



Determination 2011/073

Regarding a retail development at 176-178 Broadway, Newmarket, Auckland, in terms of the provisions of the Building Code relating to the protection of other property

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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.

The parties to the determination

1.2 The parties to this determination are:

- the Kiwell Family Trust, the owner of ‘other property’ as defined in section 7² of the Act (“the applicant”) acting through an agent (“the applicant’s agent”)
- the Auckland Council³ carrying out its duties and functions as a territorial authority and a building consent authority (“the authority”)
- L and Y Holdings Ltd, the part-owner of the property in question (“the owner”)
- The 600 proprietors of units within the development who are also part-owners (“the unit owners”) of the property in question, acting via their body corporate (“the Body Corporate”).

The matters

1.3 This determination arises from the decision of the authority to issue code compliance certificates in respect of a retail development (“the development”). The applicant asserts that the code compliance certificates should not have been issued because the development as constructed does not protect other property to the extent required under the specific provisions of the Building Code (First Schedule, Building Regulations 1992).

1.4 I take the view that matters for determination⁴ are whether:

- the building work relating to the development complies with Clauses B1 Structure, C3 Spread of fire, E1 Surface Water, F5 Construction and demolition hazards, and G13 Foul water, with respect to the provisions of those sections of the Building Code that apply to other property and consequently to the protection of such property
- the decision of the authority to issue code compliance certificates in respect of building consents Nos 20062261403 and 20062261404 for the development was correct.

1.5 Further to paragraph 1.4, I note that the applicant’s submission also raises questions relating to the following Building Code Clauses:

- B2 Durability
- E2 External Moisture
- F4 Safety from Falling.

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

² In this determination, unless otherwise stated, references to sections are to sections of the Act and references to clauses are to clauses of the Building Code.

³ After the application was made, and before the determination was completed, Auckland City Council was transitioned into the Auckland Council. The term authority is used for both.

⁴ In terms of sections 177(a) and 177(b)(i) of the Act (prior to 7 July 2010)

However, as the applicant is an adjoining owner, there is no provision in these clauses in terms of the Building Code affording the applicant protection from non-compliance with the Building Code. This is the approach that I took in Determination 2008/38. Using the same reasoning I applied in that instance, I am unable to consider them in this determination.

- 1.6 The applicant has also requested that the Department decide whether the authority, by not properly considering the protection of other property, has breached its obligations under the Act and the Building Code. I have dealt with this matter in paragraph 6.2.
- 1.7 In making my decision, I have considered the submissions of the parties, the report of the independent expert (“the expert”) commissioned by the Department to advise on this dispute, and the other evidence in this matter. I also note that relevant clauses of the Act and the Building Code are set out in Appendix A.

2. The building

- 2.1 The other property is a single-storey building that is some 80 years old and which has a full area basement. As part of the construction of the development, a building attached to the other property was demolished and a combined surface/foul water drain serving the other property and other buildings was replaced and extended under the development. The applicant’s agent states that the ground levels where the development has taken place were ‘quite flat with a gentle slope down towards the north’.
- 2.2 The development comprises a large multi-storey apartment and retail complex that has been built subject to a series of building consents. According to the applicant’s agent, the development involved the excavation of a basement area some 4 to 5 metres deep to within 500mm of two boundary elevations of the adjoining other property. The development is situated 600mm from the other property on its eastern boundary and 1000mm from the other property on its northern boundary. Piles have been installed along these two boundaries.
- 2.3 A new 150mm diameter uPVC sewer has been constructed in the basement of the complex and this extends out of the complex, and is connected to the existing sewer system adjacent to the other property.

3. Background

- 3.1 The authority issued a number of building consents covering various aspects of the development construction. In May 2007, the authority issued building consent No BLD20062261403 for the substructure of the development and on 28 August 2007 issued building consent No BLD20062261404 for the development superstructure. A total of 10 building consents were ultimately issued, one of which was cancelled. During the construction processes, the authority issued several site instructions, including some that referred to issues arising from the damage to drains, construction vibration, and surface water protection.
- 3.2 A consulting group produced a report dated 18 April 2007 describing a hole in the east brick wall caused by the demolition work on the development site and recommendations as to its repair. It was also noted that the demolition work had exposed bare brickwork of the other property that needed a protective coating to make it waterproof.

- 3.3 Following a site inspection on 4 October 2007, a firm of consulting engineers wrote to the applicant on 15 October 2007. The engineers stated that the new hairline cracks in the other property, which may have been caused by construction vibration, had not structurally damaged the building. Severe vibration had caused further irreversible damage to the basement slab and allowed water to seep into the building.
- 3.4 A second firm of engineering consultants was engaged by the applicant to assess the damage that had occurred to the other property since the commencement of the development construction. These consultants produced a geotechnical review of damage that was dated 19 October 2007, and which concluded that there was no obvious evidence to indicate any settlement or subsidence to the other property associated with the construction activities. It was noted that lowering of the adjacent ground and the failure to provide adequate drainage had allowed water to pond against the basement wall in one area. A proposal to provide underpinning to the other property foundations was also discussed, which was considered to provide additional security to these foundations.
- 3.5 In October 2007 the first firm of engineering consultants produced a “Basement Slab Condition Report” relating to the other property for a legal firm representing the applicant. The report noted that there were significant cracks in the basement floor, and ponding and seeping water was observed in the vicinity of the cracks. Evidence of a 1000mm maximum high flood that had damaged wall linings was also observed, and this was attributed to the failure of a drain attached to the building. Invasive tests revealed that the slab comprised two layers of unreinforced concrete adhered together. The un-cracked bottom layer was 85mm thick and the upper layer was 25mm thick. There was no evidence that the exterior of the basement had been waterproofed. The consultants were of the opinion that water was seeping into the basement through the eastern wall and then between the two slabs, causing damage to the slab. The report concluded that temporary waterproofing of the eastern wall was required, and the only way to remediate the top slab was to break it up and replace it with new screed.
- 3.6 The applicant engaged a consulting engineer to inspect the other property. In a letter to the applicant dated 18 March 2008, the engineer listed consequential events and observed that the topping to the basement slab was drummy over much of its area and had suffered stress cracking due to hydraulic pressure. The engineer also observed that the partition bottom plates were saturated and that water was beginning to emerge at the southeast corner of the building.
- 3.7 On 18 March 2009, the authority issued building consent No B/2006/22614/9, describing the project as ‘Amendment - Swale drain at neighbouring boundary’. The building work was described as ‘Install surface mounted gutter to the base of the precast concrete boundary wall to collect the surface water’.
- 3.8 I note that the above building consent number notes that the consent was ‘formerly known as BLD20062261410’. However, BLD20062261410 appears to have been issued two days later on 20 March 2009 and is the one to which the code compliance certificate refers (see also paragraph 6.2.6).
- 3.9 Following a site meeting on 11 February 2009 between the applicant and the authority, the authority wrote to the applicant on 16 February outlining the discussions and decisions reached at the meeting.

- 3.10 On 23 March 2009, the authority emailed the owner regarding a site meeting held on 18 March 2009. This correspondence referred to the foul water drain from the other property and also to the concerns that the applicant had relating to perceived damage to their property from the construction that had taken place at the rear of their building. It was noted that 'the photos attached indicate such movement, in which a definite arc is noticed with the ground beam and the brick wall'. Prior to any work being undertaken evidential photographs were to be produced showing the condition of the ground at the area in question.
- 3.11 Following discussions between the owner's representatives and the authority, a new foul water drain from the other property to the No 2 sanitary manhole on Kings Square was installed. The authority inspected the work and issued a certificate of acceptance (No. 2009/2240) dated 25 June 2009 in respect of Clause G13.
- 3.12 The application for a determination was received by the Department on 4 June 2009. Due to the complexity and breadth of the matters presented to the Department and consideration of the legal issues arising from the determination, the Department requested agreement from the parties to extend the 60-day time frame in which it has to process the determination. This agreement was duly given.

4. The submissions

- 4.1 Due to the number of submissions and counter submissions received during the course of this determination, I have recorded the submissions received from each of the parties and an outline of the determinations process undertaken in paragraphs 4.2 to 4.4. These paragraphs record a brief summary of the evidence received and views put forward in the submissions.

4.2 Submissions to the application

The applicant

- 4.2.1 The applicant's agent provided a detailed and comprehensive submission on behalf of the applicant. Within this submission references and arguments were presented that dealt with those Building Code clauses that I have declined to determine as set out in paragraph 1.5. In addition, there were references to breaches of building consent conditions, which again I consider to be matters outside the ambit of this determination. Accordingly, I have only referred to those sections of the submission that I consider relevant to this determination.
- 4.2.2 The submission set out descriptions of the adjoining property and the development and background to the current dispute. The status of the other property was explained and the applicant concluded that it was not dangerous or 'unsanitary'. It was also noted that a building consent and code compliance certificate had been issued by the authority for the fit-out of the basement area of the other property as a karaoke bar.
- 4.2.3 Following receipt of an opinion from the Department regarding the limited number of Building Code clauses that the Department could consider, the applicant's agent responded by letter on 27 July 2009. The submission presented detailed argument in terms of the Act, the Building Code, and a High Court decision as to why the Department should consider all the clauses that had been listed in the applicant's original submission.

4.2.4 The applicant forwarded copies of:

- a permit for a coffee lounge to be constructed in the basement of the other property
- the code compliance certificate for the karaoke bar
- the consulting groups' report of 18 April 2007
- the drainage solutions report of 20 April 2007
- the first engineering consultants' report of 15 October 2007
- the second engineering consultants' geotechnical report of 19 October 2007
- the applicant's consulting engineer's report of 18 March 2008
- relevant correspondence and some site instructions and site meeting forms issued by the authority
- a set of photographs showing details of the buildings.

The authority

4.2.5 The authority acknowledged the application, but did not make a submission in response to the application until it had received the draft determination.

The owner

4.2.6 In a letter dated 10 July 2009 the owner acknowledged the application for determination and noted that some matters raised in the application were canvassed in separate legal proceedings.

4.3 Submissions to the expert's report and first draft determination

4.3.1 As set out in paragraph 1.7, I engaged an independent expert to provide an assessment of the other property that is the subject of this determination. The expert provided me with a report dated 8 February 2010, which was sent to the parties. The report covered some of the Building Code clauses that I have declined to consider in this determination. Consequently, in the summary of evidence and submissions I have only referred to the conclusions reached in the report regarding those clauses and the matters that I consider to be relevant.

4.3.2 A draft determination was sent to the parties for comment on 15 June 2010. Based on the evidence provided up to that date, the draft concluded that the building work relating to the development did not comply with Clauses B1, C3, E1, F5 and G13 with respect to the provisions that apply to other property and that the decision of the authority to issue the code compliance certificates should be reversed.

4.3.3 The Body Corporate became aware of the determination after the issue of the draft, and subsequently, through a letter dated 29 June 2010 from a solicitor acting on behalf of the owner, the Department was made aware of the existence of the unit owners. The Department received notification of the appointment of the agent acting on behalf of the Body Corporate on 5 August 2010.

4.3.4 In an email dated 4 November 2010 from the agent acting on behalf of the Body Corporate, the Body Corporate sought an extension of time to obtain expert advice and respond to the draft determination.

4.3.5 In response to the expert's report and the first and second draft determinations, I received the following submissions:

Date	Received from	
19 May 2010	Applicant's agent	In response to expert's report
25 June 2010	Applicant's agent	Accepted the first draft
29 June 2010	Applicant's agent	Noting an error in the draft (subsequently corrected)
9 July 2010	Authority	Did not accept the first draft
23 July 2010	Unit owner	Did not accept the first draft
4 August 2010	Applicant's agent	In response to authority's 9 July submission
1 November 2010	Authority	Further comment on first draft
3 November 2010	Applicant's legal advisor	Noting application for determination is not suspended or withdrawn
10 November 2010	Applicant	Further background to the disputed matters
28 January 2011	Authority	Did not accept the first draft and provided further comment
4 February 2011	Body corporate's legal advisor	Did not accept the first draft Enclosed a report dated January 2011 by a building consultancy firm engaged by the Body Corporate responding to the draft and expert's report
20 March 2011	Applicant	In response to 4 February submission by Body Corporate
22 March 2011	Authority	Copies of code compliance certificates (refer paragraphs 4.3.12 to 4.3.14)
18 May 2011	Body corporate's legal advisor	Did not accept the second draft Enclosed a report dated 12 May 2011 responding to the second draft by a building consultancy firm engaged by the Body Corporate
3 June 2011	Applicant	In response to the 18 May submission by the Body Corporate and the second draft

4.3.6 I note that the submission dated 29 June 2010 from the applicant's agent identified a typographic error in paragraph 7.2 of the first draft which identified that the applicant was responsible for the remedial work rather than the owners. I have corrected this error.

4.3.7 The applicant's agent also noted that the applicant had accepted that the weatherproofing of the eastern boundary wall cannot be part of the determination and the agent accepted the view that Clauses B2 and E2 were outside the ambit of this determination.

4.3.8 The letter also noted that the authority had referenced the wrong wall and that it was the north boundary brick wall forming the edge of the ground pit that had been damaged; the letter also provided the applicant's view as to the cause of the damage.

- 4.3.9 Attached to the Body Corporate submission of 4 August 2010 was a review from a firm of property and building consultants (“the property consultants”), which contained photographs of relevant areas. I have included the views of the property consultants in the summary of submissions content in paragraph 4.5.
- 4.3.10 Following the receipt of the property consultants’ report and the subsequent responses from the applicant, I invited a response from the expert, who had already provided me with a report (See paragraph 4.3.1). In an email to the Department dated 25 February 2011, the expert stated that he had reviewed the consultants’ report and made further comments that enlarged on his original report.
- 4.3.11 I also requested that the expert comment on the applicant’s 20 March 2011 submission. The expert responded in an email to the Department dated 9 April 2011. In a further email dated 31 May 2011 the expert also commented on the 18 May 2011 submission made on behalf of the Body Corporate. I have included the expert’s comments in the summary of submissions content in paragraph 4.5.
- 4.3.12 The authority has issued a number of code compliance certificates for the development and it has supplied me with copies of the following code compliance certificates:

Date Issued	Description	Certificate No.
19 December 2008	Ramp structure	20062261401
16 January 2009	Piling	20062261402
16 January 2009	Substructure	20062261403
11 May 2009	Superstructure and amended drainage layout	20062261404
11 May 2009	Retail and commercial shops	20062261406
11 May 2009	Public square part of level 1	20062261407
15 May 2009	Apartments on levels 2 to 7	20062261405
15 May 2009	Joinery and floor system amendment and light well addition	20062261409
15 May 2009	Amendment – Install surface mounted gutter to base of the precast boundary wall to collect surface water	200622614010
15 May 2009	Roller shutter grille and revised atrium	20062261414A

- 4.3.13 The authority has confirmed that consent No 20062261408 was cancelled. Accordingly, no code compliance certificate was issued in respect of this consent.
- 4.3.14 The authority has also acknowledged that it has issued building consents and code compliance certificates for the development that are additional to those listed above. However, the authority has informed me that the code compliance certificates not provided do not impact on the matters being considered in the determination and that those the authority has provided are adequate.

4.4 Submissions to the second draft determination

- 4.4.1 On 15 April 2011 a second draft determination was issued to the parties for comment. The second draft determination also concluded that the building work relating to the development did not comply with Clauses B1, C3, E1, F5 and G13 with respect to the provisions that apply to other property and that the decision of the authority to issue the code compliance certificates should be reversed.
- 4.4.2 A submission to the Department dated 18 May 2011 that commented on the second draft determination was made on behalf of the Body Corporate. Attached to this submission was a further report from the property consultant.
- 4.4.3 A further submission from the applicant dated 3 June 2011 regarding the second draft determination was forwarded to the Department.
- 4.4.4 The authority stated that, as its position had not changed since the first draft was issued, it would not be making any further comment.

4.5 Submissions content and expert's findings

- 4.5.1 Submissions presented by the parties have been extensive and I have carefully considered and taken into account all of the submissions and documentation received. I have summarised the content of those submissions, including the application for determination, the comments from the parties relating to the first and second determinations, and the findings of the expert, in the paragraphs 4.5.2 to 4.5.8, with content grouped under the relevant clauses of the Building Code.
- 4.5.2 *Clause E1 – Surface water*

Party	Summary of submissions
Applicant	<p><i>North boundary</i></p> <p>As regards the northern elevation, there are no issues regarding water ingress. On the north boundary the natural overland flow, which existed prior to the development's construction and allowed surface water to flow away from the other property, has been interrupted by a newly constructed wall. Both the north and east boundaries now comprise narrow strips of land with no natural or piped gravity drainage.</p> <p>The surface water from the rear porch area flows onto a "dammed" area and then onto the confined north boundary ponded area.</p> <p><i>East boundary</i></p> <p>On the east boundary, where the buildings that were attached to the other property had been demolished, the ground level has been built up with loose fill and deposits of waste concrete. The present level is some 1000mm higher than was existing and the area serves as a catchment area for surface water that now seeps into the other property. The new catchpit and drain at the northeast boundary is at a higher level and does not serve any purpose. The pit is situated below the original bitumen surface of the car park and below the applicant's existing pavement.</p> <p><i>Stormwater</i></p> <p>There were also references to a new stormwater pipe that leads from the other property.</p>

Expert's report	<p><i>North boundary</i></p> <p>Accepting that a potential ponding situation has been formed at the northern boundary, the various consultants' reports had not indicated that surface water had entered the other property from this location. Accordingly, it is not clear that the development building works on this boundary breach Clauses E1.2 and E1.3.1.</p> <p>As the discharge of surface water from the rear porch of other property did not constitute a "natural overland flow", it was the responsibility of the applicant to alleviate this.</p> <p><i>East boundary</i></p> <p>The ground level between the buildings on the eastern boundary is uneven and has been left in a poor state with respect to surface water runoff, which could be diverted onto the other property's wall. In addition, the catchpit as constructed is ineffective. As water has been shown to enter the other property from this location, the expert was of the opinion that the siteworks of the development had breached Clauses E1.2 and E 1.3.1. However, the expert noted that the ground between the two properties is predominately owned by the applicant and that this may be a consideration regarding this non-compliance.</p> <p>The expert also commented that while the construction of a roof over the eastern area between the buildings would prevent rain falling onto that area, it would be best to rectify the ground levels.</p> <p><i>Stormwater</i></p> <p>As the new stormwater pipe from the other property is outside the parameters of the other property, it was considered to breach Clause E1 in terms of the other property. The issue of ownership of the pipe and the easements involved were not Building Code issues.</p>
Applicant's agent	<p><i>North boundary</i></p> <p>The agent did not agree that the disposal of surface water from the north boundary location was the applicant's responsibility. The natural overland flow in this area had been destroyed as a result of the construction activities of the development and the accumulated debris. The present situation did not comply with Clause E2.</p> <p><i>East boundary</i></p> <p>The agent was of the opinion that the filled ground and rubble adjacent to the east boundary was some 1 metre higher than the other property's basement floor.</p> <p><i>Stormwater</i></p> <p>Failure and disruption of the new stormwater pipe leading from the other property would lead to uncontrolled surface water flowing in a direction that could impact on the other property. The applicant has no right of access over the adjoining properties to affect any necessary repairs and the owners of these properties may be unaware of any adverse effects. Accordingly, as the consultant was of the opinion that there is a clear breach of Clause E1 in this respect the Department should seriously consider this matter. It was also proposed that the drain's attachments to the adjoining buildings should be protected at these locations.</p>

Authority	<p><i>East boundary</i></p> <p>The ground level between the applicant's property and the development is not 1 metre above the basement floor.</p> <p>There is no sign of water or soil passing through the weep holes, and they were constructed to plan and would not have any significant effect on the other property. It is therefore reasonable to conclude that there is no water entering the other property from this area.</p> <p>Obvious seepage through two holes and around the stormwater pipe appears to be ground water from an unknown source. The authority reiterated its comments regarding the stormwater pipe being incorrectly identified as a sanitary line and provided an analysis of a sample taken from the site.</p> <p>The authority agrees that the surface level between the other property and the development along the eastern boundary 'does not look good'. The authority's view was that the amount of water 'caught' in this area 'will be minimal' and that the owner is responsible for control of that water.</p> <p>Flashing installed between the two buildings would also achieve protection of the other property's exposed brick wall.</p>
Property consultant	<p>Apart from an initial event when existing buildings were removed, there had been no further instances of surface water entering the building. In addition, consideration had not been given regarding the dilapidated state of the external envelope of the adjoining building and the lack of any waterproofing to the eastern wall.</p> <p>The installation of a swale drain, which was subject to an amendment to the original building consent, was not carried out. Instead, external spouting was installed. Accordingly, the code compliance certificate did not match the description on the building consent application or approval form.</p> <p><i>East boundary</i></p> <p>The ground levels were gently sloping from the east towards the west.</p> <p>Based on the photographic evidence and the reasons provided, the natural ground levels on the northern and eastern elevations were pre-existing and set at the current, or even higher, levels. The finished ground level of the original building was higher than the basement finished level of the adjoining building.</p> <p><i>North boundary</i></p> <p>The overland flow on the northern boundary had been interrupted by the masonry walls of the development. New drainage had been provided by the developer, into which the applicant can make an appropriate connection.</p>
Applicant	<p>The evidence showed that there had been numerous instances of water ingress into the applicant's building.</p> <p>The spouting that was installed was ineffective and has failed to perform as intended.</p> <p><i>East boundary</i></p> <p>The ground sloped "upwards" from the east to the west and further clearer information would show that the original soil levels were at the level of the applicant's basement's internal floor plate.</p> <p>The applicant disputed the consultant's assertions regarding the original site levels and was of the opinion that the photographic evidence provided was not clearly defined but in fact supported the applicant's opinion as to the original situation</p> <p><i>North boundary</i></p> <p>The interruption to the overland flow was a breach of Clause E1. The new drainage was located too high to serve the affected areas of the adjoining property.</p>

Expert	<p><i>In response to consultant</i></p> <p>As the site works on the ground between the two buildings could better protect the other property from the adverse effects of surface water, Clauses E1.2 and E1.3 apparently had not been complied with. However, this opinion is affected by the fact that “the apparent non-compliance must be considered in the light of most of the ground between the two buildings apparently belonging to the [applicant]”.</p> <p><i>In response to applicant</i></p> <p>While there was conflicting evidence regarding the original ground levels against the other property, reliance had to be placed on those who actually observed the levels prior to the issuing of the building consents for the complex. Accordingly, the photographs provided for the demolition consent were likely to reflect the ground levels at that time.</p> <p>The applicant’s understanding of the levels prior to, and after, construction was carried out was reasonably detailed and the associated reasoning was logical.</p> <p>Based on a general personal knowledge of the original ground levels, the expert concluded that the applicant’s statements about the general ground levels leading away from the building were correct.</p>
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4.5.3 *Clause B1—Structure*

Party	Summary of submissions
Applicant	<p><i>Foundations</i></p> <p>As the basement excavation for the development was unsupported during that building’s construction, there were concerns regarding the integrity of the other property’s foundations.</p> <p><i>Damage to basement slab & cracks to basement walls</i></p> <p>The eastern brick wall had been damaged by the foundation operations relating to the development, and this has caused water ingress into the basement of the other property, subsequent damage to the basement slab, and hairline cracks in the basement walls.</p> <p><i>Surcharge</i></p> <p>The surcharge created against the eastern wall due to the depositing of soil and waste concrete against it to a depth of approximately 1000mm.</p>
Expert’s report	<p><i>Hole in eastern wall</i></p> <p>As remediation of accidental damage is not a Building Code matter, the hole punched through the basement wall is not a code-compliance matter. The expert also understood that the damage has since been repaired.</p> <p><i>Damage to basement slab & cracks to basement walls</i></p> <p>The first engineering consultants’ report indicated that the basement floor slab cracking was due to vibration rather than any lack of support to the excavation faces. In addition, water ingress into the other property was due to the construction of the development.</p> <p>However, the wording of the Building Code in respect of Clause B1 could be interpreted to mean that, while damage has occurred to the other property due to the siteworks activities on the development site, this might be an unintended affect of construction. The Code did not stipulate that damage should not occur but rather it requires that good construction practices be undertaken to minimise the likelihood of damage.</p> <p style="text-align: right;">...</p>

Expert's report	<p><i>Damage to pit walls</i></p> <p>It could be inferred that, as damage to the pit retaining walls had occurred, the development construction practices did not meet the requirements of Clause B1.3.6. However, the damage may have been an unintended effect of construction.</p> <p><i>Surcharge</i></p> <p>The surcharge imposed on the other property by soil and waste concrete has resulted in the development site level being higher than that of the other property. This does not appear to comply with Clause B1.3.6 and a survey of the entire eastern wall boundary is required to confirm compliance with this Clause. In this particular case, additional care should have been exercised by the owner where half of an old party wall was demolished.</p> <p>Based on additional information provided on behalf of the Body Corporate, the expert now accepts that the requirements of Clause B1.3.6 in relation to the eastern wall have been met regarding this matter.</p> <p><i>Backfilling void</i></p> <p>The owner should verify whether the void on the eastern boundary between the two buildings has been backfilled since March 2008. The authority should also confirm whether the work adjacent to the other property wall complies with Clause B1.3.1.</p>
Applicant's agent	<p><i>Foundations</i></p> <p>The agent was of the opinion that the filled ground and rubble adjacent to the east boundary was some 1 metre higher than the other property's basement floor. In addition, weepholes in the development's basement are below the level of that basement floor and soil passing through them may undermine the other property's foundations.</p> <p>The agent did not agree that the instances of poor construction practices referred to in the expert's report might be accidental. It was the consultant's opinion that they were caused by poor site management and were not "accidental". It was maintained that these practices were breaches of Clause B1.3.6 and/or Clause F5.2.</p>
Property consultant	<p>Prior to carrying out the excavations for the complex, soldier piles were constructed to retain the earth and support the other property.</p> <p>The adjoining property could be benefiting from the reduction of the imposed loadings caused by the removal of earth and buildings from the site of the complex.</p> <p>The holes drilled in the eastern retaining wall appear to have been drilled after the code compliance certificate was issued.</p>
Applicant	<p>The wall that formed the boundary wall infill panels at the Remuera Road retail shops was not designed to accommodate the new surcharging soil and concrete loads.</p> <p>The excavation to the eastern boundary was not carried out in stages as required by the authority.</p>
Expert's response to consultant	<p>Initially, the expert accepted that the additional evidence provided by the property consultants, appeared to show that the current ground level at the eastern wall of the other property was lower than the ground level existing prior to the construction of the complex. However, the expert subsequently formed a view on the ground level which concurred with the applicant. (Refer paragraph 4.5.2 – Surface water)</p> <p>The property consultants' comments concerning the existing ground level imposing a load on the northern basement wall of the other property was not relevant to the issues raised by the applicant to which [the expert's] report was directed.</p>

4.5.4 *Clause C3—Spread of fire*

Party	Summary of submissions
Applicant	A hole in the north wall of the basement of the development was poorly infilled and there were several other openings at this level around the new building.
Expert	The expert was of the opinion that the formed hole in the basement of the development, which was claimed to be poorly filled, was a matter for the owner and the authority to settle. The expert considered that such a minor item was not a breach of Clause C3.
Applicant's agent	Due to the breach in the fire wall and the poorly constructed fire egress door adjacent to the public area of the other property, it was not accepted that the requirements of Clause C had been met.
Authority	The authority concurred with the expert's views in regards to Clause C3.

4.5.5 *Clause F5 Construction and demolition hazards*

Party	Summary of submissions
Applicant	<p>A hole was punched in the eastern wall during demolition operations.</p> <p>The owner should have produced a pre-condition report especially as deep excavations took place adjoining the other property. The applicant had documented the damage caused by the construction work. The applicant did not accept that its own operations or the state of its building were to blame for the damage.</p> <p>The building work involving the development's excavation on the east boundary caused water ingress into the other property's basement. These activities also caused the cracks in the 20mm concrete screed over the basement floor to widen.</p> <p>The vibration of a rock breaker caused further "irreversible damage" to the basement floor slab and caused additional hairline cracks in the basement walls.</p> <p>The piling operations for the development may lead to future movement of the other property's structure.</p> <p>Correct demolition procedure was not followed prior to the damage caused by a pneumatic hammer during the demolition process.</p> <p>No adequate provision was made to prevent objects falling onto the roof of the other property, resulting in rocks and debris falling onto that roof.</p> <p>During the construction of the development, surplus concrete was dropped against the other property, where it still remains.</p> <p>The northern elevation of the applicant's building, which was 'very presentable' before the development commenced, had been subject to mistreatment during the adjoining building processes.</p> <p>The piling operations on the development site resulted in damage to the brick walls of a pit at the rear of the other property.</p>
Expert	The expert accepted that the falling rock and debris, the depositing of surplus concrete from the development, and the actions of workers on the other property roof had caused damage to the other property. However, the expert reiterated the comments made under the Clause B1 and suggested that the fact that damage had occurred was not necessarily a breach of the likelihood of damage occurring requirements. In addition, remediation of accidental damage to another property was not a Building Code requirement.

Property consultant	<p>The deflection of the pit brick walls was pre-existing and the alleged damage was not consistent with the drainage CCTV review.</p> <p>The events causing damage to the applicant's building took place during the construction process and have been rectified. The infill panel on the east wall of the adjoining property did not provide a satisfactory boundary wall, especially as regards its weathertightness.</p> <p>With regard to Clauses B1.3.6 and F5, the expert had not provided any information as to how the development was non-compliant at the date that the code compliance certificate was issued.</p>
Applicant	<p>The northern wall of the pit had bulged inward in the same form and shape as the bulging of the plywood boxing and the end of the concrete footing. The intervening 100mm wide strip of land could not support the lateral loading of the poured concrete. As a result of the collapse, a significant amount of soil from the development has slumped into the pit void.</p> <p>It was not accepted that the repairs to the east boundary wall were satisfactory. In addition, there were a further dozen or so holes in the western basement wall of the complex that adjoins the eastern wall of the other property.</p> <p>The nature and the extent of the damage to the other property implied that there was a "systematic failure of site management that was fully avoidable". In this regard, the applicant did not agree with the expert's conclusions that placed no sanction on poor site management or provided contractual incentives to avoid damage to adjoining properties.</p>
Authority	<p>The authority disputed references made in the application to damage occurring to a brick wall on the other property.</p> <p>The authority does not consider that there was a breach of Clause F5 at the time that the code compliance certificates were issued or that there is still a breach of Clause F5.</p>

4.5.6 *Clause G13—Foul water*

Party	Summary of submissions
Expert	<p>The expert considered that as the foul water drain under the development services applied to that building only, it did not relate to other property. Likewise, the expert considered that the gully trap outside the north wall of the other property was in the same category.</p> <p>Regarding the pipe through the development site, the expert considered that if the pipework is unsatisfactory, then it will not comply with Clause G13. As described in the consulting engineer's report of 18 March 2008 damage was observed to the other property due to effluent discharge.</p>
Applicant's agent	<p>The agent had several concerns regarding the foul water drainage system installed on the adjoining site, and did not accept that it complied with Clause G13. As the system's overflow pipe discharged above the adjoining property's basement, any blockage or surcharge, which has already occurred, would lead to effluent flowing into that building.</p>
Property consultant	<p>The drain under the development from the manhole up to the boundary between the two properties is a new uPVC pipe. The alleged defects in the drain are within the legal boundaries of the adjoining property. Also, as the applicant has noted that the northern wall has 'deflected on the development', it follows that the alleged defective drain must be situated on the applicant's property.</p>
Applicant	<p>The consultants had not addressed the specific concerns regarding the drainage that had been set out in the applicant's original submission. The defective drain in question exists on the other property but as soon as it passes beyond the other property foundations, it is on the development property.</p>

Authority	<p>The photos of the pipe described as a foul water pipe [in the determination application] is the stormwater pipe servicing the canopy over the Remuera Road footpath.</p> <p>Testing of faecal coliforms has been undertaken (with a low count) and there will be further testing done.</p> <p>It is likely the faecal matter is coming from poor drainage under the floor of the basement of the other property, and the authority is seeking to take action on this matter.</p> <p>The authority is satisfied that the foul water line complies with Clause G13. (A copy of the certificate of acceptance issued in relation to this was provided)</p>
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4.5.7 *The expert response to the property consultants*

The opinions expressed in the expert's report were not changed by the property consultants' reference to the expert not providing information on the non-compliance of the complex at the date the code compliance certificate was issued. In an email dated 31 May 2011, the expert noted that there was nothing in the property consultants' report of 18 May 2011 that warranted the expert to change his given opinions.

4.5.8 *The code compliance certificates*

Party	Summary of submissions
Authority	<p>The code compliance certificates were issued in accordance with the Act and the authority's decision should not be reversed.</p> <p>The authority agreed with the Department that the relevant building work must be code-compliant before a code compliance certificate can be issued.</p> <p>To reverse the certificates would require that there was such a deviation from the building consents as to warrant that reversal.</p>
Unit owner	<p>A reversal of code compliance certificates would have considerable impact on all of the unit owners. The unit owner also noted that 'there are other means of resolving the matter in dispute'.</p>
The Body Corporate	<p>If the authority was satisfied that the building work complied with the building consent, then it was justified in issuing the code compliance certificates. And as the building work complied with the building consents, then there are no grounds for the code compliance certificates to be withdrawn.</p> <p>The authority could be instructed to issue a notice to fix to rectify any non-compliance issues.</p> <p>The application for a determination lacked certain information and the file provided by the authority was incomplete.</p>
Property consultant	<p>The authority's building inspectors 'would not have been required to inspect the neighbouring properties, as they would not have been part of the Building Consent documentation (works)'.</p> <p>Any notice to fix should not be issued against the development building consents or to the Body Corporate. Nor should they be issued to the subsequent owners of the complex who were not involved in the alleged defects. The authority should issue any notice to fix only to the adjacent owners.</p> <p>Additional information existed over and above that shown on the authority's file.</p> <p>The application for a reversal of the code compliance certificates was not a correct, or an appropriate, request to make under the Act, nor had any grounds been established for this reversal.</p>

The applicant	<p>None of the alleged breaches occurred on the applicant's property and the applicant had not carried out any building work that involved the subject matter of the determination. No breaches of the Building Code had occurred on the applicant's property.</p> <p>There were no reasonable grounds for the authority to sign off the building work if that work was not code-compliant.</p> <p>The applicant disputed that they should be issued with the notice to fix as they were not party to the complex construction, nor were any of the breaches contained in the adjoining property. No outstanding compliance issues that gave rise to the determination had emanated from the other property.</p> <p>The comment regarding additional information did not have a bearing on the case and therefore did not alter any decision that is made.</p> <p>The supporting documentation provided with the determination application showed that there had been breaches of certain Building Code clauses. There appeared to be tacit agreement in the expert's report that such breaches had occurred.</p>
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5. The site meeting

5.1 In order to clarify some of the outstanding issues, I arranged a meeting, which was held on 5 July 2011 at the site of the two buildings in question.

5.2 I was accompanied by a representative of the Department and the meeting was attended by:

- a representative of the applicant and the applicant's agent
- three officers from the authority
- a representative from the Body Corporate.

The Body Corporate's property consultant was also invited but was unable to attend.

5.3 An inspection took place in the area bounded by the complex and the other property. This enabled me to establish the location of the gutter drain that is attached to the complex and observe the ground levels as they are now and the brick pit situated between the buildings. I also noted the position of a new sump that had been constructed and which was to have formed part of the original swale drain proposal. I inspected the opening in the adjacent wall that the applicant's agent claimed to be inadequately fire-proofed.

5.4 The applicant's representative and the applicant's agent were of the opinion that the gutter drain did not effectively prevent rainwater from impacting onto the space between the buildings. In addition it was their opinion that a buckling of the adjacent ground beam of the complex had caused the collapse of the brick pit. The agent also referred to his previous submissions regarding the ground levels.

5.5 The authority's officers stated that they had not received any complaints regarding water entering the other property and described the background to the installation of the gutter drain. It was their opinion that the gutter drain probably discharged into the carpark downpipe system. The authority was satisfied that the replaced soil drain was fully compliant and the officers did not believe that the brick pit had been damaged as a result of any deformation of the ground beam of the complex.

5.6 A further inspection was carried out at the wall of the basement of the complex that adjoins the other property. The authority's officers pointed out that the large uPVC pipe bend at the base of the wall was a stormwater pipe and not a foul water carrier.

A discoloured discharge was observed coming through the wall around the exterior surface of this pipe but not from the pipe itself, and the officers noted that tests had revealed traces of faecal coliforms in the discharge. Following discussions between the parties, it was agreed that this discharge could probably be traced to the foul water drains that are situated in the area between the two properties and should be subject to further investigation.

- 5.7 The applicant's agent also pointed out the series of holes that had been drilled through the basement wall to facilitate drainage, and which he considered posed a fire hazard in regard to the other property.
- 5.8 The authority's officers also agreed to research the authority's files to establish which of the building consents and code compliance certificates it had issued for the complex applied to the building elements in question.
- 5.9 Following the site meeting, the authority supplied further information that has helped me clarify the outstanding matters. The applicant's agent also queried whether the description of the gutter drain on the amended building consent was correct, as the gutter was fixed at a height above the base of the boundary wall.

6. Discussion

6.1 The code compliance of the building

Clause B1.3.6

- 6.1.1 The expert has queried whether the wording of Clauses B1.3.6 and F5 means that even though damage has occurred to the other property, it does not necessarily follow that the requirement to avoid the likelihood of damage to other property has been breached.
- 6.1.2 In this respect I refer to the reasoning in *Auckland CC v Selwyn Mews Ltd*⁵, where the judge stated:

Clause B1.3.6 of the Code requires that sitework be 'carried out [so as] to ... (b) avoid the likelihood of damage to other property' ... the word 'likely' ... can, depending on its context, mean 'more likely than not' — but, obviously not in this context, for that would be to invite disaster. In other contexts it can mean 'a real or not remote chance or possibility', 'something that might well happen', or 'a real and substantial risk' ...

Conscious that we are here concerned with the protection of property, a prudent but realistic approach to risk taking would not require the same degree of caution as for the protection of life ... I therefore shy away from the more sensitive triggers of liability such as 'could well be [dangerous]' as found say in [*Browne v Partridge* [1992] 1 NZLR 220, at 226] and prefer the possibly less rigorous approach applied in [*Port Nelson Ltd v Commerce Commission* 3/7/95, CA169/95, [1996] 3 NZLR 554] in the context of the Commerce Act, namely 'a real and substantial risk that the stated consequence will happen' ...

My conclusions ... are that:

...In cl B1.3.6 "the likelihood of damage to other property" refers to a real and substantial risk of such damage.

- 6.1.3 I note that the various consultants' reports, including the submission of the applicant's consultant, indicate that some of the basement construction work was carried out with a lack of care, which was responsible for the damage to the

⁵ 18/6/03, Judge McElrea, DC Auckland CRN2004067301-19

basement elements of the other property. As such, I am of the opinion that there was “a real and substantial risk of damage to other property” in terms of the authority’s decision as to how the sitework was carried out and therefore that the “prohibition threshold of likelihood” defined by B1.3.6 had been exceeded.

- 6.1.4 In addition to this acceptance, I am required to consider the Building Code that was current at the time the authority would have carried out its inspections and those matters that were current at those times. In doing so, I have taken into account the opinions of the expert, the various consultants, and the information obtained at the site visit.
- 6.1.5 The question of the original ground levels against the eastern wall of the other property was subject to conflicting opinions on the part of the applicant and the owner. When considering the supporting evidence, the expert was finally of the opinion that the arguments provided by the applicant prevailed. I support this opinion and therefore accept that the requirements of Clause B1.3.6 have not been met as regards the construction of the complex.
- 6.1.6 Conflicting views were expressed at the site meeting as to what was the cause of the damage to the brick walls of the pit adjacent to the other property. The authority’s officers were not convinced that the bowing of the adjacent wall beam of the complex was responsible for the damage. The applicant’s representatives maintained that the brickwork was in an undamaged state prior to the construction of the complex.
- 6.1.7 A photograph attached to the applicant’s agent’s initial report shows the concrete slabs that had covered the pit set against the other property wall and it is implied that the pit was in an undamaged state prior to the construction of the complex. In addition, the authority in a letter to the applicant dated 16 February 2009 noted that “it was recognised that the damage [to the pit] was likely to have been caused by construction work associated with the development over the past 18 months”. The authority went on to say that it would inform the construction manager “who you can arrange repair/access to your property”.
- 6.1.8 As I am of the opinion that, as the works undertaken on the complex adjacent to the brick pit walls fall within the definition of “siteworks” in Clause A2 and that damage has occurred, then again the requirements of Clause B1.3.6 have not been met.

Clause C3

- 6.1.9 While I accept that the infilling to the basement wall of the development may be easily rectified, it is still a breach of the of Clause C3 requirements. In addition, as observed at the site meeting there are a number of drainage weep holes drilled through the basement wall that applicant’s consultant considers impinge on the fire-safety of the other property. Accordingly, I am of the opinion that the weep holes make the basement wall in question non-compliant in terms of Clause C3.
- 6.1.10 In its letter to the Department dated 28 January 2011, the authority noted that weep holes had been in place for a number of years. It also said that “[p]hotographs taken by various people during construction indicate that the weep holes were constructed as per plan...”. This leads me to believe that these holes were formed prior to the relevant code compliance certificate being issued and not at a later date as suggested by the property consultant.

Clause G13

- 6.1.11 The expert was uncertain as to whether the foul water drain under the development was an “other property” concern. However, while Clause G13 does not have a direct reference to “other property”, I am of the opinion that the emphasis in the clause on safeguarding people from illness and loss of amenity would extend to the protection of other property affected by any breach of the clause.
- 6.1.12 However, following the site visit, I accept that the larger pipe that discharges through the complex basement wall is a pipe carrying surface water and not a foul water drain. This opinion is further confirmed by reference to the plan (Misc_05-1) that the authority supplied to me that shows the wall gutter details. The discoloured discharge evidently passed through the wall around and not through this pipe. Accordingly, I am of the opinion that Clause G13 has not been breached as regards this situation. I note that the parties have agreed to further inspect the cause of the discharge and come to some agreement as to how this problem can be alleviated.
- 6.1.13 Based on the information that I have received, I also accept that the new foul water system relating to the certificate of acceptance is code-compliant.

Clause F5

- 6.1.14 While I accept that there were breaches of Clause F5 during construction, the requirements of this clause relate to processes undertaken during the course of construction. Therefore, I do not accept that Clause F5 is relevant once construction has ceased. I also note that the authority took appropriate action in informing the contractor of various breaches of Clause F5.

Conclusion

- 6.1.15 In summary, taking into account the above comments, and the conclusions expressed on behalf of the parties, I am of the opinion that the requirements of Clauses B1 and E1, current at the time that the authority would have carried out its inspections have not been met in respect of the other property. I am also of the view that the non-compliant matters would have been obvious to the authority at the time the appropriate inspections were made.

6.2 The code compliance certificate[s]

- 6.2.1 In accordance with the requirements of section 94(1)(a) of the Act, a building consent authority can only issue a code compliance certificate if it is satisfied, on reasonable grounds, that the building work complies with the building consent.
- 6.2.2 Both the Body Corporate’s legal advisors and the property consultants engaged on its behalf have said that, as the work on the complex was built in accordance with the building consent, the code compliance certificate cannot be withdrawn.
- 6.2.3 As set out in paragraph 4.3.12, the authority has issued a total of nine code compliance certificates relevant to the matters under consideration in this determination. My examination of the certificates indicates that all the defects listed in paragraph 6.1 relate to excavation and substructure problems.
- 6.2.4 The authority is of the opinion that:
- code compliance certificate No 20062261403 – Substructure relates to the damaged brick pit, the drainage holes and access opening in the basement wall and partially to the ground levels on the eastern boundary

- code compliance certificate No 20062261404 – Superstructure and drainage amended layout relates partially to the ground levels on the eastern boundary.

Based on this information, I accept that these two code compliance certificates are the only ones that are relevant to this determination.

- 6.2.5 With regard to code compliance certificate No 200622614010 , I note that the property consultant’s report confirms that the swale drain, which was subject to an amendment to the original building consent, was not in fact installed, nor was the proposed roof/gutter structure between the two buildings. The report goes on to say ‘the Code Compliance Certificate for this work does not match the description on the building consent application or approval form’.
- 6.2.6 The authority has not has informed me that the wording on the code compliance certificate is in relation to an amended building consent that is now numbered as B/2006/22614/9. Although the wording on the building consents and the code compliance certificate is confusing, I believe that the original consent has been amended. Accordingly, I am of the opinion that the evidence I have so far received is sufficient for me to accept that code compliance certificate No 200622614010 complies with the amended building consent.
- 6.2.7 I am also of the opinion that while the documentation refers to the gutter being at the “base” of the wall, this does not materially have any effect on the code compliance certificate as issued.
- 6.2.8 The Body Corporate has stated that as the code compliance certificates all comply with the relevant building consents, they cannot be reversed. However, in Determination 2008/30 I concluded that in addition to compliance with the building consent, confirmation of a building’s compliance with the Building Code was required before an authority could issue a code compliance certificate. I am still of that opinion, and taking into account the matters identified by the expert, I consider that some of the building work did not comply with various clauses of the Building Code at the time that code compliance certificates No 20062261403 and No 20062261404 were issued. Also, that this non-compliance was apparent or should have been apparent to the authority at the time it issued that particular certificate.
- 6.2.9 The property consultants are of the opinion that the authority’s inspectors would not be required to inspect the adjoining properties as these were not part of the consented works. However, I note that the Building Code includes many references to the protection of other property. Accordingly, I am of the opinion that in order to ensure that this protection is present, building inspectors are required to take cognisance of adjoining buildings and the affect that new building work has on those properties.
- 6.2.10 I am of the opinion that the building work that I have found to be non-compliant (refer to paragraph 6.1) is in relation to building consents Nos 20062261403 and 20062261404. Accordingly, as the completed building work covered by these two code compliance certificates does not fully comply with the Building Code, I consider that the authority erred when it issued them.

7. What is to be done now?

- 7.1 The authority should issue a notice to fix that requires the owners of the development to bring the development into compliance with the Building Code, identifying the defects that have been listed in this determination and referring to any further defects that might be discovered in the course of rectification, but not specifying how those defects are to be fixed. It is not for the notice to fix to specify how the defects are to be remedied and the building brought to compliance with the Building Code. That is a matter for the owners to propose and for the authority to accept or reject.
- 7.2 I suggest that the parties adopt the following process to meet the requirements of paragraph 7.1. Initially, the authority should issue the notice to fix. The owners should then produce a response to this in the form of a detailed proposal, produced in conjunction with a competent and suitably qualified person, as to the rectification or otherwise of the specified matters. Any outstanding items of disagreement can then be referred to the Chief Executive for a further binding determination.

8. The decision

- 8.1 In accordance with section 188 of the Act, I determine that:
- the building work relating to the development does not comply with Clauses B1, C3, and E1 with respect to the provisions of the Building Code that apply to other property;
 - and accordingly the decision of the authority to issue code compliance certificate Nos 20062261403 and 20062261404 for the development is reversed.

Signed for and on behalf of the Chief Executive of the Department of Building and Housing on 2 August 2011.

John Gardiner
Manager Determinations

Appendix A: The legislation

A.1 The relevant sections of the Act include:

7 Interpretation

In this Act, unless the context otherwise requires,—

other property

- (a) means any land or buildings, or part of any land or buildings, that are—
 - (i) not held under the same allotment; or
 - (ii) not held under the same ownership...

94 Matters for consideration by building consent authority in deciding issue of code compliance certificate

- (1) A building consent authority must issue a code compliance certificate if it is satisfied on reasonable grounds, —
 - (a) that the building work complies with the building consent...

A2 The relevant requirements of the Building Code are:

CLAUSE A2—INTERPRETATION

Sitework means work on a building site, including earthworks, preparatory to or associated with the construction, alteration, demolition, or removal of a building

CLAUSE B1-- STRUCTURE

B1.3.1 Buildings, building elements and sitework shall have a low probability of rupturing, becoming unstable, losing equilibrium, or collapsing during construction or alteration and throughout their lives.

B1.3.3 Account shall be taken of all physical conditions likely to affect the stability of buildings, building elements and sitework, including:

- (a) Self-weight,
- (d) Earth pressure,
- (e) Water and other liquids,
- (f) Earthquake,
- (j) Impact,
- (m) Differential movement,
- (n) Vegetation,
- (q) Time dependent effects including creep and shrinkage, and
- (r) Removal of support.

B1.3.6 *Sitework*, where necessary, shall be carried out to:

- (a) Provide stability for *construction* on the site, and
- (b) Avoid the likelihood of damage to *other property*.

B1.3.7 Any *sitework* and associated supports shall take account of the effects of:

- (a) Changes in ground water level,
- (b) Water, weather and vegetation, and
- (c) Ground loss and slumping.

CLAUSE C3--SPREAD OF FIRE

OBJECTIVE

C3.1 The objective of this provision is to:

- (c) Protect adjacent household units, other residential units, and other property from the effects of fire.

PERFORMANCE

C3.3.5 External walls and roofs shall have resistance to the spread of fire, appropriate to the fire load within the building and to the proximity of other household units, other residential units, and other property.

CLAUSE E1--SURFACE WATER

OBJECTIVE

E1.1 The objective of this provision is to:

- (a) Safeguard people from injury or illness, and other property from damage caused by surface water,
- (b) Protect the outfalls of drainage systems.

FUNCTIONAL REQUIREMENT

E1.2 Buildings and sitework shall be constructed in away that protects people and other property from the adverse effects of surface water.

PERFORMANCE

E1.3.1 Except as otherwise required under the Resource Management Act 1991 for the protection of other property, surface water, resulting from an event having a 10% probability of occurring annually and which is collected or concentrated by buildings or sitework, shall be disposed of in a way that avoids the likelihood of damage or nuisance to other property.

E1.3.2 Surface water, resulting from an event having a 2% probability of occurring annually, shall not enter buildings.

[Performance E1.3.2 shall apply only to Housing, Communal Residential and Communal Non-Residential Buildings].

E1.3.3 Drainage systems for the disposal of surface water shall be constructed to:

- (a) Convey surface water to an appropriate outfall using gravity flow where possible,
- (b) Avoid the likelihood of blockages,
- (c) Avoid the likelihood of leakage, penetration by roots, or the entry of ground water where pipes or lined channels are used,

- (d) Provide reasonable access for maintenance and clearing blockages,
- (e) Avoid the likelihood of damage to any outfall, in a manner acceptable to the network utility operator, and
- (f) Avoid the likelihood of damage from superimposed loads or normal ground movements.

CLAUSE F5--CONSTRUCTION AND DEMOLITION HAZARDS

OBJECTIVE

F5.1 The objective of this provision is to safeguard people from injury, and other property from damage caused by construction or demolition site hazards.

FUNCTIONAL REQUIREMENT

F5.2 Construction and demolition work on buildings shall be performed in a manner that avoids the likelihood of:

- (a) Objects falling onto people on or off the site
- (b) Objects falling on property off the site
- (c) Other hazards arising on the site affecting people off the site and other property.

CLAUSE G13--FOUL WATER:

OBJECTIVE

E1.1 The objective of this provision is to:

- (b) Safeguard people from loss of amenity due to the presence of unpleasant odours or the accumulation of offensive matter resulting from foul water disposal.