



Report **06.289**
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Committee **Environment Committee**
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Waiwhetu Stream Action Plan update

1. Purpose

To inform the Committee of progress in implementing the Waiwhetu Stream Action Plan over the last twelve months.

2. Significance of the decision

The matters for decision 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

A programme to implement the Waiwhetu Stream Action Plan has been running since 2000. It is jointly funded by Greater Wellington and Hutt City Council, and is guided by the community-based Waiwhetu Stream Working Group.

The programme has a whole-of-catchment focus, from the headwaters in the Eastern Hutt hills at Taita, to the mouth at the confluence with the Hutt River at Seaview. While community and school planting events to improve the riparian environment have taken place annually, inevitably the greatest attention has been given to the issue of the contaminated sediments in the lower reaches of the Waiwhetu Stream. Greater Wellington and Hutt City Council, with the assistance of the Ministry for the Environment's Contaminated Sites Remediation Fund (CSRF), have commissioned a series of reports characterising the sediments and examining remediation options.

As a result of the flooding from the Waiwhetu and Awamutu Streams in February 2004, a joint Hutt City Council/Greater Wellington Waiwhetu Stream Floodplain Management Study was commissioned in 2005. The “Waiwhetu Project”, as it is known, has now brought together the environmental rehabilitation and flood mitigation projects. This recognises that neither the issue of contaminated sediments nor the flooding problem can be dealt with in isolation of the other. The Waiwhetu Project is overseen by the Waiwhetu Stream Advisory Committee which contains representatives from Greater Wellington, Hutt City Council, Iwi and the Waiwhetu Stream Working Group and is chaired by Stuart McCaskill. The Advisory Committee reports to this Council through the Landcare Committee.

The Waiwhetu Project has been able to draw upon the body of work on the contaminated sediments completed prior to 2005 to inform its considerations.

4. On-going contamination of the stream

As part of a project to better understand the nature of the region’s urban stormwater discharges, Greater Wellington sampled 11 sites in 2003 from a range of catchments in the region. Two of the sampling sites were of stormwater systems draining the Gracefield area and discharging into the Waiwhetu Stream. These investigations showed that there were elevated levels of contaminants discharging from these systems.

In the light of the work that was being undertaken to find ways to remediate the contaminated sediments in the lower reach, it was determined that further investigations were needed. It would not make sense to deal with the contaminated sediments in the stream if high levels of contaminants were continuing to enter the stream. Two professional services contracts were let to CRL Ltd in May 2005 jointly funded by Hutt City, Greater Wellington and the CSRF.

The first project sampled the two major stormwater systems at the point of discharge into the stream during normal low flow conditions and during “first flush” situations following a significant rainfall event. Testing of the samples was undertaken for a range of heavy metals and the results were compared to the commonly used ANZECC guidelines for Fresh and Marine Water Quality.

The results show that during periods of normal flow the guidelines are exceeded for chromium, copper, lead and zinc. During “first-flush” flows there are exceedances for cadmium, chromium, copper, lead and zinc. These are particularly high for copper, lead and zinc.

Table 1: Laboratory results for dry weather sampling event 7 July 2005 (ANZECC guideline exceedances in bold)

| | Hutt Road Culvert | Parkside Culvert | ANZECC |
|----------------|--------------------------|--------------------------|---|
| | | | Level of Protection (% species), freshwater |
| | | | 95% |
| | Average g/m ³ | Average g/m ³ | |
| Total Arsenic | 0.0011 | 0.0013 | 0.024 |
| Total Cadmium | <0.00005 | <0.00005 | 0.0002 |
| Total Chromium | 0.00168 | <0.0005 | 0.001 |
| Total Copper | 0.00336 | 0.00494 | 0.0014 |
| Total Nickel | 0.00072 | 0.00105 | 0.011 |
| Total Lead | 0.00853 | 0.02078 | 0.0034 |
| Total Antimony | 0.00142 | 0.00084 | not determined |
| Total Zinc | 0.0394 | 0.0703 | 0.008 |

Table 2: Laboratory results for wet weather sampling event 15 September 2005 (ANZECC guideline exceedances in bold)

| | Hutt Road Culvert | Parkside Culvert | ANZECC |
|----------------|--------------------------|--------------------------|---|
| | | | Level of Protection (% species), freshwater |
| | | | 95% |
| | Average g/m ³ | Average g/m ³ | |
| Total Arsenic | 0.0068 | 0.0053 | 0.024 |
| Total Cadmium | 0.000796 | 0.000601 | 0.0002 |
| Total Chromium | 0.01314 | 0.01223 | 0.001 |
| Total Copper | 0.077 | 0.06 | 0.0014 |
| Total Nickel | 0.00704 | 0.00857 | 0.011 |
| Total Lead | 0.5185 | 0.5747 | 0.0034 |
| Total Antimony | 0.01203 | 0.00512 | not determined |
| Total Zinc | 0.9155 | 1.313 | 0.008 |

With the recent receipt of the final results from this project, discussions are now underway with Hutt City to identify the responses necessary to address this problem.

The objective of the second project is to establish the significance of contaminated groundwater infiltration as a source of contaminants into the stormwater system. Approximately 30% of the 93 industrial/commercial sites in the Gracefield Industrial area are listed in the Regional Selected Land Use Register as having a history of storing, using or manufacturing hazardous substances. The high groundwater level and shallow stormwater drains in this area introduce the risk of contaminated groundwater entering the Waiwhetu Stream via infiltration into stormwater pipes.

This project involves the installation of 4 groundwater monitoring wells in the Gracefield area and sampling groundwater levels and quality during wet and dry weather over a twelve month period (12 samples per site). The data will be interpreted to establish groundwater level, flow direction, flow velocity and contaminant concentration, and estimate likely scale of contribution to the stormwater system. Two sampling runs have been completed to date and show "little or no presence of contaminants". This project will be completed by March 2007.

5. Communication

The Waiwhetu Project has generated a considerable degree of interest in the media with articles in the Dominion Post and Hutt News. Regular media releases at important stages during the process will continue for both the environmental rehabilitation and flood mitigation parts of the project.

6. Recommendations

It is recommended that the Committee:

1. **Receive the report; and**
2. **Note the contents.**

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