



Issue	Hutt City Council Proposal
<p>Coliform Levels – South End of Eastbourne Relatively high coliform levels have been recorded in the sea in the vicinity of a property at the end of Eastbourne that retains a septic tank for wastewater disposal.</p>	<p>It is proposed to carry out further investigations into possible links between the septic tank and coliform levels; and investigate the possibility of providing a reticulated wastewater connection to this property in conjunction with any alterations to the wastewater infrastructure as part of the proposed redevelopment of the Korohiwa area.</p>
<p>On-Site Wastewater Disposal Systems The inadequate design, operation and/or maintenance of on-site wastewater disposal systems can lead to health and environmental problems.</p>	<p>Hutt City Council has commenced the preparation of a database of on-site wastewater disposal systems in the city. It is proposed that this be aligned with a similar regional database being prepared by Greater Wellington Regional Council.</p> <p>It is further proposed that a programme to monitor health and environmental effects of on-site wastewater disposal in Hutt City be developed in conjunction with Greater Wellington Regional Council. This programme would include site inspections of a proportion of on-site wastewater systems.</p>

Issue	Hutt City Council Proposal
<p>Wet Weather Discharges from the Western Hills Trunk Sewer High wet weather flows from Upper Hutt and to a lesser extent from Stokes Valley can cause overloading of the Western Hills trunk sewer and downstream infrastructure leading to overflows to the Hutt River south of Manor Park.</p>	<p>A wet weather peak flow storage facility has been constructed at Silverstream to reduce these overflows and provide them with partial treatment during these extreme events. This \$10 million facility has been operational since August 2006.</p>

Roles of Hutt City Council – Public Wastewater System

Hutt City Council is responsible for ensuring the public wastewater system is managed in a way that contributes towards the achievement of Community Outcomes for the city. This involves:

- Setting standards to be achieved in the management of wastewater disposal
- Setting wastewater policy
- Public education on wastewater management issues
- Managing the interface with the community
- Monitoring the environmental effects of wastewater (and effluent) discharges
- Managing the interface with Upper Hutt City Council through the Hutt Valley Services Committee
- Managing the interface with Capacity – the Hutt City Council and Wellington City Council jointly-owned water management entity
- Approving budgets for the wastewater activity through the Community Plan process
- Monitoring the performance of the wastewater activity
- Carrying out an assessment of wastewater management in Hutt City as required by the Local Government Act 2002.



Capacity is responsible to Hutt City Council for:

- Making recommendations on standards and policy
- Managing the wastewater system through the asset management plan process to achieve required outcomes
- Ensuring risks are identified and managed within acceptable limits
- Managing the maintenance and operation of the wastewater system
- Developing and implementing programmes for the progressive replacement of parts of the wastewater system as they reach the end of their useful life
- Developing and implementing programmes to upgrade and extend the wastewater system as required to meet future demand
- Ensuring new wastewater infrastructure is designed and constructed to required standards
- Monitoring performance as an input to the monitoring of the wastewater activity by Hutt City Council.

Roles of Hutt City Council – Private Wastewater Systems

The roles of Hutt City Council with respect to private wastewater systems reflect that both private and public wastewater systems contribute towards the achievement of Community Outcomes.

Advisory – Providing advice to property owners on risks associated with septic tank systems and on the operation and management of septic tank systems.

Regulatory – Setting requirements for servicing of new developments including verifying compliance of new installations with required standards (normally AS/NZS 1547:2000).

Monitoring – Maintaining records of septic tank systems and monitoring health and environmental issues associated with groupings of these systems.

Assessments – Carrying out an assessment of groupings of private wastewater systems as part of a wider assessment of wastewater management in Hutt City as required by the Local Government Act 2002.

Possible Future Service Provider – Monitoring development in areas serviced by septic tanks and the performance of groupings of on-site wastewater systems to determine if and when reticulated wastewater systems may be appropriate.

Stormwater Assessment

Residential properties and the business community in developed areas of Hutt City are serviced by a reticulated stormwater system comprising approximately 528 km of stormwater pipes, 10,700 manholes, five retention dams and nine pumping stations which convey stormwater to receiving watercourses. The stormwater pipelines in the Hutt City system range in size from 100 mm to 1,800 mm in diameter with 65% of the pipes being between 225 mm and 450 mm in diameter.

Most of the Hutt City stormwater reticulation operates by gravity drainage. This means that the pipes run downhill and are not intended to operate under pressure. The nine stormwater pumping stations provide drainage from localised low-lying areas when gravity drainage is not effective.

Greater Wellington Regional Council is responsible for managing the major watercourses throughout the Wellington region including the Hutt River, the Wainuiomata River, the Waiwhetu Stream (from below Naenae) and the lower section of the Stokes Valley Stream. The majority of stormwater from Hutt City discharges into these watercourses.

Every stormwater pipe and channel has a finite capacity. Most of the stormwater pipelines in Hutt City were designed to accommodate rainfall with a 20% chance of occurring annually (a 5-year average return period). It is not practical to provide stormwater drains that can accommodate all foreseeable rainfall and the risk of blockages in stormwater systems cannot be eliminated. Stormwater systems in “greenfields” developments are now required to comprise both a primary system consisting of pipes and open channels intended to cater for more frequent rainfall events and a secondary system to cater for higher intensity rainfall events. The secondary system consists of overland floodpaths, which convey floodwaters safely when the primary system is unable to cope. New stormwater pipelines are now designed to accommodate rainfall with an average return period between 10 years (10% chance of occurring annually) and 50 years (2% chance of occurring annually) depending on the risk in specific situations.



It is expected that changing rainfall patterns will continue to be reflected in an increase in the frequency of severe rainstorms that exceed the original design capacity of the stormwater system. Stormwater systems in Hutt City are now designed to accommodate more intense rainfall to reflect climate change.

In rural areas of Hutt City stormwater run-off from roof areas is often diverted to storage tanks as a source of water for on-site water supply systems. Stormwater not used for water supply purposes is generally disposed of to land or to watercourses.

The quality of stormwater is highly variable. Stormwater run-off and in particular the “first flush” of stormwater run-off following a dry period, often contains many contaminants. These can include sediments, oils, greases, metals and organic material washed from roads and other impervious areas together with rubbish and contaminants illegally discharged into the stormwater system. Contamination of stormwater can also arise from overflows from the wastewater system (generally owing to wet weather overloading of the wastewater system – see wastewater assessment).

Many contaminants entering the stormwater system are subsequently discharged to watercourses. There is expected to be a greater focus on the effects of stormwater discharges on watercourses and on ways that these effects can practically be reduced.

The quality of water at popular swimming beaches in the city is monitored. This monitoring indicates that beach water is usually of a good standard that is suitable for swimming although water quality usually falls for a period following heavy rainfall.

Future Demand

Development in the city is not expected to be of a scale which will substantially increase stormwater run-off overall, although it may be significant in localised areas. The focus of stormwater management in the future is likely to shift away from simply providing pipes to convey stormwater, and towards the development of an integrated range of measures to manage the potentially adverse effects of stormwater run-off including flooding, environmental degradation and pollution.

Key Issues and Hutt City Council Proposals

Issues associated with stormwater management in the different communities in Hutt City have been identified in terms of their potential to compromise the achievement of health and environmental aspects of Hutt City Community Outcomes.

Issue	Hutt City Council Proposal
<p>Managing Adverse Effects of Stormwater Run-off</p> <p>Flooding owing to overloading of the stormwater system.</p> <p>Climate change eroding the level of protection against flooding provided by the stormwater system.</p> <p>Degradation of watercourses owing to contaminated stormwater run-off.</p>	<p>Hutt City has adopted a range of measures in response to these issues. With the flooding that has occurred in recent years the point has now been reached where it is proposed that these measures and additional measures that may be appropriate are formalised in a comprehensive stormwater strategy for Hutt City. This would be developed with input from and as a basis for consultation with the community and would enable the approach to stormwater management adopted by Hutt City Council to be more clearly communicated to the community. The strategy would include environmental as well as flood-related aspects of stormwater management.</p>



Issue	Hutt City Council Proposal
<p>Adequacy of Black Creek Channel – Wainuiomata Overtopping of the Black Creek Channel during severe rainfall.</p>	<p>Stage 1 of a programme of major upgrading of the Black Creek channel was completed in 2005/2006. Stage 2 was carried out in 2006/2007. Further works to continue the upgrading programme are proposed in 2007/2008 and from 2010/2011.</p>
<p>Secondary Floodpaths Lack of secondary floodpaths to convey floodwater safely when the primary stormwater system is blocked or overloaded.</p>	<p>It is proposed to continue to require the provision of secondary stormwater floodpaths in new (greenfields) developments to safely convey floodwater when the stormwater pipes are overloaded. Providing secondary stormwater floodpaths is often not possible in well-developed areas although they are provided where they are reasonably practical. The capacity provided in new pipes will reflect the adequacy of secondary floodpaths. It is proposed that the provision of stormwater floodpaths will be incorporated in a stormwater strategy for the city.</p>

Issue	Hutt City Council Proposal
<p>Obstruction of Stormwater Outlets on Beaches A build-up in beach levels may restrict the ability of stormwater outlets to discharge.</p>	<p>It is proposed to continue to improve stormwater outlets on beaches where practical. This is determined on a case-by-case basis. It is also proposed that the approach taken to stormwater outlets will be set out in a stormwater strategy for the city.</p>
<p>Overtopping and Maintenance of Private Streams Overflows from private streams and accumulation of debris following severe storms.</p>	<p>It is proposed to continue to investigate measures such as the provision of secondary stormwater floodpaths and the provision of peak flow bypasses to reduce the flood risk associated with private streams. The practicality of these measures must be determined on a case-by-case basis. It is further proposed that the management of private watercourses including responsibilities of the various parties will be formalised in a stormwater strategy for the city.</p>



Issue	Hutt City Council Proposal
<p>Stormwater Capacity in Areas of Stokes Valley</p> <p>The capacity of some of the main stormwater pipelines which convey stormwater from areas of Stokes Valley to the Stokes Valley Stream is less than desirable leading to backing up and overflowing of stormwater drains during severe rainfall. The issue is compounded by a lack of secondary floodpaths.</p>	<p>It is proposed that the provision of new main stormwater pipelines in areas where repeated problems have been experienced will be investigated as an option in a stormwater strategy for Hutt City.</p>
<p>State Highway 2 Obstructing Overland Flow of Floodwater</p> <p>There are several low lying areas between State Highway 2 (SH2) and the base of the Western Hills where floodwater may be trapped behind the State Highway.</p>	<p>It is proposed that a detailed assessment of the level of risk in low lying areas between SH2 and the Western Hills be carried out and options to mitigate any significant risks be identified. It is proposed that the assessment be incorporated into a comprehensive stormwater strategy for Hutt City.</p>

Issue	Hutt City Council Proposal
<p>High Floodwater Levels in the Awamutu Stream</p> <p>Flooding has been experienced owing to high water levels in the Awamutu Stream.</p>	<p>Water levels in the Awamutu Stream depend significantly on levels in the Waiwhetu Stream. Options for upgrading of the Awamutu Stream channel and lowering downstream water levels are being investigated as part of the modelling of the Awamutu and Waiwhetu Streams. Upgrading of the Awamutu Stream is proposed to be carried out from 2008/2009.</p>
<p>High Floodwater Levels in the Waiwhetu Stream</p> <p>Flooding has been experienced owing to high water levels in the Waiwhetu Stream.</p>	<p>Greater Wellington Regional Council, which is responsible for the majority of the Waiwhetu Stream, is preparing a floodplain management plan for the Waiwhetu Stream. This will define options for reducing the flood risk associated with the stream as a basis for a programme of upgrading works.</p> <p>Hutt City Council is continuing investigations into options beyond the Waiwhetu Stream corridor for mitigating the effects of high levels in the Waiwhetu Stream. A programme of works was carried out in the 2006/2007 year to improve stormwater drainage in the Gracefield industrial area adjacent to the Waiwhetu Stream.</p>



Issue	Hutt City Council Proposal
<p>Flooding From the Hutt River The Hutt River represents the major flood risk to the Hutt Valley. Failure of the Hutt River flood defences would lead to major flooding in the Hutt Valley.</p>	<p>The flood risk associated with the possible failure of the Hutt River flood defences is being addressed through an \$80 million programme of works being implemented by Greater Wellington Regional Council.</p>
<p>Backflows from the Hutt River A backflow from the Hutt River up the stormwater system could cause significant flooding.</p>	<p>Additional backflow protection has been provided on several critical stormwater outlets to the Hutt River. It is proposed that an assessment of risks associated with the possibility of backflows through stormwater drains be carried out as a basis for establishment of defined criteria/policy on backflow protection and that the outcome is incorporated into a comprehensive stormwater strategy for Hutt City.</p>

Issue	Hutt City Council Proposal
<p>Flooding in the Hutt River Coinciding With Heavy Rainfall in the Hutt Valley Floodgates on stormwater outlets to the Hutt River will be closed when the Hutt River is in flood. Stormwater is unable to discharge at these times (except for some localised areas provided with pumping stations). The backup of stormwater may be significant and lead to flooding if there is heavy rainfall in the Hutt Valley when the outlets are closed.</p>	<p>It is proposed that an assessment of risks associated with the closure of floodgates preventing stormwater outflow be carried out as a basis for the establishment of defined criteria/policy on backflow protection and that the outcome is incorporated into a comprehensive stormwater strategy for Hutt City.</p>
<p>High Flood Levels in the Opahu Stream High flood levels in the Opahu Stream can lead to flooding in adjacent areas.</p>	<p>Major works have substantially increased the capacity of the lower sections of the Opahu Stream channel. A major pumping station on the outlet from the stream to the Hutt River has been constructed. This will enable the stream to discharge into the Hutt River when the river is in flood. It is proposed that the remaining flood risk associated with the Opahu Stream channel be investigated as a basis for possible inclusion in a stormwater strategy for Hutt City.</p>