

# STAFF REPORT

**TO:** Chairman and Members, Engineering Services Committee  
**FROM:** David Stephenson, Utilities Asset Engineer  
**DATE:** 19 July 2007  
**REFERENCE:** S753  
**SUBJECT:** **SEATON VALLEY STREAM - MAPUA**

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## 1 PURPOSE

The purpose of this report is to present a summary of stormwater issues and proposed works in the Seaton Valley Stream, Mapua and to seek approval to protect the stream and its banks with a view to designating the stream between the Coastal Highway and the Toru Street Causeway as Council-maintained drain.

## 2 BACKGROUND

The Seaton Valley Stream drains a significant portion of the developed areas of Mapua and is the outlet for the reticulated stormwater networks north of Higgs Road and Toru Street. At present the stream flows through private property and as such the responsibility for maintenance lies with adjoining landowners. The outlet of the stream to the Mapua Estuary is via two culverts under the Toru Street causeway.

The performance of the existing culverts through the causeway has recently been linked to flooding and water quality issues upstream. Council has budgeted for improvements to the culverts through the causeway in this financial year's budget.

In preparation for this, Council has undertaken a stormwater management study of the Seaton Valley Stream. This work has included surveying of existing ground and channel levels, the development of a hydraulic model and the assessment of current and future flood levels in the stream. An executive summary of the study is attached.

This study has identified that flooding upstream of the causeway is caused by:

- Insufficient outlet capacity through the causeway culverts,
- Insufficient capacity through two sets of privately owned culverts between the causeway and the State Highway, and,
- Channel constraints in some locations.

## 3 PROPOSED CAPITAL WORKS

Capital works to reduce these constraints have been identified and scoped for detailed design. In brief, the works consist of:

- Provision of an additional culvert through the causeway, slightly lower than the existing culverts,
- Replacement of the two sets of privately owned culverts with small bridges or box culvert structures, and

- Excavation and widening of the waterway in selected locations.

Detailed design for the works is progressing at present.

A resource consent will be required for the proposed works, and will most likely be publicly notified. Construction of physical works on those sections of the stream on private property will require landowner agreement. Council staff have discussed the proposed works in a general sense with adjacent landowners and affected parties.

Because the proposed works have a impact on stormwater flooding throughout a large area of the catchment it is considered beneficial for Council to have on-going access to the stream between the Coastal Highway and the causeway. This access, through ownership or easement, would allow Council to maintain the hydraulic capacity of the channel in an integrated manner for the benefit of the wider Mapua community.

#### **4 ASSOCIATED WORK**

Environment and Planning staff are currently commencing work on a Structure Plan for the Mapua area; stormwater control and flood risk will be a major input to this plan. Engineering staff are working collaboratively with Environment and Planning in this area.

A number of esplanade and recreation reserves adjoin the stream between the causeway and the Coastal Highway; Engineering staff are working with Parks and Reserves staff to ensure work in these areas is coordinated and complimentary.

#### **5 RECOMMENDATION**

**5.1 THAT the Committee approves in principle for the designation of the Seaton Valley Stream between the Toru Street causeway and the Coastal Highway as a Council maintained drain.**

**5.2 And THAT the Engineering Manager be given delegated authority to negotiate with adjoining landowners with a view to acquiring ownership or easement over the stream and its immediate margins.**

David Stephenson  
**Utilities Asset Engineer**