

Determination 2013/020

The refusal to issue a code compliance certificate for a 16-year-old garage at 25 David Crescent, Karori, Wellington



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 and Assurance, Ministry of Business, Innovation and Employment ("the Ministry"), for and on behalf of the Chief Executive of the Ministry.
- 1.2 The parties to the determination are
 - the owner of the house, G Southon ("the applicant")
 - Wellington City Council ("the authority"), carrying out its duties as a territorial authority or building consent authority.
- 1.3 This determination arises from the decision of the authority to refuse to issue a code compliance certificate and to issue a notice to fix for a 16-year-old garage 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 about the compliance of the building work relate primarily to the weathertightness of the garage's exterior envelope.

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

1.4 The matter to be determined³ is therefore whether the authority was correct to refuse to issue a code compliance certificate and to issue a notice to fix. In deciding this, I must consider:

1.4.1 Matter 1: The external building envelope

Whether the external building envelope of the garage complies with Clause E2 External Moisture and Clause B2 Durability of the Building Code. The envelope includes the components of the systems (such as the concrete block walls, the doors, the concrete roof and the associated membranes, as well as the way the components have been installed and work together. I consider this in paragraph 6.1.

1.4.2 Matter 2: The structure and durability of the garage

Whether the structure of the garage complies with Clause B1 Structure and Clause B2 Durability of the Building Code, taking into account past moisture penetration into some parts of the building. I consider this in paragraph 6.2.

1.4.3 Matter 3: Other Building Code clauses

Whether the building work complies with the other requirements identified by the Authority in the notice to fix; namely Clause E1 Surface Water, Clause F4 Safety from Falling and Clause G9 Electricity. I consider this in paragraph 6.3.

- 1.5 I note the authority issued a building consent amendment on 12 November 2012, which applied the durability provisions of the Building Code from March 1996 instead of from the time of issue of a code compliance certificate for the building work. That matter is therefore not considered further in this determination.
- 1.6 In making my decision, I have considered the submissions from the parties, the report of the expert commissioned by the Ministry to advise on this dispute ("the expert"), and the other evidence in this matter.

2. The building work

2.1 The building work consists of a single-storey detached garage set into the face of a steep west-sloping site in a very high wind zone for the purposes of NZS 3604⁴. The garage provides parking for three cars, with a concrete slab and foundations, reinforced masonry retaining walls to three sides, and a concrete roof slab above as shown in Figure 1.

2.2 The garage structure

- 2.2.1 The building structure is specifically designed; with precast concrete beams supported on reinforced masonry columns. The roof comprises a proprietary concrete floor system formed from prestressed concrete ribs, timber infills and a 75mm thick insitu concrete topping slab, with falls towards the southeast corner. The roof slab has been designed to support a superimposed load of 2.0 kPa.
- 2.2.2 The retaining walls step up at the steep slope, with the rear wall rising to about 2.6m above the roof deck slab in order to retain the balance of the excavated face and to form a garden area. External waterproofing to the retaining walls, as described on

³ Under sections 177(1)(b)m, 177(2)(d) and 177(2)e) of the Act

⁴ New Zealand Standard NZS 3604:1999 Timber Framed Buildings

the drawings is two coats of liquid-applied bitumen-based damp proof membrane overlaid with 250 micron polythene sheet, which is protected by polystyrene sheets.

2.2.3 To the south, the original concrete steps and boundary retaining wall have been kept and the gap infilled with concrete following completion of the garage structure. The original steps extend past the street boundary, with a new concrete block wall finishing the north side of the steps.



2.3 The roof deck

- 2.3.1 Columns extend beyond the roof deck, with concrete block panels to north and west elevations forming balustrades offset by 100mm from the line of the garage walls. At the southwest corner, the concrete block balustrade angles across the corner, with a lower nib forming a planter at the corner.
- 2.3.2 A gap to the side balustrade provides access from the original stair landing to the roof deck. At the rear of the roof deck, the concrete block height reduces to accommodate timber access steps from the upper garden.
- 2.3.3 The original owner completed work to the roof deck over a prolonged period, with much of this work not shown in the consent drawings. The additional work appears to have included construction of
 - a timber pergola supported on concrete block columns
 - timber stairs providing access to the rear of the roof deck
 - timber seating to the southeast corner.
- 2.3.4 The applicant also completed the following additional work in 2012:
 - metal balustrades to the southeast corner and to the side of the original stairs where they projected into the footpath
 - a channel drain across the southern two bays of the garage, with rebates created at the bottom of the garage doors

- a liquid-applied membrane installed to the concrete surface of the roof deck and upstands
- soil removed from above the drainage material behind the north retaining wall and the tanking membrane extended.

3. Background

- 3.1 The authority issued a building consent (No. 16220) to the original owner on 15 March 1996 under the Building Act 1991 ("the former Act"). The consent conditions named the structural engineer and noted 'design engineer to supervise' the 'foundations on solid ground', but did not require a producer statement - construction review to be provided.
- 3.2 I also note the consent documents included structural calculations and sizes for reinforcement and beams for the design but no producer statement, with the roof deck slab drawings and details provided by the manufacturer and all remaining structural drawings prepared by the designers of the garage ("the designer").
- 3.3 The authority carried out various inspections of the garage during construction, but I have not seen a copy of inspection records. Although the structural engineer was not engaged to undertake construction review or to provide a producer statement, he apparently carried out some site visits early in the construction. It appears the designer inspected this aspect of the work.
- 3.4 The applicant has provided a copy of the designer's 'site inspection log', with photographs taken during some of those inspections. According to the inspection log dated 7 May 1996, the designer undertook 15 inspections from 8 March 1996 to 19 April 1996, which included:
 - excavations on 8 March
 - ground floor slab reinforcing on 13 March
 - 2 metre high masonry wall and column reinforcing on 17 March
 - full-height masonry wall and column reinforcing on 19 and 21 March prior to roof beam installation
 - delivery and positioning of precast beams on 11 April
 - roof slab reinforcing on 17 and 18 April
 - revised roof fall 'to opposite corner' on 19 April.
- 3.5 A copy of a note dated 18 April 1996 on the authority's letterhead left for the 'Owner 25 David Cr' indicates the authority inspected the roof slab reinforcement. The note states're steel to roof of garage all OK. Engineer to inspect before pouring concrete.'
- 3.6 The authority advised the original owner on 30 July 1998 that a code compliance certificate had not been applied for. The original owner responded on 6 August 1998 outlining work still to be completed and the authority granted a 6 month extension to the consent.

- 3.7 The authority did not carry out a final inspection until 8 November 2001 and the inspection record noted the following:
 - 1. P.S.4 required from [the structural engineers]
 - 2. Handrail required down the flights of stairs
 - 3. Safety barrier required at the bottom of the stairs.
- 3.8 According to the applicant, a handrail was fitted to the original retaining wall but no further work was carried out and the property was sold in 2010 with no code compliance certificate issued for the garage.
- 3.9 In 2012 a variety of work was carried out to the property, including the application of a liquid-applied membrane to the roof deck and the removal of soil behind the north west section of the retaining wall where moisture had penetrated the wall (refer also paragraph 2.3.4).
- 3.10 In response to the request for a code compliance certificate, the authority wrote to the applicant on 16 July 2012 explaining that it is an owner's responsibility to request a code compliance certificate as soon as the work is complete. The authority explained that it needed to be satisfied, on reasonable grounds, that 'all work done under the consent' complied with the Building Code that was in force at the time the consent was issued.
- 3.11 The authority carried out an inspection on 26 September 2012 and wrote to the applicant on 1 October 2012, identifying the following remedial items and additional documentation required to be attended to before it could consider issuing a code compliance certificate (in summary):
 - Confirm channel drain 'as draining to kerb'
 - Barriers required to falls over 1 metre.
 - Two garage doors to close against rebates.
 - Pedestrian door to close against rebate.
 - Structural engineer's report on durability of steel reinforcing, given signs of moisture penetration in one area.
 - 'Registered building surveyor's report on weathertightness of garage ...'.
 - Lack of upstands to roof deck/balustrade junctions.
 - Unprotected membranes to retaining walls.
 - Required documents:
 - o consent amendment for 'durability winding back to March 1996'
 - 'PS4 & or site notes from original engineers'
 - Code Compliance Certificate application
 - An 'electrical certificate or report from registered eletrician'
 - 'as built drainage plan (must show omission of roof sump and how water drains from roof"

- 3.12 The applicant carried out the following work in response to the authority's inspection:
 - Clearance of the stormwater outlet and a test of the drainage channel on 27 September 2012, which confirmed that the channel drained to the kerb.
 - Installation of metal balustrades top-fixed to concrete block walls.
 - Rebates created to the two upper garage doors.
 - Extended flashing installed to pedestrian door opening into garage.
 - Fillet applied to roof/balustrade junction and membrane applied to upstand, with additional coating applied to entire roof area and roof inspected.
 - Wall where soil removed coated with tanking membrane and painted.
 - Building consent durability amendment (granted 12 November 2012).
 - Electrical certificate of compliance obtained.
 - As-built drainage plan showing roof drainage provided.
- 3.13 The applicant attempted to obtain a 'registered building surveyor's report' on weathertightness of garage. Two building surveyors were not available and three surveyors declined due to particular demands from the authority. The original structural engineers for the garage had earlier indicated that they had not been responsible for issuing a producer statement for construction review. Four other structural engineers were contacted but were unable to assist as they had not observed critical stages of the work.
- 3.14 The authority issued a notice to fix dated 7 February 2013, which stated:

Building work, namely the triple car garage roof and the retained walls has been done that does not comply with [Clause] E2 of the NZ Building Code.

You must undertake the remedial action described in the [authority's] inspection report letter dated 01/10/12.

- 3.15 While the notice to fix was in respect of a breach of Clause E2, the letter dated 1 October 2012 also listed matters related to Clauses B1, B2, E1, F4, and G9 as noted in paragraph 3.11.
- 3.16 The Ministry received an application for a determination on 20 February 2013.

4. The submissions

4.1 The applicant's submission

4.1.1 In a letter to the Ministry dated 19 February 2013, the applicant outlined the history of the garage and the remedial work carried out during the past year. The applicant also described his efforts to provide the weathertightness and structural reports demanded by the authority, noting that no professional was willing to provide what the authority was requesting, and the applicant considered that those requirements should be removed from the notice to fix.

- 4.1.2 The applicant provided copies of:
 - the consent drawings
 - the building consent
 - the designer's 'site inspection log' and construction photographs
 - some correspondence with the authority
 - the notice to fix dated 7 February 2013
 - correspondence with various engineers and building surveyors
 - various certificates, invoices and other statements.
- 4.2 The authority acknowledged the application but made no submission.
- 4.3 A draft determination was issued to the parties for comment on 11 April 2013. The authority accepted the draft without comment.
- 4.4 The applicant submitted a response to the draft dated 17 April 2013, requesting that the notice to fix be removed from the LIM⁵. The applicant noted that there is no water staining on the area of ceiling directly under the timber stair or to the paint that was applied by the original builder which the applicant took that to be an indication that there is adequate membrane applied to this area (photographs of the ceiling were provided).
- 4.5 I accept the applicant's position given the age of the building, the satisfactory performance of the waterproofing to date and the limited area concerned. The determination has been amended accordingly. I note that I have no jurisdiction under the Act on respect of LIMs and what may appear on them.

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 27 February 2013, providing a report completed on 22 March 2013. The parties were provided with a copy of the report on 2 April 2013.

5.2 General

- 5.2.1 The expert investigated the background of the construction by searching the authority's property file (see paragraph 3.6). He also discussed the construction with the designer, who was present during the inspection. The designer made the following comments on the construction:
 - The structural engineer, who is now retired, apparently carried out some site visits early in the construction.
 - The designer carried out site inspections but not full project management.

⁵ Land Information Memorandum

- The builder's scope was limited to the shell of the building, with waterproofing and backfilling apparently completed by the original owner. The builder recalled layout changes during construction.
- 5.2.2 The expert described the workmanship as generally 'of average quality', noting that the building was 'very dirty with some moss growth on walls and parapets and is due for some routine maintenance and a repaint'.
- 5.2.3 The expert noted that the construction varied from the consent drawings in a number of ways, including:
 - the building set further into the site than shown on the site plan
 - the garage floor is on a single level instead of being stepped between the three garage bays
 - a drainage channel was added in front of two garage doors
 - the roof slab drainage amended to drain onto the original stairs
 - a planter formed in the southwest corner of the roof
 - access provided to the roof deck from the original stair landing.

(I also note the addition of the timber pergola and stairs to the northeast corner.)

5.3 Clause E2: Weathertightness

- 5.3.1 The expert could observe retaining wall waterproofing at various locations, and confirmed the type of waterproofing membrane and that it was protected in accordance with the consent documents as described in paragraph 2.2.2.
- 5.3.2 The expert made the following observations about the recent remedial work:
 - New rebates in front of the garage doors provided satisfactory 'weather steps'.
 - Soil had been removed behind the north wall, with liquid-applied membrane tanking extended and protective paint added for UV protection there had been no backfilling carried out and the wall appeared satisfactory.
 - Hosing down the roof deck membrane confirmed generally adequate falls, with some minor ponding that was not considered significant.
- 5.3.3 The expert inspected the walls and underside of the roof for signs of moisture penetration through the external building envelope, noting:
 - efflorescence on the inside of blockwork walls:
 - at the northwest corner, where moisture had entered prior to soil removal and tanking of the upper wall, with the wall currently appearing dry
 - behind the original stairs where roof water drains over the steps, including over the unprotected stair/wall junction – and where access for waterproofing would have been restricted during construction
 - damage to the bottom of the pedestrian door, likely to have resulted from blockages to the channel drain combined with a lack of paintwork maintenance

- waterstaining to boards on the underside of the roof deck slab, which was likely to have occurred prior to the application of the roof deck membrane.
- 5.3.4 Commenting specifically on the external envelope, the expert noted that:
 - the junction between the original stairs and the garage wall is not weathertight and the lack of access during construction is likely to have compromised waterproofing installation
 - the roof deck membrane upstand is missing behind the timber steps
 - the south corner planter lacks an effective membrane and appears to rely on polythene for waterproofing
 - two unsealed pipes penetrate the blocks above the original stairs.

5.4 Other Building Code clauses

5.4.1 The expert also inspected and commented on other aspects identified by the authority relevant to the garage. His comments are summarised as follows:

5.4.2 Clauses B1 and B2: Structure

- The authority inspected the construction, the designer carried out various site inspections and maintained a site inspection log, and the structure engineer apparently carried out some site visits early in the construction.
- Moisture penetration through the roof deck over a long period prior to the installation of the deck membrane may have reduced the durability of reinforcing steel and a structural engineer's report on this aspect is recommended.

5.4.3 Clause E1: Surface water

- The channel drain in front of the garage doors has no sump to prevent blockages.
- Surface water from the roof deck runs down the original stairs onto the footpath.

5.4.4 Clause F4: Safety from falling

- A satisfactory balustrade has been installed at the bottom of the original stairs, with a continuous handrail fixed to the side of the original retaining wall.
- The 1 metre high handrail at the southeast corner steps down to only 600mm high at one section behind the fixed seating. However, the height to the fixed seating is only 1100mm and the particular area borders a planted area more than 1200mm northwest of the stairs.

5.4.5 Clause G9 Electricity

• The electrical work appeared to be 'well constructed', with all cables in conduits and terminated at a sub-board with circuit breakers. An electrical certificate of compliance has been provided.

6. Discussion

6.1 The external building envelope (Clause E2)

- 6.1.1 While the garage is required to comply with Clause E2, compliance in this case must be assessed against what is considered 'undue moisture ingress' in terms of the this particular building, taking account of the likely effects of damage cause by moisture ingress, and the level of amenity the garage is required to provide.
- 6.1.2 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 garage is constructed of reinforced masonry: the consequential damage to the structure in the case of moisture ingress is significantly less than if the structure was timber-framed. However, the walls and roof slab must still comply with Clauses B1 Structure, and B2 Durability and I address these matters in paragraph 6.2.
- 6.1.3 Taking account of the expert's report, the shell of the garage appears to have been generally constructed in accordance with reasonable trade practice at the time, although there were many areas that remained incomplete for a prolonged period leading to moisture penetration through the roof deck and some retaining walls.
- 6.1.4 Taking account of the expert's report, although the historic moisture penetration has generally been rectified with the applicant's recent remedial work, I am satisfied that the following areas require attention:
 - Inadequacy of the junction of the garage wall and the existing stairs in terms of moisture ingress
 - the lack of an adequate membrane liner to the roof planter
 - the two unsealed pipe penetrations located above the original stairs.
- 6.1.5 Although I consider that the garage does not yet comply with Building Code Clause E2 and Clause B2 (insofar as it applies to E2), I am satisfied that rectifying the areas identified in paragraph 6.1.4 will result in a level of durable weathertightness considered to be adequate and appropriate for this building's use and construction. I consider weathertightness of the roof deck adjacent the timber steps is likely to be adequate in the circumstances.

6.2 The structure and durability of the garage (Clauses B1 and B2)

- 6.2.1 The authority has required that the applicant provide a PS4 Producer Statement Construction Review 'and/or site notes from the original engineer': this is being sought some 17 years after the garage was built. I note that the original engineer is no longer available, and the applicant has unsuccessfully attempted to obtain a producer statement from engineers not involved in either the design or construction of the garage.
- 6.2.2 There is no provision in the Act for an authority to require a demand a producer statement as a condition for establishing compliance and in order to issue a code compliance certificate. An authority accepts a producer statement at its discretion and in the belief that the author of the producer statement is creditable. In my view

the receipt of a producer statement by an authority does not lessen its liability in establishing code compliance.

- 6.2.3 While a producer statement may form part of evidence used to establish the compliance of various elements in a building, it is not the only evidence that can be considered.
- 6.2.4 In regard to the this particular building, I make the following observations:
 - The Building Code is performance-based. The garage appears to have performed adequately since it was built some 17 years ago without exhibiting any signs of distress or failure.
 - The structural engineer's involvement with the garage was limited to checking of the designer's drawings to determine beam sizes and reinforcing, with supporting calculations provided as part of the consent documentation and no producer statement for the design was provided.
 - The proprietary roof slab was designed and detailed by the manufacturer and no changes were made to that element during construction. Apart from the roof slab, all structural drawings were prepared by the designer.
 - The designer's site inspection log and construction photographs indicate a close level of oversight during critical stages of construction to ensure compliance with significant structural aspects of the consented design despite layout changes. The engineer may have visited the site but was not engaged to provide construction review or to provide a producer statement.
 - The authority inspected the work and no matter of non-compliance were raised with respect to Clause B1 at its final inspection.
- 6.2.5 Taking the above into account I am satisfied that there are reasonable grounds to come to the view that the garage complies with Clause B1 Structure.
- 6.2.6 The structure of the garage is also required to comply with the durability requirements of Clause B2. Clause B2 requires that a building continues to satisfy all the objectives of the Building Code throughout its effective life, and that includes the requirement for the structure to continue to perform for a period of not less that 50 years from 1996.
- 6.2.7 It is not disputed that moisture has penetrated the garage in the past but I have concluded that, providing some specified remedial work is carried out, the garage will remain adequately weathertight in the future given normal maintenance.
- 6.2.8 However, past moisture penetration through the structure has raised doubts about possible damage to the reinforcing steel, and whether the structure will comply with the durability requirements of Clause B2 for a further period of more than 30 years (or an otherwise specified intended life of a lesser period).
- 6.2.9 In regard to the likely condition of the underlying reinforcing as a result of past moisture penetration, I note the following:
 - The consent does not appear to have required a membrane to the concrete roof slab, or for the exterior to be sealed (the blockwork is shown as having a

plaster finish). The authority's final inspection in 2001 also did note the lack of a roof membrane.

- The efflorescence to two upper areas of retaining wall is limited in extent and severity; and therefore unlikely to have been the result of significant moisture penetration into the reinforced walls. Efflorescence can arise from a variety of sources and not simply from water entering from behind the blockwork.
- While the concrete block walls are currently painted internally, the prolonged completion by the original owner suggests that the inside surfaces of the blockwork may well have remained unpainted for some time, allowing any moisture to dissipate into the garage space. The timber infill to the underside of the roof deck slab is unsealed, which also would have allowed the dissipation of moisture.
- Although waterstained, there is no evidence of concrete spalling or sign of rust stains to the underside of the roof slab or to the inner faces of the concrete block walls, which would be expected if severe corrosion to reinforcing steel had occurred.
- 6.2.10 I therefore take the view that the reinforcing steel to the concrete roof slab and the retaining walls is unlikely to have suffered any significant damage as a result of past moisture penetration.
- 6.2.11 I note that the applicant could consider applying for an amendment to the building consent for the garage to incorporate a specified intended life for the building with the effect of reducing the remaining durability period for the structure. However, I do not consider that necessary in this case, as I have reasonable grounds to conclude that the garage structure complies with Clause B2 Durability.

6.3 Other Building Code clauses

Clause E1 Surface water

- 6.3.1 The consented drawings show a roof sump in the northwest corner discharging to a 90mm surface water drain. The as-built work has the surface water from the roof discharging down the existing stairs and over the footpath. The discharge from the roof to the stairs does not constitute a nuisance to other property, however, the point at which the existing stairs will discharge surface water into the footpath does. I consider remedial work is required in this respect.
- 6.3.2 I do not consider remedial work is necessary in respect of providing a sump to the channel drain to the front of the garage. While the presence of a sump may mean a blockage may be less likely it does not prevent such an occurrence. The channel drain collects water from a very limited area, the consequences of the drain blocking are minor (water will flow to the road kerb), and any blockage will be readily apparent and the drain easily maintained.

Clause F4 Safety from falling

6.3.3 I note the expert's comment in paragraph 5.4.4 and accept that the lower section of balustrade above the west retaining wall is satisfactory in the circumstances, given the very limited circumstances during which the planted area behind the section of

lower balustrade will be occupied. I therefore consider that the garage complies with Clause F4 of the Building Code.

Clause G9 Electricity

6.3.4 The applicant has provided an electrical certificate of compliance. I note energy works did not form part of the approved consent and is self-certifying. The authority is unable to seek an energy works certificate in as a prerequisite to issuing the code compliance certificate for the consented work.

7. The refusal to issue the code compliance certificate and issue the notice to fix

- 7.1 The transitional provisions of the Act apply when an application for a code compliance certificate is received in respect of a building consent issued under the former Act. The transitional provision in section 436 of the Act requires the authority to consider such an application under the former Act, and section 436(3)(b) of the Act modifies the test for issuing a code compliance certificate by requiring an authority to issue a code compliance certificate 'if it is satisfied on reasonable grounds that the building work to which the certificate relates complies with the building code that applied at the time the building consent was granted'.
- 7.2 Taking into account the expert's report and the other evidence, I am satisfied that whilst the garage is compliant in some respects, there are aspects of it that do not comply with the Building Code and therefore I consider the authority made an appropriate decision to refuse to issue the code compliance certificate.
- 7.3 However, as noted in paragraph 3.15 the notice to fix includes reference only to a breach of Clause E2 and does not include other breaches considered by the authority. The notice to fix therefore appears to be of limited relevance. Given the applicant's willingness to address the matters brought to his attention, advice under section 95A would appear to have been sufficient in this case.

8. The decision

- 8.1 In accordance with section 188 of the Building Act 2004, I hereby determine that
 - the garage does not comply with Building Code Clause E2
 - surface water drainage does not comply with Building Code Clause E1

and accordingly, I confirm the authority's decision to refuse to issue a code compliance certificate and to issue a notice to fix.

Signed for and on behalf of the Chief Executive of the Ministry of Business, Innovation and Employment on 29 April 2013.

John Gardiner Manager Determinations and Assurance

Appendix A The legislation

A1 The relevant provisions of Building Code:

Clause B2 Durability

B2.3.1 Building elements must, with only normal maintenance, continue to satisfy the performance requirements of this code for the lesser of the specified intended life of the building, if stated, or:

- (a) The life of the building, being not less than 50 years, if:
 - (i) Those building elements (including floors, walls, and fixings) provide structural stability to the building, or...

Clause E2 External Moisture

E2.3.2 Roofs and exterior walls shall prevent the penetration of water that could cause undue dampness, damage to building elements or both.