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Committee Landcare
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Pinehaven Flood Study

1. Purpose

- To advise the Committee of the scope of the proposed Pinehaven flood study.
- To seek the Committee's endorsement for the Pinehaven flood study to be included in the draft 2006 – 2016 Flood Protection Operating Plan for subsequent consideration by Council.

2. Significance of decision

The matters in this report do not trigger the significance policy of the Council or otherwise trigger section 76(3)(b) of the Local Government Act 2002.

3. Background

Officers are currently preparing a first draft of the proposed new 2006 – 2016 LTCCP. A number of workshops have been held to provide guidance to officers in preparing this first draft. One of the items still requiring further consideration in preparing the draft Flood Protection Department Operating Plan is the scope and nature of an investigation into the flood hazard from the Pinehaven Stream, and ultimately the ongoing management of this stream.

In 1996 the Flood Protection Department began a programme of investigating the flood hazards from the next tier of watercourses after the major rivers – the Hutt, Otaki and Waikanae. The Porirua Stream improvements had been completed by this stage.

The Departments 1996 – 2006 10 year Operating Plan provided for flood hazard investigations on the following watercourses to be completed by 2006:

- Waiwhetu Stream – Lower Hutt (study currently underway)
- Wainuiomata River – Lower Hutt (completed)

- Pinehaven Stream – Upper Hutt (the topic of this report)
- Mangaone Stream – Kapiti (completed)
- Mangaroa River – Upper Hutt (study nearing completion)
- Waitohu Stream – Kapiti (study completed, report to LCC due)

The above studies are key steps in Council meeting its long-term performance indicator of completing “*a programme of flood hazard assessments of rivers and streams in the Western Region which are subject to significant flooding and erosion.*”

Some of the investigations will be complete at the completion of the flood hazard study phase, and will be used for information and planning purposes only, for example the Wainuiomata River and Mangaone Stream reports. For other streams such as the Waiwhetu Stream the flood risk is such that mitigation works are appropriate, and a second phase of developing a stream management plan is appropriate.

In the current 2005 – 2013 Flood Protection Operating plan the Pinehaven flood hazard study is due to commence next financial year, 2006/07. In anticipation of this work going ahead a number of meetings have been held between officers of both Council’s to work out the best way to proceed with the study, and to consider its potential outcomes.

4. History of Pinehaven Stream Flood Management

The Pinehaven Stream rises from a short steep catchment on the eastern side of the Hutt valley. Much of the upper catchment is in pine forestry, some of which has recently been logged, with part of the upper catchment being in regenerating bush. The stream flows down through a residential suburb, then connects in with Hulls Creek before flowing into the Hutt River downstream of the Silverstream Bridge - see **Attachment 1**.

Severe flooding occurred along parts of the Pinehaven Stream in the December 1976 storm, similar to what occurred in Stokes Valley and along the Waiwhetu Stream. More recently, the February 2004 and January 2005 storms caused flooding of a number of properties adjacent to the stream.

Following the 1976 storm a number of actions were taken to try and manage the flooding risk, including:

- In July 1977 the then Wellington Regional Water Board agreed with the then Hutt County and UHCC to accept management responsibility for a 1.4km reach of the Pinehaven Stream under the terms of the Administration of Watercourses Agreement. The reach to be managed by the Water Board was from the Pinehaven Reserve down to the junction with the Heretaunga Drain/Hulls Creek. The aim of the watercourses agreement was to encourage regular maintenance of these watercourses to limit the risk of future flooding.

- In 1980 the Wellington Regional Water Board produced a comprehensive report on “Flood Control Measures for the Lower Pinehaven Catchment”. The report looked at a variety of flood alleviation options including channel improvements, detention storage and building controls. The report made a number of recommendations including mapping of the watercourse, controls on new culverts and bridge crossings, and that a full economic and feasibility assessment of undertaking improvement works, to provide an agreed level of flood protection, be completed.
- In 1983 the Upper Hutt City Council prepared a report on “Flood Control Measures in Whitemans Road”. This report looked at flood improvements from the Heretaunga Drain up to the then Hutt County boundary at 52A Whitemans Road. This report eventually resulted in the duplication of the culvert under Whitemans Road which increased the capacity up to about a 50 year return period flow. The duplication was completed in the early 1990’s.
- Since the Whitemans Road culvert was duplicated the Upper Hutt City Council has undertaken further investigations into the flood risk from the stream including some flood hazard modelling work that was completed as part of a city wide assessment of flood risk. This work has not been finished into a definitive report on which decisions on a way forward can be made.

In addition to the above, discussions occurred in the early 1990’s about the possible transfer of total management of the stream to the Upper Hutt City Council.

5. Recent GWRC/UHCC officer discussions

Over the last couple of years there have been a number of officer discussions about the best way to proceed with the future management of the Pinehaven Stream.

The areas discussed included completing a definitive flood hazard study of the Pinehaven Stream and its tributaries, using modern computer modelling techniques, possible flood improvements, and the eventual transfer of management of GWRC’s current stream management responsibility to UHCC.

Officers are of the view that a significant flood hazard exists to a number of residents along the stream and that a comprehensive study, taking into account possible future development in Pinehaven, is appropriate. This may eventually lead to improvement works being undertaken.

Officers have prepared a joint proposal that is summarised as follows:

Step 1 – complete a definitive flood hazard assessment for the stream covering both the UHCC and GWRC sections of responsibility.

Step 2 - subject to the outcomes of the flood hazard study, investigate options for stream improvements to provide an agreed level of flood protection for Pinehaven residents and businesses.

Step 3 - both Council's implement the agreed flood improvements, resulting from the options study phase.

Step 4 - GWRC transfer management of its reach of the Pinehaven Stream to UHCC once agreed improvements have been completed.

The immediate recommendations to implement the above proposal is that both Council's make provision in their respective 2006 - 16 LTCCP's for Steps 1 and 2 above.

6. Proposed Pinehaven Flood Study

The proposed Pinehaven flood study is summarised below, and outlined in more detail in **Attachment 2** - a copy of the Upper Hutt City Council report on the proposed study.

Phase 1 - detailed flood hazard assessment including flood mapping, and recommendations for the Phase 2 study. This work is proposed to be undertaken in 2006/07 with Greater Wellington officers managing this work. This is essentially a technical study to update and bring together existing work, undertake new work as required and report. No significant consultation with residents is proposed, apart from releasing the outcomes of the study at completion.

Phase 2 - undertake a flood mitigation options assessment, including non-structural options, develop a stream management strategy and report with recommendations to both Council's. This phase of the study is proposed to be undertaken in 2008/09 only after the Phase 1 study has been presented to both Council's, and the joint Council's have confirmed they wish to proceed with Phase 2.

It is currently proposed that UHCC officers would take the lead role in Phase 2. This phase would require significant consultation with affected residents, and a joint political steering committee may be appropriate.

Both phases of the proposed study were jointly scoped by officers, including a cost estimate for the work. The cost estimate is based on the work being outsourced to consultants.

The current proposal is that the costs for Phase 1 and 2 be jointly shared between the Council's on a 50:50 basis. This is considered to reasonably reflect the respective responsibilities for the stream. Committee members should however note that the funding of any possible works in the future will need to be considered on the merits of the work, taking into account the current Watercourses Agreement.

7. Flood study costs

The current Flood Protection Operating Plan provides \$40,000 in 2006/07 for the flood hazard study.

The current estimated costs of the study are:	Phase 1 -	\$180,000
	<u>Phase 2 -</u>	<u>\$160,000</u>
	Total	\$340,000

It is suggested that provision be made in the draft 2006-16 Flood Protection Operating plan for this Council's 50% share as follows:

2006/07 Phase 1 - \$9,000 (loan funded)

2008/09 Phase 2 - \$ 80,000 (loan funded)

This is a \$130,000 increase in investigation costs over current provisions but will ensure that both Council's meet their flood hazard obligations for the Pinehaven Stream. It should be noted that the funding of the study is still subject to UHCC approving their 50% share of the study costs.

The Phase 2 costs will need to be confirmed at the completion of Phase 1. The Committee should note that Phase 2 will only proceed if the scope and extent of the study is agreed by both Council's. This is a key reason why a gap year has been introduced before Phase 2 starts.

The Committee should also note that no provision for improvement works is recommended to be incorporated into the draft Flood Protection Operating Plan. The need, and business case, for any improvements can only be known at completion of Phase 2 of the study.

8. Communications

No specific communications with the community as a result of this report are proposed. The results of the Committee's consideration of this paper will be communicated to UHCC as part of forward planning for this proposed project.

9. Recommendations

That the Committee:

1. **Receives** the report
2. **Notes** the contents of the report
3. **Endorses** the proposed joint Pinehaven Flood Study with Upper Hutt City Council, noting that Phase 2 of the study would only proceed in 2008/09 following receipt of the Phase 1 report, and a joint decision by both Councils' to proceed with Phase 2.

4. ***Agrees** that the proposed 50:50 cost split for the proposed Pinehaven Flood Study is a reasonable basis on which to proceed.*
5. ***Approves** the inclusion of \$90,000 in 2006/07 and \$80,000 in 2008/09 in the draft Flood Protection 2006-16 Operating Plan for subsequent consideration by Council in preparing the GWRC 2006-16 LTCCP.*
6. ***Notes** that Greater Wellington would be the lead agency for undertaking Phase 1 of the study, but that Upper Hutt City Council would take the lead role with Phase 2 should it proceed.*
7. ***Notes** that Upper Hutt City Council also needs to approve the inclusion of the Pinehaven Flood Study in its LTCCP for the study to proceed on the joint basis as proposed.*

Report prepared by:

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Attachment 1: Pinehaven Flood Study – Study Area

Attachment 2: UHCC – Pinehaven Stormwater Management study report, August 2005