Department of
Building and Housing
Te Tari Kaupapa Whare

Determination 2011/034

Does work to an existing building constitute 'major alterations', and therefore should a section 73 notice be issued in respect of land subject to natural hazards at 82 Bisley Avenue, Nelson?

1. The matter to be determined

1.1 This is a Determination under Part 3 Subpart 1 of the Building Act 2004[1] ("the Act") made under due authorisation by me, John Gardiner, Manager Determinations, Department of Building and Housing ("the Department"), for and on behalf of the Chief Executive of that Department.

1.2 The parties to this determination are:

- the owners of the building, Ms L McKellar and Mr J Schokking ("the applicants")
- the Nelson City Council carrying out its duties and functions as a territorial authority and a building consent authority ("the authority").

1.3 I take the view that matter for determination under section[2] 177(b)(i) (prior to 7 July 2010) is whether, based on the details that have been supplied to date, the decision of the authority to refuse to issue a building consent unless it was subject to a section 73 notice is correct. The authority is of the opinion that the land on which the property is situated is subject to the natural hazard of slippage and considers that the proposed works are not "minor".

[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.

1.4 I am of the opinion that, in order to determine the authority's decision, I must also consider whether:

- the site is subject to the natural hazard of slippage under section 71(3)
- the proposed alterations are major in terms of section 71(1)
- the proposed alterations comply with the Building Code, including (if required) any waivers or modifications issued in terms of section 67.

1.5 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 (Schedule 1 of the Building Regulations 1992) are set out in Appendix A.

2. The building

2.1 The building work in question relates to the proposed construction of a new double garage attached to the house and associated earthworks ("the garage") that is to replace a 23m^2 carport. In pre-consent works, which were not subject to a building consent and for which resource consents were obtained, the carport was demolished, and some major earthworks and retaining walls have been completed.

2.2 The proposed timber-framed garage is 7m long x 7m wide overall across its external walls (49m^2) and has a concrete floor and foundations, and a prefinished metal roof that overhangs the front of the garage by 1.9m. The external walls are finished with stucco plaster laid over building paper and fibre-cement board fixed to cavity battens.

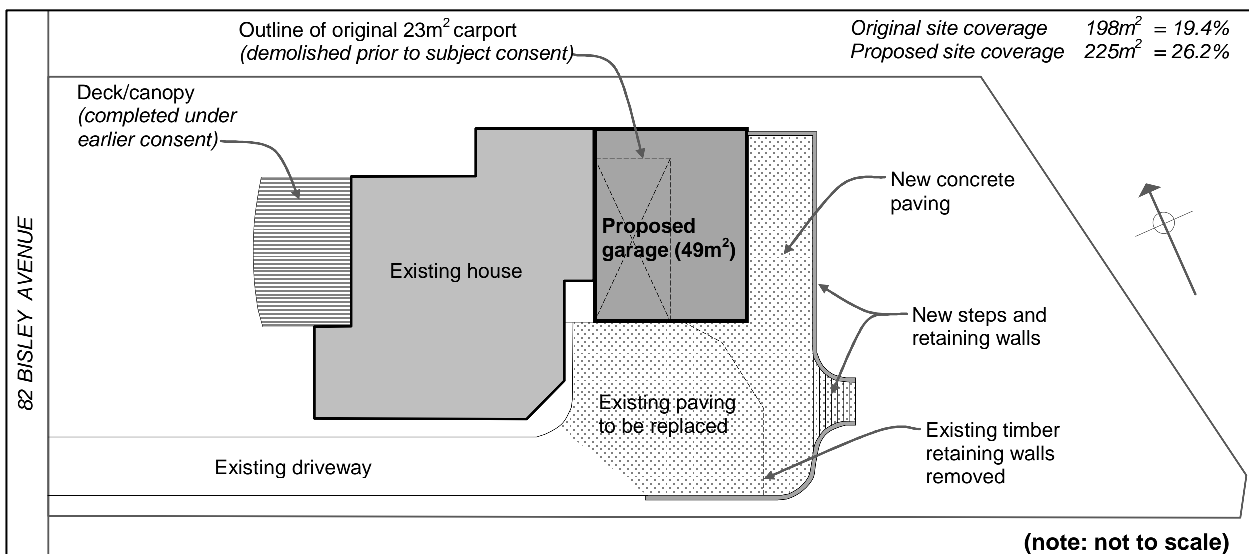

Figure 1: Site plan showing existing and proposed work

2.3 The property on which the building work is to take place is situated on what the authority and the applicants have agreed is a coherent block within the so called Tahunanui Slump, which is a large complex rotational landslide covering approximately 26 hectares that is still in the process of slippage in varying intensities.

3. Background

3.1 On 7 July 2003 a firm of environmental and geotechnical engineering consultants ("the applicants' consultants") produced a report titled "Geotechnical Assessment, 82 Bisley Avenue, Nelson". The report described the surface and subsurface conditions of the site and its stability. The report also noted that, based on historical data and monitoring, there was 'unlikely to be significant differential movement within the lot'. It was also noted that, provided that the report's recommendations were followed, the proposed extensions were unlikely to 'accelerate or worsen the existing stability'. Nor would it result in slippage of the land or of any other property.

3.2 In 2003 the authority issued two building consents regarding the property; consent No 030861 was for alterations to the house and consent No 031318 was initially for a new garage and addition of a deck and canopy. The garage was subsequently deleted from the building work on the second consent and a section 36(2)(a) notice[3] under the Building Act 1991 ("the former Act") that the authority had applied was removed from the property title. Code compliance certificates were issued by the authority for the first consent and the amended second consent.

3.3 The applicants' consultants produced a further report entitled "Geotechnical Assessment – Proposed Retaining Wall at 82 Bisley Avenue, Tahunanui, Nelson" dated 8 December 2008. The report discussed previous investigations, the assessment undertaken for the subject building consent, taking into account the site conditions. With regard to the stability of the site, it was noted that, there had been a general downslope movement between 1953 and 2002 in the vicinity of the property. The report said that 'ground and deformation on this site is minor' and was 'not consistent with large landslide movement and [was] less than on other areas of the Tahunanui Slump'. It was considered that 'the site is located on a large, relatively intact block of land within the central portion of the landslide'. The report also noted that the construction of the garage, which required the removal of approximately $120m^3$ of soil to mitigate the weight to be added by building the proposed garage, would not 'accelerate, worsen or result in slippage of the land or any other property'.

3.4 There is dispute between the parties as to whether the authority gave verbal advice to the applicants (via their architect) that, due to the planned earthworks to remove soil to counteract the building weight, a section 73 notification would not be applied to a building consent for the garage. I note that in a letter dated 30 September 2009 from the authority to the applicants, there is reference to a memo dated 17 December 2008 'when it was recommended that the applicant be advised that if a building consent was granted for the proposed work then it would be under Section 72'; however I have not seen a copy of that memo.

3.5 A resource consent application was made for "Earthworks in Tahunanui Slump Core Risk Overlay to enable the construction of a new garage" specific to the subject site and the resource consent was granted on 10 February 2009. Advice Note No 3 of the consent states:

> If building consent is granted, it will be under Section 72 of the BA 2004 and an entry to this effect will be made on the Certificate of Title for the property.

[3] Section 36 of the Building Act 1991, is equivalent to sections 71 to 73 of the current Act.

The resource consent noted under the heading "Assessment of Environmental Effects" that approximately 247 tonnes of weight was proposed to be removed from the site.

3.6 The applicants contacted their architect to query the advice note. The architect sought to clarify with the authority their position surrounding the Section 73 notification in respect to the building consent. The architect emailed the authority on 25 February 2009. The parties dispute whether there was a written response to the architect's email (I have not seen a copy of a response to the architect's email) but the applicants have stated that subsequent discussions were held.

3.7 The architect then wrote to the applicants on 4 March 2009, stating that 'on the matter of section 72 [the manager of consents] has said that she believes she will not have to apply Section 72 in this case given the amount of earth you are removing'. He then suggested that a building consent was lodged at that time whilst the authority still linked the removal of soil with the construction of the garage.

3.8 According to the authority, it received a formal application for a building consent (BC 090905) for the demolition of the carport and the building of the garage on 3 August 2009. I note that the applicants are of the opinion that the Resource Consent application granted on 10th February 2009 would have given the authority knowledge of the building consent prior to that date.

3.9 An email from the authority dated 2 October 2009 indicates that the only outstanding issue was the Section 73 notice and that all other building issues had been resolved and 'the amendments approved on the 8 September 2009.'

3.10 Excavations on the property commenced on 9 September 2009 with the applicants expecting, on the basis of the resource consent having been issued and assurance from their architect (refer also paragraphs 3.4 and 3.7), that a building consent free of any reference to section 72 would be issued shortly thereafter.

3.11 In a letter to the applicants' architect dated 10 September 2009, the authority noted that it required details of the stability report carried out by the consultants, and in particular, questioned the basis used for the recommended significant change in the site loading.

3.12 The applicants state that they advised the authority that:

- the change in loading had been dealt with at the Resource Consent stage when the change in loading occurred
- the removal of the soil did not require a building consent
- the removal of the soil was required to mitigate the weight of the garage to be built.

3.13 The applicants obtained the requested stability report dated 22 September 2009 from their consultants and forwarded this to the authority. The report discussed the consultants' assessments of the slope stability and their view as to whether the work justified a Section 73 notification. The consultants concluded that the land in the immediate vicinity of 82 Bisley Avenue was a coherent block that showed no geomorphic evidence of recent past slippage i.e., no scarps, bulges, graben etc, nor

evidence of slippage having adversely affected the dwelling In particular, there were ‘no differential settlement or later disruption to the building or paths that were greater than are normally accepted under serviceability limits for buildings and reported damage arising from earthquake induced displacement’. With regard to Section 71 (1) (a), the consultants assessed that ‘for rainstorm or earthquake events that are normally expected, it is unlikely that the property will be adversely subject to slippage within the normal lifetime of the building’.

3.14 In an email to the authority dated 28 September 2009, the applicants requested that the authority meet them to discuss the consent. The applicants also set out the history of their involvement with the building work and consultations with the authority. The applicants noted that excavations on the property had been commenced on the basis of an expectation that a building consent would be issued in the near future.

3.15 On 30 September 2009 the authority responded to the applicants, stating it considered the building work in question to be “major work”. Accordingly, it did not meet the authority’s criteria for an exemption from a section 73 notice, which is given on the basis of “minor works”. The authority concluded that it had no alternative other than granting a building consent in terms of section 72 of the Act.

3.16 Various discussions and further exchanges of correspondence took place involving the applicants, the applicants’ architect, and the authority. There are conflicting views between the parties as to the content and intent of these negotiations. However, as these are matters outside the ambit of the determination process, I have not considered them in this determination. Consequently, I have reached my conclusions regarding the proposed building work only in terms of the Act.

3.17 The application a determination was received by the Department on 2 November 2009.

4. The submissions

4.1 General

4.1.1 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 4.7. A brief summary of the views put forward in the submissions received is recorded in paragraphs 4.8.1 to 4.8.8.

4.2 The applicant’s submissions

4.2.1 The applicants provided a detailed submission and attachments with their determination application. The submission set out the background to the dispute and queried the authority’s “major work” approach, noting that the authority should issue a building consent pursuant to section 71. The applicants also considered that the authority should have assessed the consent in terms of the specific property rather than the generic local area. The submission cited the consultants’ reports, previous legal cases, and previous determinations in support of their contentions, as well as the approach to section 73 notices taken by another territorial authority.

4.2.2 The applicants forwarded copies of:

- the authority's Resource Management Plan with the natural risk overlay
- the consultants' reports of 7 July 2003 and 8 December 2008
- the consultants' letter of 11 December 2009
- a 1992 Conference Paper that discussed the Tahunanui Slump
- the policies of another territorial authority regarding application of sections 71 and 74
- the relevant correspondence.

4.2.3 Following a request for more details, the applicants provided a set of plans detailing the proposed garage and the associated alterations (these alterations having been completed under a separate building consent).

4.2.4 Further submissions were received from the applicants, including:

- a letter to the Department dated 21 December 2009 responding to a submission by the authority
- a copy of a letter from the consultants to the applicants, dated 11 December 2009 addressing matters raised by the authority and criticising the authority's approach the consultants' conclusions
- a letter from the applicants' architect dated 7 December 2009 disputing the authority's interpretation of events
- a letter to the Department dated 7 February 2010 responding to the authority's submission of 18 January 2010
- a letter to the Department dated 23 March 2010 in response to the first draft determination
- a letter to the Department dated 26 March 2010 regarding the determination process
- a letter to the Department dated 8 May 2010 in response to the authority's submission of 21 April 2010
- a letter to the Department dated 16 May 2010 in response to the expert's report of 4 May 2010
- a letter to the Department dated 23 June 2010 responding to the authority's letter of 15 June 2010
- a letter to the Department dated 26 October 2010 in response to the second draft determination
- a letter to the Department dated 7 March 2011 in response to the third draft determination
- a letter to the Department dated 9 March 2011 responding to the authority's submission of 7 March 2011.

4.3 The authority's submissions

4.3.1 The authority made a detailed submission dated 12 November 2009, which was forwarded to the Department under a covering letter dated 16 November 2009. The authority set out the background to the dispute and the geotechnical factors affecting the area in question. The summary also considered the consultants' reports and described the potential and risk factors associated with the building work. The authority also described its major and minor works policy approach when dealing with section 72 considerations.

4.3.2 The authority attached a copy of a memorandum dated 29 September 2009 between the authority and its consultants. This set out the authority's reasons why it required a section 73 notice.

4.3.3 The authority also forwarded copies of:

- a memo dated 12 November 2009 from two geotechnical consultants to the authority regarding the property
- relevant correspondence
- a paper entitled " Housing Development on a Large Active Landslide: The Tahunanui Slump Story"
- a copy of the resource consent decision, and the applicant's consultants' report of 7 July 2003 provided for the resource consent application
- a report dated October 1995 providing a Geotechnical Assessment of the Tahunanui Sump (authored by the two geotechnical consultants described above).

4.3.4 Further submissions were received from the authority, including

- a letter to the Department dated 18 January 2010, responding to the applicants' letter of 21 December 2009 and the consultants' letter attached thereto.
- an email to the Department on 23 March 2010 in response to the first draft determination
- a letter to the Department dated 21 April 2010 in response to the applicant's submission of 23 March 2010
- a letter to the Department dated 15 June 2010 in response to the hearing
- an email to the Department dated 11 August 2010 responding to information (plans and engineering details for the garage) supplied by the applicant
- a letter to the Department dated 7 March 2011 in response to the third draft determination.

4.4 The first and second draft determinations

4.4.1 As set out in paragraph 1.5, I engaged an independent expert to provide an assessment of the building site that is the subject of this determination (refer paragraph 5). The expert provided me with a report dated 3 February 2010, which

was sent to the parties. A draft determination was also sent to the parties on 9 March 2010.

4.4.2 The applicants provided a submission dated 23 March 2010 in response to the expert's report (refer paragraph 5.3). In order to address the applicants' concerns regarding the information provided to the expert, I requested the expert to review the owners' submission and comment accordingly (refer paragraph 5.6).

4.4.3 A second draft determination was issued to the parties on 15 September 2010. The third draft found that the alterations were major in terms of section 71 and that the land on which the garage is to be built is subject to slippage; concluding that the authority was correct in proposing to grant a building consent only in terms of section 72 thereby invoking a section 73 notice. The draft also considered that the building consent documents did not provide sufficient detail to show full compliance with the Building Code

4.4.4 The authority accepted both draft determinations. In both instances, the applicants did not accept the draft determination and responded with two lengthy and detailed submissions. I have carefully considered the applicants' concerns and have made those amendments I consider appropriate.

4.5 The hearing and site visit

4.5.1 I arranged a hearing at Nelson on 2 June 2010, which was attended by both parties and their consultants and the applicants' legal representative. I was accompanied by a Referee engaged by the Chief Executive under section 187(2) of the Act, together with two consultants and the expert engaged by the Department. During the hearing process the participants also visited the property at 82 Bisley Street to examine the property.

4.5.2 All the attendees spoke at the hearing and the evidence presented enabled me to amplify or clarify various matters of fact and was of assistance to me in preparing this determination. Both parties also provided me with post-hearing submissions.

4.5.3 Following the hearing held on 2 June 2010, I requested the expert to consider the conclusions that he had reached in his initial report and also to comment on the post-hearing submissions made on behalf of the parties. The expert provided me with such a report and this is set out in paragraph 5.7

4.6 Post-hearing discussions

4.6.1 The applicants subsequently sought a further meeting to discuss the draft determination and options that may be open to them. The meeting was held on 11 October 2010 at 82 Bisley Avenue and, although the authority was invited to attend it declined. I confirmed with both parties the topics discussed at the meeting and noted that the applicants had indicated they would provide further information and comment.

4.7 The third draft determination

4.7.1 A third draft determination was forwarded to the parties for comment on 18 February 2011. The third draft found that although the land on which the garage is to

be built is subject to slippage, the alterations could not be considered major in terms of section 71 and therefore sections 71 to 73 did not apply. The draft addressed the compliance of the proposed alterations and found that there was not sufficient detail provided in the consent documentation to show full compliance with Clause B1 in respect of Clause B1.3.1, noting that the authority should consider a modification of Clause B1.

4.7.2 The authority did not accept the third draft determination and provided a detailed submission dated 7 March 2011. The authority accepted the decision reached in the draft determination (that its decision to refuse to issue the building consent was correct), but did not accept that its decision was based on an incorrect application of sections 71 and 72. The authority set out its reasons, and I have taken account of those comments and included the salient points in the summary of submissions in paragraph 4.8.

4.7.3 The applicants accepted the draft determination in a submission dated 7 March 2011. The applicants noted some errors in the draft that I have subsequently corrected, and provided further comment that I have taken account of and included in the summary of submissions in paragraph 4.8.

4.7.4 The applicants made a further submission, dated 9 March 2011, in response to the authority's response to the draft which has also been taken account of and the salient points included in the summary of submissions in paragraph 4.8.

4.7.5 After considering all the submissions, I have amended the determination as I consider appropriate.

4.7.6 The applicants also wished to liaise directly with the Department regarding design changes to their proposed building work. I have discussed this request in paragraph 6.7.3.

4.8 Summary of submissions: content

4.8.1 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, and the application for determination, in the paragraphs 4.8.2 to 4.8.8 with content grouped to the following topics:

- Is the proposed building work "major"? (section 71)
- Is the land subject or likely to be subject to one or more natural hazards? (section 71(1)(a))
- Is the building work likely to accelerate, worsen, or result in a natural hazard? (section 71(1)(b))
- Has adequate provision been or will be made to protect the land, building work, or other property referred to in that subsection from the natural hazard or hazards; or restore any damage to that land or other property as a result of the building work? (section 71(2))

4.8.2 Is the proposed building work "major"? (section 71)

Party	Summary of submissions
Authority	The authority's approach to major/minor work in regards to applying a section 73 notice: • the procedure was on a non-formal value/risk/building area basis • minor work generally fell in line with schedule 1 exemptions, which were relevant as they were not subject to a building consent • building extensions with areas of 10 – 15m^2 and internal minor works were also exempt from a section 73 notice • if no exemption allowances were granted, all work would be subjection to the notice. The authority generally considers an additional 10-15m^2 increase in area to be an appropriate threshold, in line with the criteria of Schedule 1 of the Act for exempt works. The authority agreed that the footprint increase was 26m^2; however it considered that the overhang to the front of the house had to be included as it was part of the total building area, and in doing so an area of 62m^2 was the basis for the authority's assessment of the garage. The authority did not accept that the roof overhang could be discounted when arriving at the area of the garage nor that all the floor levels of the house could be considered when calculating its site coverage. Because of the size and nature of the building work, the applicants' proposal does not meet the criteria for what the authority considers to be minor work. An assessment of the cumulative effect of the potential impact of the proposed alteration on the site showed it to be a "major" project. The building consent can only be considered pursuant to the terms of the previous Schedule 1 and not in terms of the schedule applicable after 23 December 2010. In any event, the current Schedule 1 referred to "carports" and not to "garages" when applying the 20m^2 exception. The building consent application included alterations to the house as well as the construction of a new garage. The values of the building work included in building consent application No BC090905 and the garage on its own were both in the major work category.

Applicants	The authority should issue a building consent pursuant to section 71. The garage measures $49m^2$, which represents an increase in footprint of $25.8m^2$ taking into account the existing carport. The roof overhang was provided to maintain the existing house roof lines and it would reluctantly be removed it if it was a critical factor in the authority's decision. The authority's decision to require a section 73 notification was not based on any geotechnical analysis of the site, but rather on the minor/major works arguments, which in any case is legally flawed. The applicants queried the basis of the authority ability to access building consents cumulatively and considered the authority's use of a cost value in determining whether building work was major was flawed, noting that similar sized comparative building products could vary greatly in price.

4.8.3 Is the land subject or likely to be subject to one or more natural hazards? (section 71(1)(a))

Party	Summary of submissions
Authority	The authority's submission concluded that the Tahunanui Slump is a large, deep seated and complex landslide that has been active for a long time. The Slump is affected by groundwater factors, earthquakes and land movement in one part of it could in turn adversely affect the relative stability elsewhere. Where the risk is relatively low, as is the case regarding the property in question, then the authority can issue building consents under section 72. Based on advice from the authority's geotechnical consultants, as the property in question is part of the Tahunanui Slump, it cannot be considered in isolation and the whole stability of the landslide must be considered. There have been times when parts of the Slump have been subject to rapid movement. Regarding the property in question (and some 120 other properties surrounding it), the authority stated: • The properties will be subject to one or more hazards, which in this case is subsidence in terms of the Act. • Further slippage of the Tahunanui Slump affecting significant areas can be expected. However, current information cannot determine where and when such slippage will occur. The authority was of the opinion that the geomorphic evidence to date indicated that the Bisley Avenue area is not a single large coherent block. Rather, the evidence indicates that the 'area comprises a number of subsidiary failures whose boundaries are imprecisely defined and that are to a degree masked by residential development'. In response to the third draft determination the authority noted that the evidence of slippage in the Tahunanui Slump area 'is now indisputable'. The authority commented on the effects of rainfall on the Tahunanui Slump and that ground saturation was the critical factor rather than intensity of rainfall. The authority disputes the applicants' assertion that the authority's geotechnical consultants held conflicting views over aspects of the landslide.

Authority's geologists	At the hearing the authority, through its two contracted geologists, commented that: • It is difficult to define the boundaries of the relevant block and some blocks within the Slump are forming into smaller units. • The considerations surrounding "slippage" include the affects of earthquakes. • While there is no visual evidence of deformation occurring, that did not necessarily mean that none had occurred. • There is a lack of investigation regarding the sub-surface condition of the site at present and there are no accurate records. • The site has not yet been subject to a 50-year event.
Applicants	The discussion of minor and major works under section 72 is irrelevant as the consent should have been issued pursuant to section 71 on the basis that the land on which the building work is to be carried out is not subject to slippage. The application of the authority's "blanket policy" regarding the entire local area, backed by the District Plan Condition No 414, contravenes the authority's obligations in terms of the Act as it was not in terms of the specific property. The Act requires that any building consent application must be considered on a site-specific basis and the authority had not done this. The authority should have assessed the consent in terms of the specific property rather than the generic local area. The authority is required to consider whether the property at 82 Bisley Avenue, not the surrounding 26 hectare area, is likely to be subject to slippage. The coherent block contains over 20 separate properties and 82 Bisley is in the centre, not near the boundaries of the block, and no one has suggested that the 'land intimately connected with the proposed garage was subject to a hazard'. The applicants' consultants' conclusions should be taken into account as the authority had previously agreed with them but had failed to apply these conclusions. The applicants were of the opinion that the authority has relied on its 414 condition, rather than consideration of the geological reports, and this is in contravention of the requirements of the Act. In addition, the provisions of the Local Government Act 2002 require the authority to exercise a duty of care. The authority did not question the report supplied by applicants' consultants that was dated 22 September 2009 and the authority is not in receipt of any conflicting geotechnical information specific to the property. The authority has not shown that it has undertaken sufficient research to disprove the applicants' consultants' conclusions and investigations, or proved that these were superficial. There was conflict between the authority's two geotechnical consultants about the affect that the existing area drainage had on the surrounding areas.

Applicants continued	In response to a comment made by one of the authority's consultants at the hearing, the applicants noted that the lack of verification regarding the rainfall that was falling on the areas in question. (The applicants had obtained records from NIWA that I have been able to peruse and from which I can draw my own conclusions.) The applicants' consultants had noted that the survey markers on which they based their assessments are located so as to provide information to assess any movement on the 82 Bisley Avenue property. The consultants believed that the markers indicated that the "differential component of the vertical movement is significantly less than is stated as acceptable in the Building Code". The applicants disputed the comment that the site had not yet been subjected to a 50-year event.
Applicants' Consultants	In the consultants' professional opinion, the nature of the Tahunanui Slump, as it affects the building site, did not justify the use of section 72 in granting a building consent because under section 71(1)(a) it can be considered that the land on which the building works are proposed is not likely to be subject to one or more hazard.

4.8.4 Is the building work likely to accelerate, worsen, or result in a natural hazard? (section 71(1)(b))

Party	**Summary of submission**
Authority	At the hearing, the authority agreed that the building work is unlikely to accelerate, worsen, or result in a natural hazard.
Applicants	If the property and the land intimately connected with the building is not likely to accelerate, worsen or result in a natural hazard, the authority must issue the building consent under section 71(1). Based on the various reports of the applicants' consultants', it was unlikely that the minor internal works and the building of a garage would be likely to accelerate, worsen, or result in a natural hazard on the property in question or any other property. The applicants submitted that the authority agreed that the proposed works will not accelerate or worsen the stability of the Tahunanui Slump.

4.8.5 Has adequate provision been or will be made to protect the land, building work, or other property referred to in that subsection from the natural hazard or hazards; or restore any damage to that land or other property as a result of the building work? (section 71(2))

Party	Summary of submissions
Authority	The authority is satisfied that no adequate provision has been made to protect the land, the building work, or other property from that hazard. Building work of any description is not appropriate in the more active moving parts of the landslide unless mitigation measures are possible. The removal of material as part of the earthworks consent was not in itself a measure that would mitigate against the ongoing movement of the landslide.
Applicants	The applicants did not consider that the work involving the house alterations had an impact regarding the application of sections 71 to 74. It was also noted that the removal of the surplus soil would more than counterbalance the weight of the proposed garage. The applicants submitted that, as the authority has agreed that a building consent will be granted subject to a section 73 notification the authority has accepted that the building work complies with the Building Code, therefore the requirements of section 71(2) have been satisfied.
Applicants' Consultants	In the consultants' professional opinion, the nature of the Tahunanui Slump, as it affects the building site, did not justify the use of section 72 in granting a building consent because under section 71(2)(a) the proposed works, if carried out in accordance with the Building Code, can protect the building from the ground movements that are likely to occur.

4.8.6 Regarding the authority's approach to section 72, the authority submitted that:

- As most building activity on the Slump is consistent with sections 71(a), (b), and (c), the authority has only granted building consents under section 72
- For areas that do not meet the section 72 criteria, the authority has declined applications for building consents, and will continue to do so.

4.8.7 Included in various submissions was discussion regarding the Determination setting a precedent for other building work within the Tahunanui Slump. The applicants submitted that as the consent application and determination should be site specific any decision made by the Department regarding 82 Bisley Avenue will not create a wider general precedent regarding any other structures on the Tahunanui Hill, and that this should alleviate the authority's concerns regarding future liabilities.

4.8.8 The applicants also discussed the implications of the Local Government Act 2002 and the Resource Management Act 2004 as they related to the dispute in question and queried the authority's actions in regard to these enactments. The applicants also commented that the authority was bound by statute to act in good faith and to make democratic and effective decisions.

5. The expert's report

5.1 As set out in paragraph 1.5, I engaged an independent expert, who is Chartered Professional Engineer specialising in geotechnical engineering, to provide an assessment of the building site that is the subject of this determination.

5.2 The expert provided me with a report dated 3 February 2010. The expert described the property in question and referred to the various consultants' reports that had been prepared. The expert concluded that the authority must refuse to grant a building consent under Section 71 based on the following:

- Based on the consultants' observations regarding sections 71(1)(a) and 71(3), the land is subject to one or more natural hazards, in this case slippage.
- In terms of section 71(1)(b), the proposed building work at 82 Bisley Avenue is not likely to accelerate, worsen, or result in a natural hazard on that land or any other property. This finding was based on the conclusions reached by the consultants and the fact that the property is near to the middle of the landslide where change in loads will tend to have little effect on overall landslide stability. In addition, the earthworks would remove far more loading than will be added by the extra building and retaining walls and the retaining wall excavation will remove material downhill of the filling embankment for Moana Road.
- As the landslide is a large feature and stabilisation is not possible on a property-by-property basis, adequate provision to protect the land or restore damage is not provided in terms of section 71(2).

5.3 In its submission of 23 March 2010 regarding the draft determination that was issued on 9 March 2010 (see paragraph 4.4.4), the applicants also commented on the expert's report and I summarise these comments as follows:

- Not all of the consultants' documentation had been passed onto the expert and the applicants considered that they had been disadvantaged by this.
- The applicants noted that the applicants' consultants were of the opinion, based on their investigations, that there is no evidence of recent slippage and slippage is not currently affecting the property.
- The applicants queried what stabilisation is actually required on a property-by-property basis, given that any vertical movement affecting the property is less than is defined as "good ground" in the Building Code. If all the information had been provided to the expert, the applicants believe that he would have been in a position to note that no modification was required.

5.4 The applicants also referred to the additional legislative considerations set out by the expert. These were additional to the technical analysis that I required and have been deleted from this determination.

5.5 In order to address the applicants' concerns regarding the information provided to the expert, I requested the expert to review the owners' submission and comment accordingly.

5.6 In an email to the Department dated 4 May 2010, the expert made the following comments:

- The perusal by the expert of all the available documentation that was forwarded to him did not cause the expert to alter his overall conclusion that the authority should not issue a building consent in terms of section 71, as the property is certainly subject to "slippage".
- Adequate provision to protect the land and building work in terms of section 71(2) is not provided.
- In support of his conclusion that the 'land is a large feature and stabilisation is not possible on a property by property basis' the expert added the consideration:

  > that the likelihood of differential deformation affecting the land and proposed building (in the 50 year life of the building) is relatively low, but is more than the "merest possibility" and cannot be dismissed.

5.7 As described in paragraph 4.5.3, following the hearing and subsequent submissions the expert provided me with a second report that was dated 29 July 2010. In summary, the expert stated:

- Geotechnically, the property in question is subject to a landslide hazard and there is potential for slippage to aversely affect the proposed building work. This is because the property is within an active landslide hazard zone and differential movement has resulted in damage to various elements at a number of locations within the landside zone. There is a potential for such damage to affect the property in question.
- As rapid or catastrophic slippage is considered unlikely, the risk to life is low, especially in the context of the proposed building work. The slow-creep type slippage to the property could potentially damage the proposed garage, deform the driveway, and damage utilities on the property.
- After consideration of the submissions made on behalf of the applicants, and the authority, the expert was of the opinion that a high level of proof would be required to support the applicants' contention that it is "unlikely" that slippage would cause any adverse consequences to the proposed garage.
- The expert was of the opinion that insufficient evidence regarding the unlikely hazard caused by slippage had been presented to provide certainty as to:

  > The identification of previous differential movement zones as a result of potential earthworks modification of the ground surface.
  >
  > The [long-term] behaviour of the landslide due to the limited period of observation.
  >
  > The existence of a coherent block and the potential for such a block to break up in the future, primarily due to a lack of subsurface information.

- The expert concluded that, in his opinion:

  > Land slippage has the potential to damage, or adversely affect utilisation of, the proposed building.

> The land on which the building is proposed is subject to, or is likely to be subject to, slippage.

5.8 I also note that, following the comments made by the applicants regarding the expert's report and its effect on the draft determination, I took steps to ensure that the expert was in possession of all the relevant documentation. As set out in paragraph 5.6, the expert has reviewed and assessed all the information that he had ultimately received and has informed me that his previous conclusions have not changed as a result of this further investigation.

6. Discussion

6.1 In considering the authority's decision to only issue a building consent for the garage under section 72, I must follow the process described in the Act before I can reach any final decision.

6.2 Section 71: Land subject to natural hazards

6.2.1 Before sections 71, 72, and 73 can be applied, I must first consider whether the land on which the garage is to be built is subject to a natural hazard as defined in section 71(3).

6.2.2 The applicants provided comprehensive arguments to show why, in their opinion, the land on which the building work is to be carried out is not likely, at present or in the future, to be subject to a natural hazard as defined in the Act. The applicants state that their opinion is based on information provided by the authority and its own consultants. This information showed that the land in question has not historically suffered damage as a result of a natural hazard over the past 60 years, despite being subject to several extreme events during that period. The applicants also referred to the conclusions reached by the applicants' consultants, to historical matters, and to various mitigating factors that also supported their contention.

6.2.3 I note that the word "likely" occurs in both sections 71(1)(a) and (b). I discussed the term "likely" in the context of section 121 in Determination 2008/82. I accepted that previous decisions of the Courts were good law in respect of the word "likely" in section 71, which was interpreted to mean that there had to be a reasonable probability or consequence that something could happen. I also accept that this interpretation can be applied to the current situation.

6.2.4 The area that the garage would occupy in relation to the property must be considered to establish whether this is a relevant factor. From the evidence that I have been provided, there is no question that the whole building site, including the area on which the garage is to be built, is within the Tahunanui Slump and is therefore likely to be subject to slippage. Having reached this decision I was of the opinion in the first draft determination that I need not analyse the term "the land on which the building work is to be carried out" that was defined in *Auckland City Council v Logan* [1/10/99, Hammond J, HC Auckland AP77/99].

6.2.5 However, at the hearing and in their subsequent submissions, the applicants' legal advisors have emphasised that it is the "land intimately connected with the building" which is a major factor in the matter to be determined. This concept could be

interpreted to mean that only the land that is to be occupied by the proposed garage is to be considered. However, in this respect, I note the following discussion in the *Auckland City Council* case

> When the statute refers, as it does, to 'the land on which the building work is to take place', is it referring to the area contiguous to the building or to the land in general? Plainly, the circumstances may vary greatly. The 'land' may be a 1000 acre property, on which a new house is to be built. The house may be far away from any potential inundation. Or, as here, the site may be a smallish suburban one, which is earmarked for higher density use, and it is very difficult to dissociate the building from the entire parcel of land.

6.2.6 Taking into account this interpretation, I have reached the conclusion that, as 82 Bisley Avenue can be defined as a "smallish suburban site", it is the entire site, rather than the area to be occupied by the proposed garage, that I must consider in respect of the hazard in question.

6.2.7 In simple terms, the argument put forward on behalf of the applicants is that the site is a coherent block of land that is subject to standard movement, and which is outside the conditions affecting other parts of the Tahunanui Slump area.

6.2.8 The authority is of the opinion that not enough evidence has been provided to support the applicants' contention that it is unlikely that slippage would cause any adverse consequences to the proposed garage. This view is also supported in the expert's second report, which refers to a lack of certainty in the evidence produced on behalf of the applicants.

6.2.9 Based on the opinion of the expert and the authority, I accept that the land on which the garage is to be built is subject to the natural hazard of slippage as described in Section 71(3).

6.2.10 After careful consideration, I accept the opinions of the authority and the expert that insufficient evidence has been provided on behalf of the applicants to convince me that the land on which the garage is to be built would not be subject to slippage in terms of section 71(1)(a).

6.2.11 Having established that section 71(1)(a) is relevant, it is not necessary at this stage for me to consider section 71(1)(b). However, I note that both the consultants and the expert consider that the building work would not worsen the hazard and I accept that assessment in this regard.

6.3 Section 71: Major alteration

6.3.1 I note that section 71(1) is written partly in terms of a "major alteration" to a building. Accordingly, I am of the opinion that I must initially define whether the proposed building work falls into the category of a "major alteration". While section 71(1) refers to "major" alterations, there is no definition of major work in the relevant sections of the Act. Accordingly, I must give the term its fair and ordinary meaning. I have approached this issue in terms of the Act as set out below.

6.3.2 The authority under its District Plan No 414 condition has applied a "minor/major" works criteria regarding the application of sections 71 and 72 over the past 15 years. The authority's approach when considering the effects of natural hazard is, in part,

based on Schedule 1 of the Act, which exempts certain building work from the requirement to obtain a building consent. The applicants have expressed concerns about this approach, especially in regard to using Schedule 1 of the Act as a guide.

6.3.3 In this context, I note that any building work not requiring a building consent by virtue of being exempt under Schedule 1 of the Act does not trigger the requirement to issue a section 73 notification. However, it does not follow that building work that is not exempt under Schedule 1 would automatically be considered major work under section 71.

6.3.4 I would like to comment on the authority's suggestion that Schedule 1 of the Act could be used when considering the effects of natural hazards. I am of the opinion that this approach is not one that should be recommended. There is a risk that if Schedule 1 was used to determine the application of the natural hazard provisions set out in the Act, this could, in some instances, seriously undermine these provisions. This would be especially so if the wide discretion set out in paragraph 1(k) of the Schedule was invoked by an authority.

6.3.5 I consider Schedule 1 to be relevant when considering the term major in the context of section 71 only in that it can guide the lesser limit of building work considered to be minor and therefore can be used as a starting point for comparison.

6.3.6 In order to decide whether building work is to be defined as major in the context of section 71(1), I am of the opinion that it is useful to consider the following:

- To what degree the building work differs from building work that would be exempt from requiring a building consent in terms of Schedule 1 of the Act. Major alterations are likely to be significantly different in nature and extent from the type of building work exempt under Schedule 1.
- The intended use and degree of design and construction complexity.
- The size of the alteration compared with that of the existing building.
- The increased footprint of the building, and the percentage increase in site coverage.
- Allowance for the replacement of existing structures with new work.
- The extent to which the performance of the building work in question is likely to be affected by the hazard conditions. For example, can the likely affects of the hazard be mitigated by, say, a specific design?

6.3.7 In applying the reasoning set out in paragraph 6.3.6 to the proposed garage, I note the following:

6.3.8 Regarding the floor area of the proposed garage, I note that Schedule 1 was amended as from 23 December 2010. The new paragraph (jf) states that the construction, installation, replacement, alteration or removal of a carport that does not exceed 20 square metres in size and is on ground level does not require a building consent. However, I also note that paragraph (jf) refers to a carport rather than a garage, and as such it should be considered that the intended use of the proposed garage may play a greater factor in considering whether the building work is major.

6.3.9 The authority has pointed out that the amended Schedule 1 was not current at the time that the matters arising for determination were raised. While I accept that this is the case, I have used the criteria set out in the amended schedule merely as a tool to assist in considering whether alterations can be defined as major.

6.3.10 The authority in its 11 August 2010 email to the Department has stated that it would generally consider alterations with an upper limit of a 10 to $15m^2$ increase in area to be minor alterations and low risk developments.

6.3.11 The authority in its correspondence to the applicants considers that the roof overhang should be included when establishing the relevant area of the garage. I do not accept this approach. Paragraph (i)(iv) of Schedule 1 clearly refers to "floor area" as do other relevant references in the Schedule. Therefore, I do not consider that a "roof" overhang can relate to the floor of a building and subsequently be included in any "floor area" considerations. Accordingly, I agree with the applicants that the floor area of the garage, in terms of this analysis, is $49m^2$, rather than the $62m^2$ applied by the authority.

6.3.12 In accepting the $49m^2$ floor area, if the area of the original carport is taken into consideration, the increase in footprint is $26m^2$ as confirmed by the authority in its email to the applicants of 11 August 2010.

6.3.13 In undertaking a comparison of the areas of the proposed garage and the existing house, I find the floor area of the garage to be an increase of 23% of the footprint of the house and the existing carport. However, the applicants are of the opinion that the whole floor area of the house has to be considered. Based on this calculation, the garage would occupy 10% of the whole house area. Such an alteration is not trivial but nor do I think it falls into the category of a major alteration. I note the proposed garage means in increase in site coverage of 7%.

6.3.14 I accept the authority's contention, as set out in its submission regarding the third draft determination, that value of the work is one of the relevant factors that can be considered when ascertaining whether building work is major. However, some caution needs to be exercised when considering the value of proposed building work and the extent to which the value indicates building work is major. I also accept the applicants' argument that similar-sized building work may vary greatly in value depending on the materials used, design complexity, and the like. While the cost of the proposed alterations is not yet known, because the nature and extent of the proposed alterations have not yet been agreed to, the value of the garage itself is likely to be at more modest end of the scale.

6.3.15 Taking into account all the above factors; a comparison of the proposed garage with the reasoning set out in paragraph 6.3.6 is as follows:

- The area of the proposed garage extension ($26m^2$) is outside the area criteria set by paragraph (jf) of Schedule 1 ($20m^2$) although not significantly. I also note that paragraph (jf) refers to carports rather than garages. While this makes the nature and extent of the proposed work undoubtedly different, I do not think that it makes the alterations so different from work that is exempt under Schedule 1 that it can be said that work that is exempt under Schedule 1 is a minor alteration and the proposed garage is a major alteration. The size and nature of the work relating to the proposed garage is similar to work that

is exempt under Schedule 1, and within the scheme of the type of possible alterations to a building, closer to a minor alteration than a major alteration.

- The use of the proposed building is as an outbuilding that is not intended for human habitation and does not involve sleeping or crowd activities. The structure of the proposed garage is relatively simple and a reconsideration of the design could reduce its construction complexity.
- The increase in size of the overall building area of some 10% is more akin to a minor alteration than a major alteration.
- The building work could be affected by the hazard conditions, but as set out later in this determination, if some reconsideration is given to the design it will mitigate such effects through measures such as allowance for differential movement between the garage and house.
- The building work will not adversely impact in any way on the natural hazard on the land or any other property.

6.3.16 In conclusion, I am of the opinion that these comparisons indicate the building work can not be considered major in the context of section 71 and also that relatively minor modifications to the area and/or the design of the proposed building work could produce a building that could be considered under the authority's current policy to be a minor work.

6.3.17 I note that the authority's processes when considering the major/minor work concept has led to some confusion. I suggest that the authority investigate and revise as necessary its processes in this respect. I record here that I do have concerns that the applicants' use, of what is essentially standard detailing taken from NZS 3604 for the garage design, may not be appropriate in this instance. Accordingly, when the authority further considers the design in detail, I recommend that it discusses with the applicants how the effects (on building performance) of any future landslip movement might be accommodated to achieve a reasonable level of performance in terms of the Building Code.

6.4 Other considerations

6.4.1 I note that one purpose of the natural hazards provisions under the Act is to ensure that, where a building consent may be granted for building work in relation to a natural hazard, potential purchasers of the property are alerted to the existence of the natural hazard or the property is protected from the natural hazard. For example, sections 71 and 72 permit a building consent to be granted for building work on land that is subject or is likely to be subject to a natural hazard as long as a notification of such a hazard is placed on the title of the land or the land, building work or other property are protected from the natural hazard.

6.5 Conclusion: The application of Sections 71 to 73

6.5.1 As I have come to the conclusion that the land on which the garage is to be built is subject to a natural hazard but that the work can not be considered a major alteration, it follows therefore that sections 71 to 73 do not apply in this instance.

6.6 The code compliance of the building

6.6.1 The authority in its document of 12 November 2009 notes that 'where the risk from landslide movement is relatively low, as at 82 Bisley Avenue, [the authority] can grant a building consent under Section 72'. I note that in its email of 2 October 2009 to the applicants, the authority stated that it 'would grant a building consent for the proposed works, subject to a Section 72 notification on the … title.' However, as I have concluded that sections 71 to 73 do not apply as the building work is not major, I must now consider whether the building work will comply with the building code taking into account the prevailing ground conditions.

6.6.2 The applicants have made frequent references to the property being on "good ground", and I accept that this definition is material to consideration of the compliance of any structure built on the property. However, I have to consider any effects on the property in the context of future movements of the Tahunanui Slump. I have accepted that such a movement is likely, and that the whole property would be displaced by such a movement. Accordingly in this context, the ground conditions would, in my view, fall outside the definition of "good ground" in terms of the relevant B1 compliance documents. This does not mean that a specific design approach could not be used to reduce the effects of ground movements on the garage superstructure, but this aspect has not been raised with me.

6.6.3 With reference to the applicants' plans and specifications for the garage, I note that:

- the foundations are slab-on-ground with relatively stiff perimeter footings
- the external walls are timber-framed, clad with stucco plaster over a cavity, which incorporates regularly spaced vertical control joints along its length.

The junction of the new garage structure within the existing building does not appear to incorporate provision for differential movement between the two areas such as might be expected given the existing site conditions.

6.6.4 Taking into account the siteworks that have already been constructed, plus details of the proposed garage construction (referred to in paragraph 6.6.3 above), I am not satisfied that there will be sufficient mitigation of the effects of any future land slippage. That is not to say that a different design for the proposed garage might not better address this issue.

6.6.5 In addressing the compliance of the proposed garage, I note that the performance requirement of Clause B1.3.1 requires that "buildings ... shall have a low probability of rupture, becoming unstable ... throughout their lives". Because the likelihood of movement of the land supporting the garage over the course of its intended life might well exceed the low probability threshold within B1.3.1, it is, in my view, appropriate for the authority, on application, to consider a modification of Clause B1 under Section 67 of the Act.

6.7 Conclusion

6.7.1 Taking into account the conclusions reached in the above paragraphs, I am of the opinion that the authority, based on the details that have been supplied to date, was

correct in refusing to grant a building consent, however that decision was based on incorrect application of sections 71 and 72.

6.7.2 In addition, I note that the documents supplied to me do not, in my opinion, and given the nature of the site, provide sufficient detail to show full compliance with the Building Code in respect of Clause B1. However, I also accept that on application the authority has the power to issue a building consent subject to a modification of Clause B1 under section 67 of the Act once any concerns about the code-compliance of the garage have been alleviated to the authority's satisfaction. In doing so, the authority should consider any modification in terms of the principles of the Act as outlined in section 4(2).

6.7.3 The applicants have requested that I provide them with some guidance regarding amendments that could be made to the plans as originally proposed. However, I consider that it is for the applicants to propose a solution in the form of an amended application for a building consent, taking the advice of their technical advisers, which they consider will satisfactorily address the matters set out in paragraphs 6.6.2 to 6.6.5 above. The authority should then decide whether or not to approve the application. If there are any further disputes regarding the proposed building work these can be referred to the Department for a further determination.

7. The decision

7.1 In accordance with section 188 of the Act, and based on the details that have been supplied to date, I determine that

- the site is subject to the natural hazard of slippage under section 71(3), and
- the proposed alterations are not major in terms of section 71(1), however
- the proposed alterations do not comply with Clause B1.3.1 of the Building Code

and accordingly I confirm the authority's decision to refuse to issue a building consent, though I note that the grounds on which it made that decision were incorrect.

Signed for and on behalf of the Chief Executive of the Department of Building and Housing on 13 April 2011.

John Gardiner
Manager Determinations

Appendix A: The legislation

A.1 The relevant sections of the Act include:

71 Building on land subject to natural hazards

(1) A building consent authority must refuse to grant a building consent for construction of a building, or major alterations to a building, if –

(a) the land on which the building work is to be carried out is subject or is likely to be subject to 1 or more natural hazards: or

(b) the building work is likely to accelerate, worsen or result in a natural hazard on that land or any other property.

(2) Subsection (1) does not apply if the building consent authority is satisfied that adequate provision has been or will be made to –

(a) protect the land, building work, or other property referred to in that subsection from the natural hazard or hazards; or

(b) restore any damage to that land or other property as a result of the building work.

(3) In this section and sections 72 to 74, natural hazard means any of the following:

(c) subsidence:

(e) slippage.

72 Building consent for building on land subject to natural hazards must be granted in certain cases

Despite section 71, a building consent authority must grant a building consent if the building consent authority considers that-

(a) the building work to which an application for a building consent relates will not accelerate, worsen, or result in a natural hazard on the land on which the building work is to be carried out or any other property; and

(b) the land is subject or is likely to be subject to 1 or more natural hazards: and

(c) it is reasonable to grant a waiver or modification of the building code in respect to the natural hazard concerned.

73 Conditions on building consents granted under section 72

(1) A building consent authority that grants a building consent under section 72 must include, as a condition of the consent, that the building consent authority will, on issuing the consent, notify the consent to,—

(c). . . the Registrar-General of Land.

A.2 The relevant performance requirements of the Building Code Clause B1 Structure include:

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.

B1.3.4 Due allowance shall be made for:

(a) The consequences of failure,

(c) Effects of uncertainties resulting from construction activities, or the sequence in which construction activities occur,

(d) Variation in the properties of materials and the characteristics of the site, and

(e) Accuracy limitations inherent in the methods used to predict the stability of *buildings*.

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.