

Report 13.90
Date 19 March 2013
File N/23/04/04

Committee Hutt Valley Floodplain Management Subcommittee
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Pinehaven Stream Floodplain Management Plan - Preferred option combination for further investigation

1. Purpose

To update the Subcommittee on the development of a preferred option combination for the Pinehaven Stream Floodplain Management Plan.

2. The decision-making process and significance

No decision is being sought in this report.

The identification of a preferred option combination does not commit the Greater Wellington Regional Council to a package of works. The purpose of the preferred option combination is to enable officers to:

- a) Focus project resources and future consultation on the refinement of the preferred option combination.
- b) Engage with the community, including those individuals who may be significantly affected by the preferred options, in continuing the development of this combination.
- c) Report back to this Subcommittee, at a later date, on the further developed preferred option combination with the intention of recommending the preferred option combination for adoption as a package of flood risk management measures.

3. Background

The Pinehaven Stream Floodplain Management Plan is in the 'Define Risk and Treatment Options' Phase. The detailing work has been completed on four option combinations developed to manage the flood risks of the Pinehaven Stream.

These option combinations were presented to the community at an open day on 18 July 2012.

Subsequent to the open day, community feedback was assessed and a preferred option combination identified by the Project Steering Group. These preferences

were based on a combination of community feedback, Upper Hutt City Council's target levels of service, and Greater Wellington Regional Council's floodplain management philosophy.

The preferred option combination report was provided to this Subcommittee at its planned September 2012 meeting seeking the Subcommittee's endorsement of the preferred option combination for the purposes of community engagement. Unfortunately, this endorsement could not be provided at that meeting as a quorum had not been met. Guidance was given by those members of the Subcommittee present on the basis on which consultation with the affected landowners should commence and work has proceeded on this basis. The report was again submitted to the 11th December sitting of this committee for information, however the Subcommittee meeting was again cancelled.

Community engagement to further refine the preferred option combination commenced in November 2012 with meetings on an individual basis engaging with owners of properties most affected by the preferred option combination. These meetings focus on looking at and discussing alternatives for flood management within these properties with the intention of reaching a verbal consensus to enable further investigations to proceed.

On the 5th March the Environment Wellbeing Committee accepted a recommendation that the delivery date for this project be extended to the 2013/14 financial year to accommodate both budget and resource constraints within the Flood Protection Department.

A walkover and inspection has been organised for members of the Subcommittee on 12th March.

4. Preferred Option Combination Summary

The technical detail report, 'Pinehaven Stream Floodplain Management Plan: Phase 3 – Preferred Option Combination for further Investigation', has been prepared which contains details, costs and alternatives investigated during the development of flood risk management options. Copies of this report will be available at the meeting for Councillors.

The preferred option combination for further development takes into consideration concerns at an individual level, community level and regional level. The combination integrates both structural and non structural options to manage the continuum of flood risk, and implementation of a complete flood risk management package would be required to deliver acceptable floodplain management planning outcomes.

4.1 Preferred Options Combination for further investigation

The combination aims to deliver a 1-in-100 year level of flood protection to all habitable buildings within the Pinehaven catchment, and provide the 1-in-25 year Upper Hutt City Council target channel capacity.

The table below, extracted from the Preferred Option Combination summary report, contains details of the preferred option combination for further investigation, including indicative cost estimates for structural options.

| Option | Description | Indicative Cost |
|---|--|-----------------|
| Sunbrae Drive to Whitemans Road Option 1.1 | 25 year channel capacity to protect residential floor levels up to the predicted peak 100 year flood level. Key features: .. Concrete lined section through 8 Blue Mountains Road (Dutch Reformed Church) .. Naturalised channel with suitable riparian planting for the remainder of the reach. .. New bridge at Sunbrae Drive (25 year capacity) .. Replacement of private bridge crossings .. Upgrade of piped stream & bypass inlet structures .. Negotiation of access with properties heavily impacted by works .. Securing secondary flow paths through a lowered driveway and easement servicing 13/14/15 Clinker Grove. .. Securing secondary flow paths from Deller Grove through 6 Sunbrae Drive and 1 Tapestry Grove | \$3,400,000 |
| Pinehaven Road to Sunbrae Drive Option 2.1 | 25 year channel capacity to protect residential floor levels up to the predicted peak 100 year flood level. Key features: .. Concrete lined section from Pinehaven Road to 26 Blue Mountains Road .. Naturalised channel with suitable riparian planting for the remainder of reach. .. Bridge at Pinehaven Road (25 year capacity) .. Replacement of private crossings .. Blockage reduction measures at inlet structures at Wyndham Rd .. Swale to capture secondary flow paths at 2 and 4 Pinehaven Road | \$3,940,000 |

| Option | Description | Indicative Cost |
|---|--|-----------------|
| Pinehaven Reserve to Pinehaven Road Hybrid | Hybrid option of a concrete lined 25 year channel capacity through the space restricted areas adjacent to Birch Grove, no channel capacity upgrades in the Pinehaven Reserve or 50 Blue Mountains Road and the construction of a naturalised channel diversion through 48 Blue Mountains Road. Key features: .. 25 year capacity concrete lined section through Birch Grove properties .. Naturalised channel through 48 Blue Mountains Road .. Minimal works in 50 Blue Mountain Road .. No work in Pinehaven Reserve .. Secure secondary flow path by lowering driveway in Birch Grove in conjunction with upgrading stormwater network | \$1,750,000 |
| Upper Catchment Option 4.1 | Secure flow paths & blockage reduction upgrades to facilitate long term improvements in the upper catchment .. Set a minimum underside of deck level, channel width and required capacity for any new vehicle and pedestrian access structures. .. Blockage reduction measures at inlet structures at Chichester Drive .. Upgrade intake to culvert at Pinehaven Community Hall .. Modifications to road kerbs, road grading, crossings and driveways as well as easements to secure secondary overflow paths at the intersection of Jocelyn Cr and Pinehaven Rd (both Northern and Southern) and Forest Road and Pinehaven Rd. .. Information, education and enforcement of upgrades to nuisance flooding from private structures. | \$185,000 |
| Catchment Wide Option 5.0 | Work with Upper Hutt City Council to secure increased planning controls to help prevent increases in flood risk from new development. Example planning controls: .. Identify flood zonings and introduce associated development and subdivision controls .. Zone and control important secondary flow paths .. Hydraulic neutrality or reduction in runoff requirements for new development .. Source control measures for new buildings such as attenuation of peak flows in the catchment using onsite rainwater tanks .. Enforcement around nuisance flooding associated with private stream crossings .. Review of landuse in the upper catchment including potential controls on forestry | - |

| Option | Description | Indicative Cost |
|----------------------------------|--|-----------------|
| Catchment Wide Option 5.0 | Civil Defence and Emergency Preparedness: .. Identify and map flood hazard warning time zones, including at risk residential property and area response priority. .. Identify critical infrastructure and lifelines .. Identify flooding types (nuisance, hazard to services, pollution hazard, property and life) .. Raise community awareness of civil defence centres, alerts and public warning systems. .. Investigation options for location of additional flow gauge and rain gauging stations. .. Incorporation in future regional flood warning system. | |

4.2 Cost of preferred option combination

The total cost of the preferred combination of options is \$9,275,000. Currently GWRC and UHCC each have \$2.1m allocated in their respective LTPs to fund these works. This leaves a \$5,275,000 funding deficit at this stage, and options for bridging this gap will need to be considered as the Pinehaven FMP develops.

The impacts of the works proposed for Pinehaven is very property specific due to the highly developed nature of the floodplain. The benefit of the works in general attributes directly to those properties. For this reason when we engage with the community about the options, discussions will be had on the basis that there will most likely need to be direct land owner contributions of some sort to the works. This will need to be developed as we proceed.

The following table summarises how many properties are affected and to what extent in terms of section area. This is shown as a percentage affected based on the footprint of the preferred option combination.

| Works footprint impact as a percentage of section area | Number of properties impacted by works | Number of these properties which will receive flood reduction benefit from the preferred option combination |
|--|--|---|
| 1% to 10% | 14 | 12 |
| 11% to 20% | 10 | 10 |
| 21% to 30% | 5 | 4 |
| 31% to 40% | 1 | 1 |
| 41% + | 1 | 1 |
| Total | 31 | 28 |

5. Phase 3: the next stage of the process

The technical detail report 'Pinehaven Stream Floodplain Management Plan: Phase 3 – Preferred Option Combination for further Investigation' identified the process by which a preferred option has been selected by the Project Team and endorsed by the Project Steering Group.

Community engagement has commenced to ensure that the preferred option combination represents community opinion. Once this stage of engagement is complete, we will seek confirmation of the preferred combination of options for further investigation from this Subcommittee at its next meeting.

The following stages will entail further detailed investigations, refinement and the final stage of community engagement with the purpose of seeking Council approval for a package of measures.

6. Communication

A community open day was held on 18 July 2012.

60 residents have been identified as most affected, and have been contacted on an individual basis to arrange a meeting to discuss the impacts of the preferred option combination. To date GWRC officers have met with 7 residents on an individual basis.

7. Recommendations

That the Subcommittee:

1. **Receives the report.**
2. **Notes the content of the report.**
3. **Notes the recommendation to the Council made by the Environmental Wellbeing Committee that delivery of the new FMP be extended to the 2013/14 financial year.**

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