, B2	Does not comply	5.8, 7.10.1, 7.12.1
The adequacy of the structural connection between the balcony stringer and the framing of the house.	B1	Requires verification	5.8, 7.10.2, 7.12.1

Item	Code clause(s)	Conclusion	Ref.
The inadequately attached timber balusters	F4, B1	Does not comply	5.8, 6.2.7, 7.10.1, 7.12.1
Fixing of the posts supporting the glazed sections	F4, B1	Does not comply	5.8
The timber top rail nailed through the cladding	E2, B2	Does not comply	7.10.1, 7.12.1
The roof			
The roof flashings and associated elements.	E2	Does not comply	5.10, 7.11.1
The bracing			
The ground floor wall bracing	B1	Requires verification	5.9, 5.18, 5.20
The basement wall bracing	B1	Complies	5.9, 7.7.1, 7.12.1
The steel beams and the support posts			
The size & thickness of the baseplate to the RHS post, and the ability of the basement floor slab to accommodate the load	B1	Does not comply	5.21, 7.12.1
The supporting studs to the garage beam	B1	Complies – note are close to maximum capacity	5.21, 7.12.1
The foundation design			
The mesh reinforcing	B1	Complies	6.2.7, 7.5.4
The adequacy of the foundations taking into account the expansive clay soils on site	B1	Requires verification	5.24, 7.12.1
The integrity of the foundation slab following the installation of the sub-floor drains	B1	Requires verification	7.1.3, 7.3.1

B2 = Clause B2 insofar as it relates to Clause E2*

9. Notices to fix and site notices

- 9.1 To date, the authority has issued two notices to fix and two letters that listed additional work that required attention. I consider the two letters to be the equivalent of site notices. At the hearing, both parties put forward their views as to who should receive a notice to fix and or a site notice. The LBP was of the opinion that a notice to fix should not be issued to the owner, but to the person or persons who directly carried out the building work. The authority was of the opinion that a notice to fix should be issued to the builder.
- 9.2 While I consider an authority has considerable discretion when considering the appropriate means of notifying non-code compliance, the authority should be consistent in their use to avoid possible complications later. An authority will likely consider that a site notice may be more appropriate for minor matters, as unlike notices to fix, they do not impose major legal consequences for the owner.
- 9.3 Section 164 notes that a notice to fix applies to a specified person who is contravening or failing to comply with the Act (for example, the requirement to obtain a building consent). Section 163 states that a specified person means:
- a) the owner of a building; and
 - b) if the notice to fix relates to building work being carried out,--
 - (i) the person carrying out the work; or

(ii) if applicable, any other person supervising the building work.

- 9.4 In line with the wording of the Act, I am of the opinion that a notice to fix must always be forwarded to the building owner or their nominated representative. However, the notice to fix should also be issued to the person carrying out the work if he or she is not the owner's representative. The reference to the two inclusive specified persons in subsections (a) and (b) of section 163, does not appear to support the authority's contention that only the builder (or if the work is under supervision, an architect or a project manager) as a "person supervising the work" should be the recipient of a notice to fix.
- 9.5 As regards any rectification work that has been undertaken on the house that the authority considers should be subject to a notice to fix; a copy of the notice should be issued to the owners and also the LBP concerned with the work as the "person supervising the building work".
- 9.6 The LBP has submitted that I have not addressed the issues raised by the owners that were additional to the determination application from the authority. In this respect I note that these are listed in paragraph 1.7 and I am of the opinion that I have fully considered these matters in this determination.
- 9.7 I note that a notice to fix is necessary in respect of work that an authority does not consider to be code compliant, or that has not been carried out in accordance with the building consent. In this instance it is clear that the work has not been done in accordance with the building consent.

10. The decision

- 10.1 In accordance with section 188 of the Building Act 2004 I hereby determine that:
- certain building elements installed in the house, as described in this determination, do not comply with the requirements of the Building Code
 - the decision of the authority to refuse to amend the building consent is confirmed.

Signed for and on behalf of the Chief Executive of the Department of Building and Housing on 8 December 2009.

John Gardiner
Manager Determinations