



Determination 2017/042

Regarding compliance of building work with Clause E1 of the Building Code at 1–5 Saint Bathans Lane, Papanui, Christchurch

Summary

The determination considers whether site works carried out as part of a development have breached the requirement under Clause E1.3.1 in regards to the disposal of surface water to avoid the likelihood of damage or nuisance to other property. The determination discusses the causes of the flooding and the performance requirements in relation to annual exceedance probability of storm events.

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 and Assurance, Ministry of Business, Innovation and Employment (“the Ministry”), for and on behalf of the Chief Executive of the Ministry.

1.2 The parties to the determination are:

- the owner of the property at 4 Saint Bathans Lane, J van Klink
- the owners of the property at 5 Saint Bathans Lane, A MacKenzie and J Jackson (together with the owner of 4 Saint Bathans Lane referred to as “the owners”)
- the owner of the neighbouring property at 197 Blighs Road, R.B. and C.J. Gibson Family Trust, which is the applicant for this determination (“the applicant”)
- Christchurch City Council carrying out its duties and functions as a territorial authority or building consent authority (“the authority”).

1.3 I have also included the owners of the properties at 1, 2 and 3 Saint Bathans Lane as persons with an interest in the matter because all of the building work in the development was carried out under a single building consent.

1.4 This determination arises from the authority’s decision to issue a building consent in respect of building work (sitework) on the owners’ properties, and its subsequent refusal to issue a notice to fix in respect of this work. The applicant is of the view that the building work does not comply with Clause E1.3.1 of the Building Code², as it is causing a nuisance (flooding) on the applicant’s property, and that a notice to fix should be issued.

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

- 1.5 Accordingly, the matter to be determined³ is whether the building work complies with Clause E1.3.1 of the Building Code.
- 1.6 In making my decision, I have considered the application, the submissions of the parties, the report of the independent expert commissioned by the Ministry to advise on the dispute (“the expert”), and the other evidence in this matter.

1.7 Matters outside the determination

- 1.7.1 In its application and submissions, the applicant raised several other related matters that it was seeking a determination about, including whether the building consent had been complied with (in particular in relation to the conditions in the subdivision consent) and whether the building consent should have been issued subject to sections 72 and 73 of the Act.
- 1.7.2 As the applicant is a neighbour to the property on which the building work was carried out, and not the owner, then under section 176(e)(1) the applicant is only entitled to seek a determination in respect of those clauses of the Building Code that have the purpose of protecting other property. With respect to surface water, this is Clause E1.3.1. I have not considered any other aspects of the Act or Building Code, beyond those required to decide on the matter to be determined.

2. The building work

- 2.1 The applicant’s property is situated in an urban area in central Christchurch. The property is relatively flat, with a gradual slope from its street frontage on Blighs Road on its south-east side, down toward its northern corner. Dudley Creek crosses this northern corner at an angle, running from a north-western to a south-eastern direction.
- 2.2 Before it enters the applicant’s property, the creek crosses the corner of the property directly behind the applicant’s (5 Saint Bathans Lane). It enters the applicant’s property under the rear boundary fence, and leaves under the boundary fence with 201 Blighs Road. The boundary fence at both locations where the creek goes under is a standard 1.8m high timber paling fence. After leaving the applicant’s property the creek crosses the adjacent property at 201 Blighs Road. It then enters a concrete arch culvert, which takes the creek under Blighs Road.
- 2.3 Blighs Road is a two-lane city street, with standard road kerb and flat drainage channels on both sides. Between the road and the boundary of the applicant’s property, there are planted gardens and a footpath. The footpath has another drainage channel set within it. The footpath channel drains to a corner sump in the footpath outside 201 Blighs Road, which itself drains into the under-road culvert. The road channel drains into a double sump set into the road outside 201 Blighs Road, which also leads to the culvert.

³ Under section 177(1)(a) of the Act.

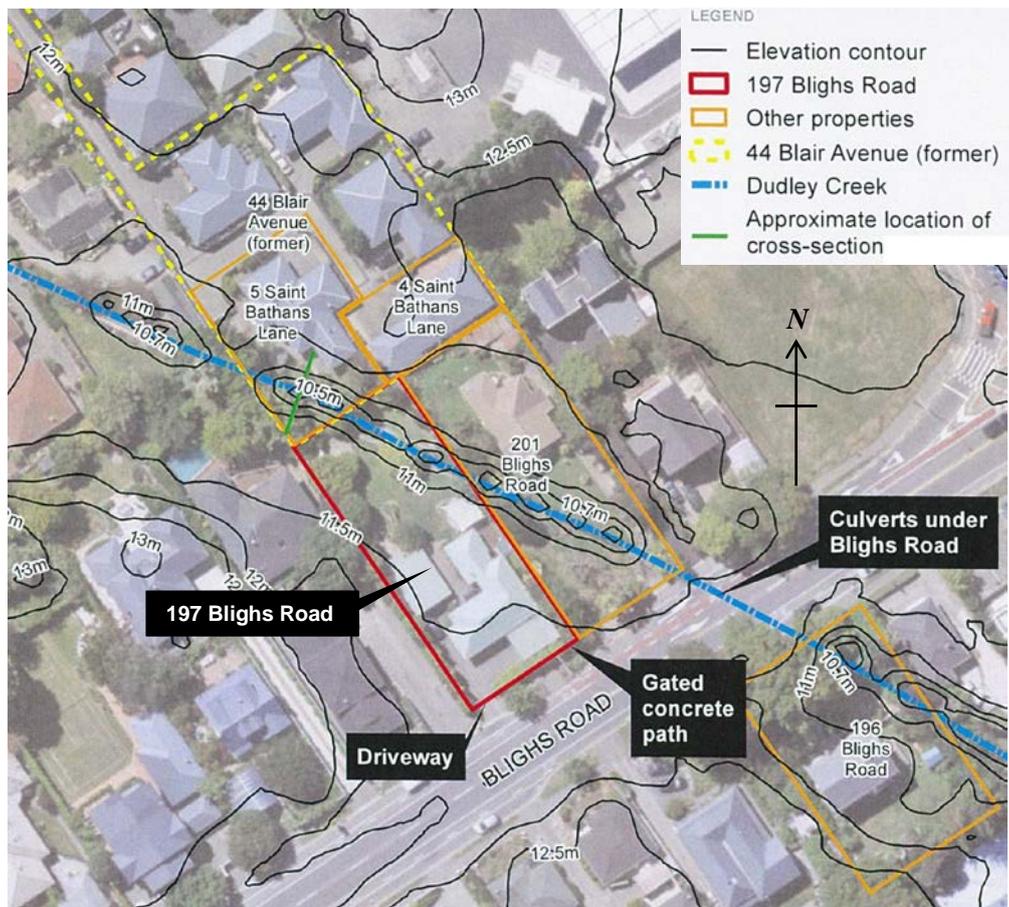


Figure 1: site location and topography (from expert's report) (not to scale)

- 2.4 The levels of Blighs Road and its footpath are both slightly higher than the ground level of the applicant's property, and there is very little fall between the applicant's driveway and either the road kerb and channel or the footpath channel. The driveway leads to the house and garage, which are the main buildings on the applicant's property. The rear of the property is lawns and gardens, which the creek dissects.
- 2.5 The building work that is the subject of this determination ("the development") took place on the properties to the rear of the applicant's property at what was formerly 44 Blair Avenue and subsequently renamed 1–5 Saint Bathans Lane. The building work replaced two existing flats, garages and sheds on the property with five townhouses.

3. The background⁴

- 3.1 Members of the Gibson family, who the applicant represents, have lived at 197 Blighs Road for over 35 years.
- 3.2 The subdivision (PAP/97/810) for the development was approved on 17 November 1997. It required resource consent (972160), which had been granted on 10 October 1997 subject to various conditions including: "No filling is to be introduced within 12m from the bank".
- 3.3 A building consent for the development was issued on 27 November 1997, and the five townhouses were subsequently constructed in accordance with the consented plans, using concrete slab foundations on hard fill. The plans for the building consent

⁴ See also Appendix A for a simplified timeline of events

- show that the ground around the new townhouses at 4 and 5 Saint Bathans Lane was to be filled, with the levels of fill ranging between 0.39m and 0.84m. At their closest points, the townhouses are 8m (No. 4) and 6m (No. 5) from Dudley Creek.
- 3.4 Other unrelated construction work in the area, which has been raised by the parties as having a potential impact on flooding on the applicant's property, included road works by the authority in 2007. The works were part of a citywide kerb and channel renewal programme, and included re-profiling Blighs Road to prevent ponding, extending the road kerb in front of 197 Blighs Road, installing the footpath channel and sump draining to the Blighs Road Culvert, and installing a 300mm pipe on the opposite (northern) side of the road, also draining to the culvert.
- 3.5 In 2010 and 2011, the Canterbury earthquakes affected the ground levels of the broader area in which the applicant's property is located, with levels dropping by around 200mm throughout the area.
- 3.6 On 4 and 5 March 2014, the applicant's property was subject to severe flooding during a period of heavy and extended rainfall that exceeded a 2% AEP event⁵ (i.e. an event with a 2% probability of occurring annually). During this event, Dudley Creek over-topped its banks and the applicant's entire property was underwater. The floodwaters covered the bottoms of the boundary fences that cross the stream, and entered the applicant's house and garage. Parts of the properties at 4 and 5 Saint Bathans Lane and 201 Blighs Road were also flooded during this rainfall (although the flood water did not enter the buildings on these properties), as were several other parts of the city.
- 3.7 Around this time, the applicant started a process to subdivide the property at 197 Blighs Road, with a view to constructing an additional dwelling on it. The applicant states that, during this process, it was advised by the authority that any development on the land would need to be designed 'so as not to impede any possible flood water' on the property, and that no filling would be allowed. The authority also advised that any building consent for the development would probably be issued under Section 72 of that Act, and would require a notice under Section 73 to be placed on the certificate of title, advising that the land was subject to a natural hazard (flooding). The applicant queried this advice with the authority, as it considered it inconsistent with the filling that had occurred at 4 and 5 Saint Bathans Lane during the 1997 development.
- 3.8 The applicant subsequently asked the authority to investigate the effects of flooding on its property, which the applicant considered were being worsened by the building work at Saint Bathans Lane (specifically the filling that had been placed within the flood plain of Dudley Creek on that property) and the authority's road works on Blighs Road.
- 3.9 The authority conducted an investigation into these matters, including a comparison of the engineer's design ground levels for the development and the ground levels from a new topographical survey conducted for this purpose, and flood modelling and assessment using a hydraulic software programme. It produced a report on its findings dated August 2015 ("the authority's report").
- 3.10 The authority's report concluded that although the earthworks that were part of the development in 1997 'resulted in minor loss of flood plain storage', this would not have 'a significant impact on flood levels immediately downstream at 197 Blighs Road'.

⁵ Annual exceedance probability.

- 3.11 The report also found that Dudley Creek was susceptible to flooding ‘during larger storm events’, and that these flooding issues had been made worse by the drops in ground levels that occurred as a result of the Canterbury earthquakes. The report noted that the March 2014 storm had been classified as ‘an extreme event’, with flood levels recorded elsewhere in Christchurch exceeding those predicted for an ‘2% AEP storm event’ (a storm of such severity that it is likely to occur only once every 50 years). The authority was, at the time of the report, developing a stormwater management programme ‘to identify options for improving the flood prone Dudley Creek’.
- 3.12 On 7 January 2017, the applicant’s property was again flooded. The applicant advises that on this occasion Dudley Creek overflowed its banks and water entered the applicant’s property down the driveway from Blighs Road. Parts of the applicant’s backyard were underwater, although the floodwaters did not enter any of the buildings.

4. The submissions

- 4.1 The Ministry received an application for a determination on 27 April 2016. The applicant outlined the background to the application and made a submission, the main points of which I have summarised as follows:
- The March 2014 flooding event has been the only time during the 35 years that the Gibson family have lived at Blighs Road that there has been flooding of this magnitude on the property.
 - The building work at 1–5 Saint Bathans Lane clearly introduced a ‘substantial amount’ of fill within the no-fill area stipulated in the resource consent (12m from the bank of Dudley Creek). This can be measured, and is clearly visible, in terms of differing ground levels between those properties and the applicant’s property.
 - The authority should issue a notice to fix for this unauthorised fill, as this was inconsistent with the conditions of the resource consent. Instead the authority has invested substantial resources in investigating the effect of this fill and advised the applicant that its effect on flooding on the applicant’s property is negligible. If this is correct, the applicant should be able to fill their own property and use concrete floor foundations in their development.
- 4.2 With their submission the applicant provided copies of:
- a signed statement from the owner of 201 Blighs Road to the effect that the land directly behind his property (4 Saint Bathans Lane) was filled
 - copies of the 1997 subdivision consent documentation for 1–5 Saint Bathans Lane, including the accompanying plans
 - photos showing the difference in ground levels between properties at 197 and 201 Blighs Road and the Saint Bathans Lane properties
 - correspondence with the authority and screenshots from its LiDAR software programme showing ground levels around Dudley Creek.
- 4.3 The applicant also made further submissions as follows:
- Email dated 6 June 2016 – concerning the scope of the determination; and hand-made amendments made to the floor and land fill heights on the

subdivision plans. The applicant attached a photo showing the boundaries of the relevant properties.

- Email dated 7 July 2016 – attaching the authority’s report with annotated comments.
- Letter and email dated 6 September 2016 – concerning the scope of the determination; and the impact that the building work and authority’s work on Blighs Avenue have had on flooding on its property.
- Email dated 9 October 2016 – advising that during ‘a short down pour of rain’ on 9 October 2016, rainwater flowed across the footpath and into their driveway and ‘front garage area’. The applicant attached photos showing this effect.
- Email dated 9 January 2017 – advising that on 7 January 2017 their property again flooded with rainwater flowing onto and ponding on the property from Blighs Road and Saint Bathans lane. The applicant attached photos showing this effect.

4.4 The authority made a submission in response to the application for a determination dated 3 June 2016, the main points of which I have summarised as follows:

- The siteworks and building platforms for the 1997 building work at Saint Bathans Lane formed part of the subdivision consent (PAP/97/810) for the development under the Resource Management Act 1991.
- The approved plans for the siteworks for the subdivision consent are dated 13 November 1997. Approval was given in writing on 17 November 1997.
- The building consent was granted on 27 November 1997. ‘The building consent plans make specific reference to the previously approved subdivision plans’.
- The authority made ‘no further assessment for building code compliance’ (in relation to Clause E1) in granting the building consent ‘as this would have been duplications of work that had already been undertaken’ for the subdivision consent.

4.5 With its submission the authority attached copies of its report dated August 2015 (see paragraph 3.9) and the topographic survey associated with this report.

4.6 A draft of this determination was issued to the parties for comment on 6 April 2017.

4.7 The authority responded on 18 April 2017, accepting the findings of the draft but requesting some amendments to remove comments regarding matters relating to the resource consent. The authority noted the suggestions at paragraph 6.14.1 and that this would be passed to the relevant part of the organisation.

4.8 The applicant responded on 18 April 2017. The applicant did not accept the findings of the draft and submitted the following (in summary):

- The applicant is not aware of evidence of flooding at 4 and 5 Saint Bathans Lane (refer paragraphs 3.6, 5.5, and 6.4), and believes it could not occur due to the introduced fill.
- With respect to fill on the site, the authority should have issued the building consent with the same conditions as it had issued as the resource consent.

- The hand written amendments (refer paragraph 6.4) do not extend into the 12m set back and existing ground levels remain unchanged on the plans and elevations.
- The applicant maintains the view that the flooding experienced in January 2017 fits the criteria of E1.3.1 and the expert has offered no counter evidence to dispute this other than combining the effect of the fill with the downstream restrictions.
- Even a moderate amount of rain fall that soaks into the filled land against the boundary fence with the applicant's property leads to water discharging or seeping onto the applicant's property, resulting in sodden and bogged land that lasts for some considerable time after each event. There is no suitably designed wall or drainage at the boundary to prevent damage or nuisance caused to the applicant's property from this.
- Because of the introduced fill, the applicant does not agree with the expert's view that the property at 5 Bathans Lane is subject to a natural hazard.
- The authority has not monitored the effects of the changes to the road, and while the changes may have solved an issue of road safety it has reduced flood plain storage and created a backwater effect, which results in flooding of the applicant's property.

4.9 The applicant made a further submission on 18 April and 20 April in response to the authority's submission, in regards to the matters concerning the resource consent and whether the introduced fill breached the conditions of the consent. I note here that matters concerning compliance with the resource consent are outside of my jurisdiction, and information regarding the resource consent has been retained in the determination only for the purpose of providing context.

4.10 On 9 May 2017 I sent a reminder to the owners and persons with an interest requesting a response to the draft determination. The owners of 5 Saint Bathans Lane responded on 29 May 2017, noting that during the flooding events parts of their property had flooded but the flood waters had never entered the house. The owners of 4 Saint Bathans Lane responded on 13 June 2017, accepting the draft without further comment.

4.11 No submissions have been received from the persons with an interest.

5. The expert's report

5.1 As stated in paragraph 1.6, I engaged an expert to assist me in this determination. The expert is a qualified water resource engineer. The expert reviewed the submissions and documents provided by the parties, and made a site visit to the applicant's property on 2 September 2016 at which the applicant's representative was present. The expert also met with officers of the authority on 2 September 2016, and subsequently corresponded with them; the meetings and discussion focussed on the authority's report of August 2015.

5.2 The expert provided a report dated 9 February 2017. The parties were provided with a copy of the report on the same day. The expert made several observations in the report as a result of the site visit, and with respect to meeting with the authority and examination of its report.

5.3 In regards to ground levels in the area and the fill at 4 and 5 Saint Bathans Lane, the expert observed:

- The ground levels at 5 Saint Bathans Lane are ‘obviously higher’ than the ‘general ground level’ of the applicant’s property. The same is the case between 4 Saint Bathans Lane and 201 Blighs Road. The properties at 4 and 5 Saint Bathans Lane have similar ground levels, as do the properties 197 and 201 Blighs Road. It is understood that before the 1997 building work all of these properties had similar ground levels to each other.
- The limited elevation difference between the ground levels of the applicant’s property and the levels of the footpath and road outside it were noted, along with the limited fall from the start of the applicant’s driveway to the road kerb and channel and the footpath channel. Photographic evidence provided by the applicant showed that this caused ponding in this area during rainfall, some of which flowed down the applicant’s driveway.
- The amount of filling that has occurred can be determined by comparing the pre- and post-development ground levels for the Saint Bathans Lane properties. Authority survey data from July 2015 shows that 4 and 5 Saint Bathans Lane are approximately 0.5m higher than 197 and 201 Blighs Road, which ‘is consistent with what was observed during the site visit and the various approved subdivision and dwelling plans’.
- The July 2015 survey data also shows an invert⁶ for Dudley Creek where it crosses 5 Saint Bathans Lane before entering the applicant’s property which is consistent with the invert shown on the pre-development subdivision plans, once the subsidence effects associated with the Canterbury earthquakes have been allowed for.
- Based on the pre-and post-development cross-sectional survey data provided by the authority, the development of the dwelling at 5 Saint Bathans lane and the associated filling has substantially reduced the cross-sectional area of Dudley Creek. However, some of this data is unclear and further analysis is required to determine ‘the volume of fill and the reduction in flood plain capacity below certain flood levels’ in this area.
- The raised nature of the Blighs Road crown⁷ relative to surrounding land creates a flood basin upstream of the culvert. The basin is relatively small and restricted to the immediate surrounds of the up-stream channel, particularly 197 and 201 Blighs Road, and to a lesser extent 5 Saint Bathans Lane.

5.4 The expert considered that the March 2014 flood event almost certainly exceeded the 10% AEP criteria in Clause E1.3.1. The expert set out a sequence of events that would occur in a flood event and made the following comments with regard to surface water flow:

- The boundary fences on the applicant’s property do not appear to have been ‘a significant barrier’ to flow during the March 2014 flooding.
- The culvert under Blighs Road is ‘an obvious downstream restriction’ to Dudley Creek’s flow and the pipe that crosses it ‘is likely to restrict flow through the culvert during extreme events’.

⁶ “Invert level” is the base interior level of a pipe, trench or tunnel.

⁷ The ‘crown’ is the high point in the cross section through a road and normally occurs at a road’s centre.

- The expert agreed with the authority's report that backwater effects associated with the restriction caused predominantly by the Blighs Road Culvert will be the dominant cause of flooding upstream of the culvert.
- It is likely that even during large rainfall events most of the creek's flow will pass through the culvert. It is only during extreme rainfall events that there is likely to be any restriction on the creek's flow with attendant backwater effects. However the extent of backwater effects and their duration will vary depending on the flood hydrography; a longer event which has a lower peak flow may result in greater flooding than a shorter event which has a higher peak flow.
- The applicant's photographs of the 9 October 2016 event shows some runoff, from Blighs Road and the footpath, does enter the applicant's property during storm events; the volume is likely to be small but will exacerbate any flooding already occurring.
- During the March 2014 event, it is possible that runoff from Blighs Road and the footpath may have entered the driveway of the applicant's property and contributed to localised flooding.

5.5 With respect to the consenting of the development, the expert also noted:

- The approved house plans for the dwellings at 4 and 5 Saint Bathans Lane 'clearly show that the ground around the house will be filled'. The amount of fill shown on the plans is consistent with the difference in ground levels between these properties, and those at 197 and 201 Blighs Road, noted by the expert during the site visit.
- 'From the information provided there is an obvious contradiction between the conditions of resource consent 972160, particularly that "No filling is to be introduced within 12m from the bank" and the approved house plans for building consent concerning 4 and 5 Saint Bathans Lane which clearly indicated filling within 12m of Dudley Creek.'

5.6 The expert considered the effect that the building work (in particular the filling that occurred as part of the development at 1-5 Saint Bathans Lane) has on flooding at 197 Blighs Road, and commented as follows:

- The development at 1-5 Saint Bathans Lane will have reduced the flood plain volume upstream of the culvert.
- It is difficult to accurately assess the effects of the development and its relative contribution and the increased flood vulnerability on the applicant's property due to the reduction in flood storage.
- In the expert's opinion, given the location of the fill in the upper parts of the flood basin, the fill is likely to have no or minimal effect on smaller floods but will affect the larger floods which use the upper parts of the basin.

5.7 The expert noted that further analysis is needed to accurately determine both the degree of flood storage lost as a result of the fill, and the level of flooding that is likely to occur as a result of a rainfall event with a 10% probability of occurring annually, as envisaged by Clause E1.3.1. However, the expert also concluded that 'based on the information provided our opinion is that the loss of flood storage is likely to mainly affect larger, more extreme floods which have an AEP of less than 10%'.

5.8 The parties' responses to the expert's report

- 5.8.1 The applicant made a submission dated 12 February 2017 in response to the expert's report. The submission reiterated some of the points made in the applicant's earlier submissions, and responded to and clarified some matters raised in the expert's report. The key points can be summarised as follows:
- The authority's report is simplistic. The Ministry's expert also did not undertake to accurately assess the effects of the fill.
 - The flooding experienced by the applicant on 7 January 2017 occurs once or twice a year. The applicant has been recording it recently in response to the determination process.
 - Before the road levels on Blighs Road were raised, rainwater ponded or flowed over the road when the culvert was at capacity. Now it is 'forced back down into 201 and 197 Blighs Rd'.

6. Discussion

- 6.1 The matter for determination is whether the building work (site work) at 1–5 Saint Bathans Lane complied with Clause E1.3.1 of the Building Code.
- 6.2 Clause E1.3.1 reads:
- 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.
- 6.3 The applicant is of the view that the sitework, which formed part of the development carried out in 1997, did not comply with Clause E 1.3.1 as it has caused the property to become flood-prone, and on occasion to flood, thereby creating a nuisance.
- 6.4 It is clear that the building work at Saint Bathans Lane included filling, in places, of the ground that the townhouses were built on and some of this filling has occurred within 12m from the banks of Dudley Creek. The fill was, however, noted on the plans that formed the basis of the building consent, with hand-written amendments showing finished floor levels and design ground levels that equate with the actual ground levels on the property today. These ground levels are approximately 0.5m higher than the ground levels on the applicant's property and at the neighbouring 201 Blighs Road. It appears that there is now no dispute between the parties that the filling has occurred.
- 6.5 What is less clear is the impact that this filling is likely to have had on flooding of the applicant's property; that is whether the site work means that the surface water is no longer disposed of in a way that avoids the likelihood of damage or nuisance to the applicant's property in an event with 'a 10% probability of occurring annually'.
- 6.6 I accept the expert's assertion that the degree of the reduction in flood storage that this filling has had on the Saint Bathans Lane property is 'extremely difficult to robustly determine'. I also accept the expert's analysis of the nature of the flood basin that the applicant's property forms part of, and the likely causes and sequence of any flood event in Dudley Creek in this area.

- 6.7 There seems little doubt that the filling has reduced the capacity in the top part of the flood basin. The question becomes to what degree. The expert has stated that given the size of the Blighs Road Culvert and the relatively swift flow of Dudley Creek, it is likely that even during large rainfall events most of the creek's flow will pass through the culvert; it is only during extreme rainfall events that there is likely to be any restriction on the creek's flow with attendant backwater effects. Given this, and the location of the filled area of land within the upper reaches of the flood basin, I concur with the expert's assessment that 'the fill is likely to have no, or minimal, effect on smaller floods but will affect the larger floods which use the upper part of the basin'.
- 6.8 The authority states that the March 2014 flood event was categorised at the time as an 'extreme' event, causing widespread flooding throughout the city, and with recorded rainfall levels exceeding those predicted for an '2% AEP storm event'. The expert agrees with this assessment, stating in the report that it 'is likely to have been more extreme (i.e. had a higher return period or lower AEP) than the 10% AEP criteria stipulated in Clause E1.3.1 on the [Building Code]'.
- 6.9 The significance of this is that, while it is possible that during a storm of this magnitude, the fill at Saint Bathans Lane would have an impact on the degree of flooding experienced by downstream properties (due to a reduction in the capacity of the flood basin further upstream), and hence cause a nuisance for these properties, such storms do not fall within the requirement for the protection of other property afforded by Clause E1.3.1.
- 6.10 Clause E1.3.1 requires that surface water collected by building work or sitework must be disposed of so as not to cause damage or a nuisance to other property. However, not all surface water needs to be so disposed of; only surface water resulting from an event with 'a 10% probability of occurring annually' or put another way, a storm or rainfall event of such severity that it only occurs once every 10 years. A 2% AEP storm event is expected to occur only once every 50 years, and falls outside the level of performance required by Clause E1.3.1.
- 6.11 I agree with the expert's assessment in regards to the development site works affecting larger, more extreme floods than 10% AEP events. The applicant's property is low-lying and forms part of a natural flood basin. The applicant has stated that flooding happens at least once or twice a year. This flooding also affects the downstream property at 201 Blighs Road and at times the upstream properties at 4 and 5 Saint Bathans Lane. The cause of the flooding is most likely to be the restriction in flow caused by the Blighs Road Culvert and other downstream restrictions. The reduction in the capacity of the flood basin caused by the fill at 4 and 5 Saint Bathans Lane will only have an impact during large or extreme flood events, once the backwater or ponding effect caused by the culvert reaches back that far.
- 6.12 I consider it notable that in the 35 years that the applicant has lived on the property, the flooding on its property has only once been of sufficient depth to enter the buildings. The applicant's neighbour at 201 Blighs Road, who has lived at that property for 45 years, recalls one other occasion when this occurred. This is consistent with the March 2014 event, and events of that severity being assessed as having a 2% probability of occurring annually. Such events fall outside the degree of performance required by Clause E1.3.1, which only extends protection to events with a 10% probability. During these lesser, more frequent events, I consider the fill work will have no appreciable effect.

6.13 Conclusion

6.13.1 Accordingly I conclude that the building work at 4 and 5 Saint Bathans Lane complies with Clause E1.3.1 of the Building Code.

6.14 Other matters

6.14.1 The applicant has raised the matter of rainwater collecting and ponding on the road and footpath, and flowing back down the driveway onto their property. Although this matter is outside the scope of this determination, I note that the expert considered that this was likely to be adding to the flooding issues experienced by the applicant and should be further assessed. The expert has suggested that a water engineer could visit the applicant's property during a large rainfall event to confirm what works would be effective to prevent the runoff entering the applicant's property. In my opinion, this is a sensible suggestion and one that the parties may wish to pursue.

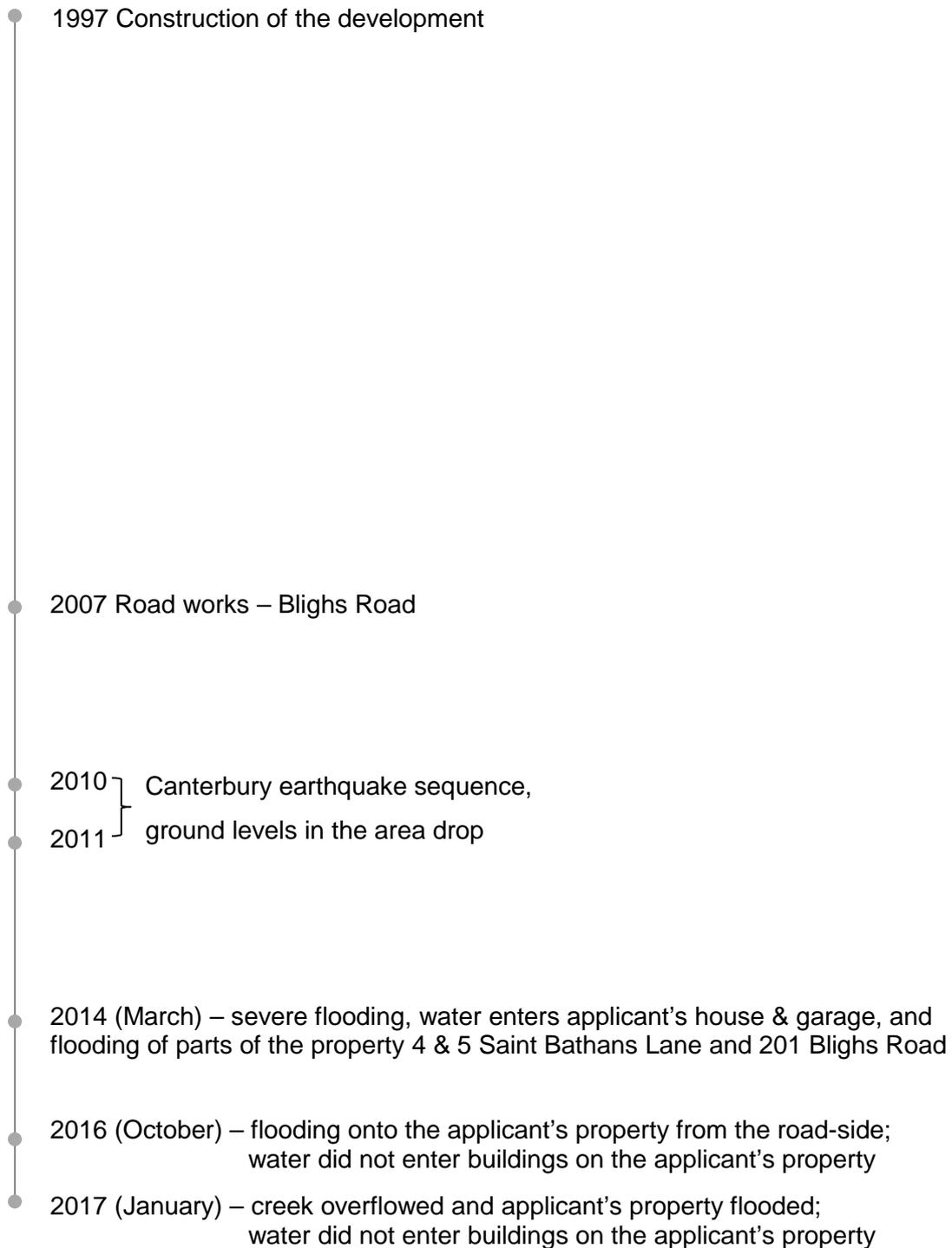
7. The decision

7.1 In accordance with section 188 of the Building Act 2004, I confirm that the building work at numbers 1–5 Saint Bathans Lane complies with Clause E1.3.1 of the Building Code.

Signed for and on behalf of the Chief Executive of the Ministry of Business, Innovation and Employment on 20 June 2017.

John Gardiner
Manager Determinations and Assurance

Appendix A: Timeline of events



Appendix B: Regulations

B.1 Clause E1 of the Building Code

Clause E1—Surface water

Provisions

Objective

E 1.1 The objective of this provision is to:

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

Functional requirement

E1.2 Buildings and sitework shall be constructed in a way 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.