

## 6. HULVERSTONE DRIVE STOPBANK

<b>Officer responsible</b> Parks and Waterways Manager	<b>Author</b> Paul Dickson - Drainage Engineer, DDI 941-8392
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The purpose of this report is to convey the results of consultation with Avondale residents about the proposed Hulverstone Drive stopbank construction. The report is to be considered by the Parks, Gardens and Waterways Committee.

### BACKGROUND

On 3 March 2003 the Board considered a report about a proposed stopbank along Hulverstone Drive between Avondale and Wainoni Roads. The stopbank is to protect against street flooding and rare house flooding. One house has a floor level below a 2% annual risk ("50 year return period") event. Three houses are subject to flooding in a 1% annual risk ("100 year return period") event. Street flooding has a 4 to 5% annual risk of occurring.

The cost of the stopbank was estimated to be \$220,000. However the benefits (calculated as the estimated present-day value of saved flood damages) are less than the cost of construction and from an economic standpoint one would not proceed with construction. For this reason the staff recommendation was that the stopbank construction be deferred until sea level rise (if it occurs) increases the number of houses at risk and hence increases the benefits of stopbank construction. The stopbank was budgeted for in 1999 based on information that potential flood damages were worse than is now understood to be the case.

The Board decided to "consult with residents of Hulverstone Drive between Wainoni Road and Avondale Road and adjacent streets to ascertain their views on whether a stopbank construction or other options should proceed".

### CONSULTATION PROCESS

Information packs were posted to 680 Avondale households, generally those whose addresses appeared on the Parks and Waterways Unit database of lower lying properties. Recipients included all households on Hulverstone Drive. All properties known to have floor levels lower than the proposed stopbank were advised of this fact separately, with floor level information. Residents distant from the river and on higher ground did not receive the information.

The information pack was circulated to Board members and is not appended to this report.

The information pack advising that pegs would be placed along the line of the stopbank was distributed to residents on 8 and 9 April to indicate the proposed stopbank height. This was only done downstream of Briarmont Street. Pegs were omitted between Avondale Road and Briarmont Street, where the stopbank height would not exceed 15 cm, because survey staff were busy and the job was taking longer than anticipated. Adjacent residents were advised by a letterbox drop that this was the case.

Residents were invited to meet Parks and Waterways Unit staff at the Shirley Service Centre between 7.00 and 9.00 pm on Thursday 17 April 2003. Seventeen people came to ask questions and share opinions about the project. Written comments from the night are recorded in Appendix A.

### Responses

In total, 144 responses have been received. The response rate is 21%.

Respondents were placed into three locality groups, which could be expected to have distinct views about the project.

Response Area 1: Numbers 23-181 Hulverstone Drive which would view the stopbank across the road.

Response Area 2: Numbers 2-18 Hulverstone Drive which back onto the riverbank and would have the stopbank outside their rear boundary.

Response Area 3: All other residents.

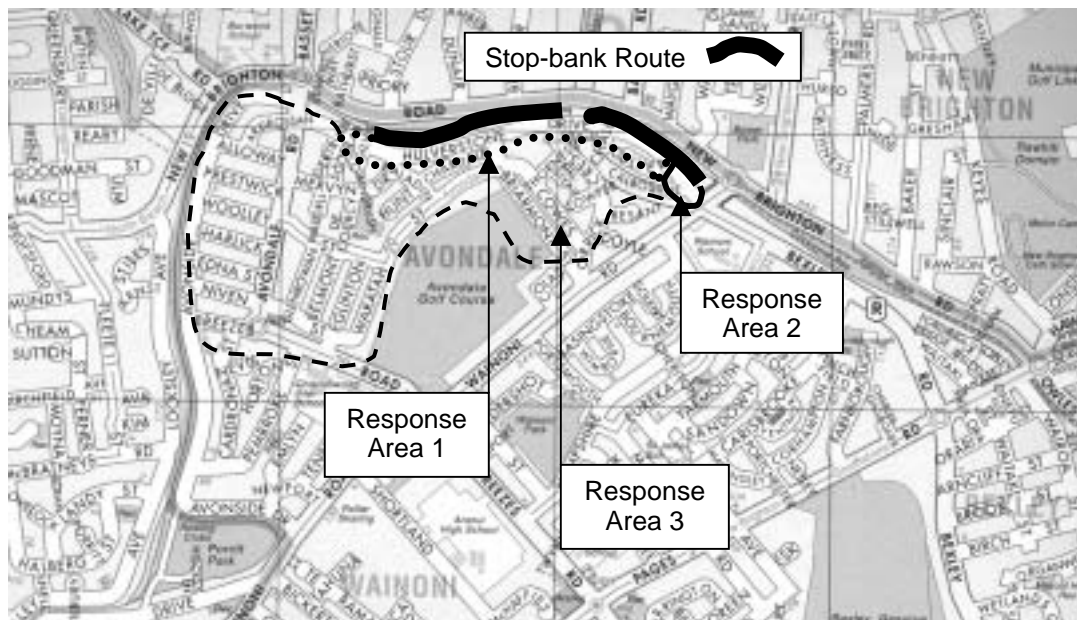


Figure 1: Area covered by information mail-out. Division into special interest "Response Areas"

Respondents' position for or against the stopbank proposal	Response Area 1	Response Area 2	Response Area 3
	Hulverstone Drive 23-179	Hulverstone Drive 2-18	Avondale Remainder
For	22 (69%)	4	99 (94%)
Against	9 (28%)	3	9 (6%)
No Opinion	1 (3%)	0	0
Total	32	7	105

The main reasons given for opposing the stopbank were:

- The stopbank will affect views of the river channel (17)
- The stopbank will affect views of the riverbank (15)
- Concerns that the additional landscaping would look scruffy if not properly maintained
- Plants will obscure views of the river
- Cost (12)

These opinions were fairly evenly distributed among respondents from the three groups.

Two households from the 2-18 Hulverstone Drive area oppose location of the stopbank close to their property boundaries because it will alter or displace landscaping done by themselves on Council land. These two households were supported by their neighbours at the meeting.

Two stopbank options were outlined in the information pack. The first option costing \$220,000 incorporates a grass bank where space permits and a low concrete wall disguised by groundcover plants where the river berm is narrower. The second option costing \$300,000 would be wider and would be predominantly an earth bank. The greater width of this bank would be accommodated by narrowing Hulverstone Drive by 1.5 metres. Nine Hulverstone Drive Group 1 residents (and three Group 3 residents) disliked the second option because of the perceived danger from speeding cars on the narrowed road. However, 36 respondents (including nine from Group 1) supported this option.

#### COMMENTS ON THE RESPONSES

The responses speak for themselves and signal majority approval.

Two issues warrant comment, and these are:

- The wish by Group 2 people for the stopbank to move further toward the river.
- The second, wider stopbank option involving the narrowing of Hulverstone Drive.

### Stopbank Along the 2-18 Hulverstone Drive Area

The concept plan places the proposed stopbank between the existing asphalt path and the rear boundaries of nine properties between 2-18 Hulverstone Drive. Two of these properties have extended their rear yards about 5 metres onto the riverbank by using tree planting and side fence extensions. These households have indicated that the presence of a 450 mm high stopbank would detract from their enjoyment of the riverbank. They want the protection provided by the bank but would like it located further away, between the path and the river.

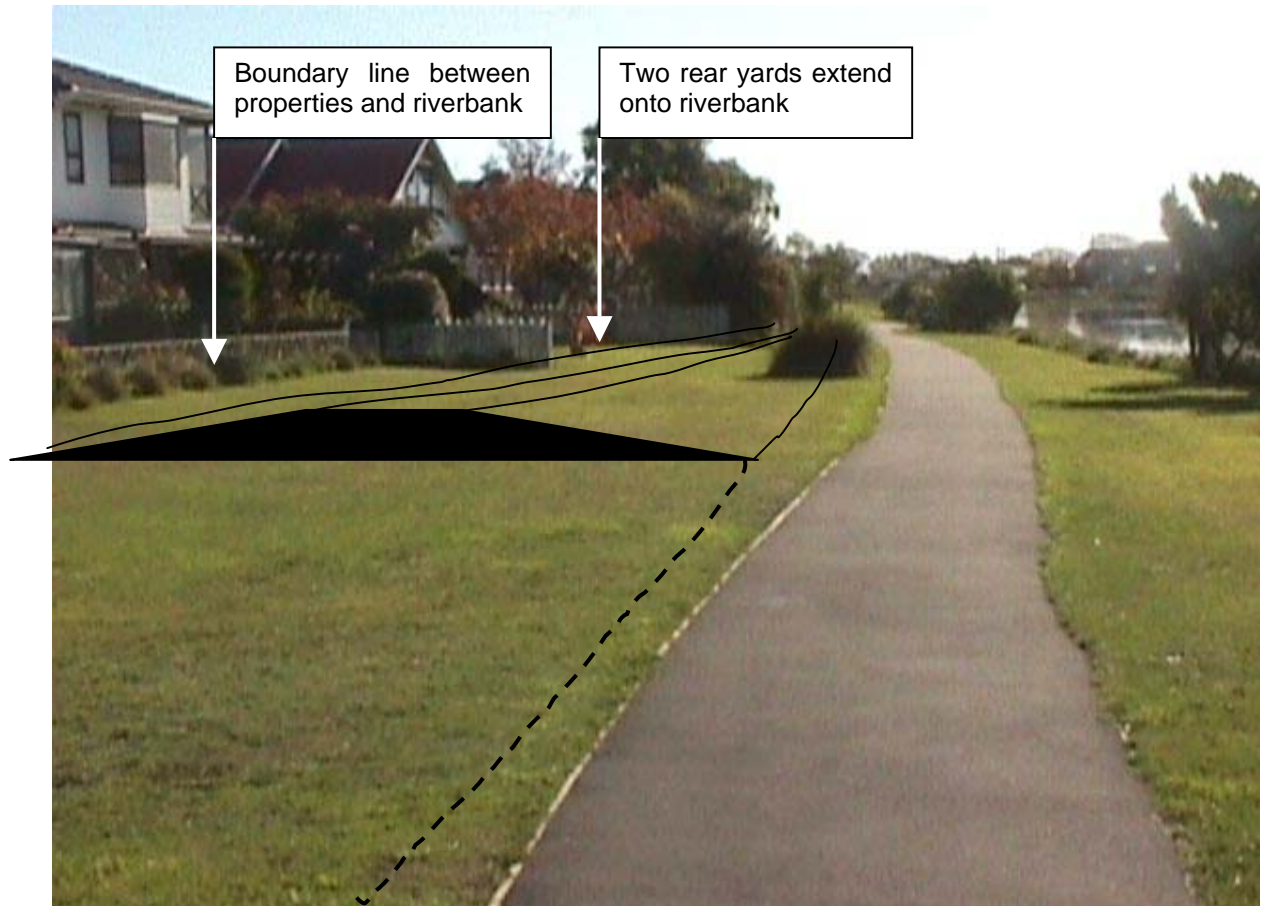


Figure 2: View indicating proposed stopbank placement behind 2-18 Hulverstone Drive

Staff do not agree that relocating the stopbank closer to the river would be beneficial. If the stopbank were placed between the path and riverbank the stopbank would have to be narrower and steeper sided. The visual impact on the riverbank would be negative and the stopbank would need additional erosion protection. An analogous situation is seen across the river around Waygreen Place and Wattle Drive where the stopbank is perched on the riverbank. The stopbank could be placed in some middle position, but the path would have to be relocated.

### Wider Stopbank and Narrowing Hulverstone Drive

An alternative suggested by the designers and put forward for comment is the construction of a wider, more gently graded bank of mainly earth construction. In many aspects (visual appeal, access, ease of maintenance) this option would be superior; however it would involve the narrowing of Hulverstone Drive. Some Hulverstone Drive residents perceive this as a potential safety problem. Alterations to the road and walkway make this option more expensive. The previous report did not deal in any detail with this option but it should be considered as an alternative if the stopbank is to proceed.

The previous report raised the question of whether a stopbank *should* be built given its possibly objectionable environmental impact and poor economics. This report deals principally with the public response to a stopbank. Additional consideration should still be given to visual, environmental and amenity issues, including alternative types of construction.

If the stopbank is to proceed a resource consent must be applied for and this will require a consideration of alternatives. The wider stopbank alternative could be considered during the design and consent phase and discussed with Hulverstone Drive residents. The City Streets Unit is supportive in principle but would need to canvas traffic issues.

## LEGAL ISSUES

The Board asked for comment from the Legal Services Unit on the following questions:

1. Does the Council have any potential liability if it does not undertake stopbank works and the lowest house is subsequently flooded in a 2% annual risk event?
2. Would a decision to cancel the budgeted item for stopbanking render the Council liable for subsequent flood damage?

The Legal Services Unit has provided the opinion that it would be very unlikely that the Council would be liable for damage to the house in question if it does not build a stopbank; and it is not made liable for damage to this or other properties as a consequence of not proceeding with a budgeted activity.

## RELEVANT INFORMATION FROM THE PREVIOUS REPORT

- A budget item for Hulverstone Drive Stopbanking entered the 10 Year Budget after an Avon Floodplain Study indicated that the risk of flooding justified the expenditure.
- Closer investigation during preparation of the March 2003 report to the Board showed that the original number of at-risk properties was overly conservative.
- One house has a floor level slightly below a 2% annual risk ("50 year return period") event; however, this house may not flood in a 2% annual risk event. Flooding is tidal, and a high tide is at its peak for a relatively short duration. In order to threaten any house tidal flood water would have to spill over the riverbank, run over-land, and pond on streets and sections before rising high enough to reach the floor level. There is some doubt that water would reach the lowest floor in a 2% annual risk flood.
- Three houses are subject to flooding in a 1% annual risk ("100 year return period") event.
- Street flooding has a 4 to 5% annual risk of occurring (equivalent to "once in 20 to 25 years").

### Staff

**Recommendation:** That the information be received.

### Chairperson's

- Recommendations:**
1. That the Board recommend to the Parks, Gardens and Waterways Committee that, in view of the strong support for the Hulverstone Drive stopbank proposal, work on the stopbank proceed.
  2. That consultation be undertaken on the design and landscaping options.