



DIRECTOR SHIRE SERVICES REPORT

8th February 2005

DSS1	FLOODPLAIN MANAGEMENT PROGRAM
	2005/2006
	FILE: FM500 APV

SUMMARY:

Reporting on proposed projects for submission to Department of Infrastructure Planning and Natural Resources for the 2005/2006 Floodplain Management Program.



Council has been invited to submit projects by 25th February 2005 to the Department of Infrastructure Planning and Natural Resources for consideration for financial assistance in 2005/2006 under the Floodplain Management program.

Council's Flood Mitigation infrastructure has been assessed, at current values, at \$62M with a written down value of \$43.5M. Using a depreciation rate of only 1%, \$620,000 should either be set aside or expended annually on maintaining the flood mitigation infrastructure. The infrastructure includes 181 floodgated structures with 352 floodgates, 48 timber farm bridges, 37km of rock bank protection, 35km of earth levees and 147km of drains.

Much of the infrastructure that was constructed during the 1960's and 1970's is ageing and urgent restoration work is now required to prevent any future catastrophic failures of floodgate structures, levees or riverbanks. It is critical, therefore, that funding for this program be at least maintained at current levels and the following proposals have been based on that premise.

As previously reported to Council, funding for the Floodplain Management Program in 2004/2005 was reduced by \$93,333 as a result of the State Government's mini-budget in April 2004. Council's contribution from loan funds being repaid under the Environmental Levy was also reduced proportionally by \$46,667. It is anticipated that funding offers for 2005/2006 will be increased in 2005/2006 to offset the reduction in 2004/2005. The proposals outlined below have been developed on that basis.

Funding under the Floodplain Management Program is provided under the following categories:

- 1) Ongoing Subsidised Studies (1:1:1)
- 2) Ongoing Subsidised Works
 - A) Commonwealth and State assisted Program (1:1:1)
 - B) State Assisted Program (2:1)
- 3) New Studies
- 4) New Works
- 5) Maintenance Program (1:1)

The following proposals are submitted for consideration:

1) Ongoing Subsidised Studies (1:1:1)

Council has engaged Webb McKeown and Associates for Stage 4B (Kempsey Flood Study) of the Lower Macleay Floodplain Management Plan to determine the existing flood behaviour in the Kempsey Urban Area and to assess the strategic development options in the floodways in the Kempsey CBD. Following on from the Flood Study, a Management Study and Plan will be developed.

It is proposed that, in 2005/2006, the Kempsey Flood Study would be completed and work would commence on the Management Study and Plan for the Kempsey Urban Area (Stage 4C).

**Lower Macleay Floodplain Management Study
Stage 4B and 4C \$45,000**

2) Existing Subsidised Works

**A) Commonwealth and State Assisted Program
(Regional Flood Mitigation Program) (1:1:1
Subsidy)**

i) Kempsey Floodway Voluntary Purchase

A survey of the Kempsey Floodway has revealed that there are still 42 houses that should ideally be removed over time. Council has resolved to participate in a project under the Regional Flood Mitigation Program to purchase and remove identified houses from the Kempsey Floodway.

With the increase in property values in Kempsey, the amount of funding was increased to \$100,000 per annum for the purchase of properties.

Kempsey Floodway Voluntary Purchase \$100,000

B) State Assisted Program (2:1 Subsidy)

i) Macleay River Bank Protection

Since 1956, Council has constructed some 37,200 lineal metres of bank protection works with an asset value of \$18M. Progressively over time this rock has degraded and fatigued with the result that there is now a need to carry out work to place additional rock to fortify the existing system. \$850,000 of work has been identified as currently requiring upgrading.

It is proposed that in the 2005/2006 program, the upgrading of the bank protection between Kempsey and Frederickton on the left bank will be completed and work will commence on the left bank upstream of the Jerseyville boat ramp. This provides for continuation of urgent maintenance of bank protection works on the Lower Macleay Floodplain

Macleay Bank Protection	\$60,000
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ii) Floodgate Restoration

Council is responsible for 180 floodgated structures with 352 floodgates. Rehabilitation of floodgate structures is required to ensure the gates remain watertight and/or to treat concrete 'cancer', which is occurring because of the corrosion of the reinforcing steel in the harsh, acidic and brackish conditions.

Structures were identified that require repairs within the next five years with the cost of repairs estimated at \$2,250,000. The inspection of the structures indicates that Council should be spending in the order of \$250,000 - \$500,000 per year over the next five to ten years for floodgate replacement.

This project provides for repairs to failed concrete structures and restoration of concrete 'cancer'. It is proposed that in 2005/2006 repair work on the floodgate structures at Summer Island Drain, Gladstone Drain and Korogora Drain (adjacent to the Hat Head Road) be undertaken.

Floodgate Restoration	\$225,000
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iii) Water Quality Monitoring

The project provides for monitoring water quality data at 10 locations, plus 2 mobile trailers, in the Lower Macleay Floodplain. The project is establishing long-term base-line data sets of key water quality parameters and to measure the effectiveness of operational and management changes. This project is a vital part of Council's Floodplain Project and is

also an integral part of projects under the Coastal Acid Sulphate Soils Program and Acid Sulphate Soils Hot Spots Program. A web page has been developed so that the community can access real time water quality data.

Water Quality Monitoring \$75,000

iv) Floodgate Adjustments

Following on from the Lower Macleay River Floodplain Management Plan and the Upper Belmore Floodplain Management Strategy, operation of the floodgates and headworks is undertaken to improve the water quality in flood and non-flood periods.

Existing floodgate structures will be modified to ensure that they comply with current Occupational Health and Safety guidelines to ensure that the opening and closing of gates can be undertaken in a safe manner. It is proposed that in 2005/2006 work be undertaken on the structures at Saltwater Creek, Back Creek, Glenrock Drain and Verges Drain. An amount of \$75,000 is sought to cover the works required.

Adjustments to Floodgates \$75,000

3) New Studies (State Assisted Program 2:1 Subsidy)

i) Smithtown – Gladstone Levee Concept

The Lower Macleay Floodplain Management Plan identified the need to provide greater flood protection to the villages on the floodplain. The villages of Smithtown and Gladstone have approximately 125 and 100 dwellings respectively that are flooded above the floor in a 1% flood and the current levees only offer protection up to approximately the 1 in 5 year flood level. The Lower Macleay Floodplain Study carried out a preliminary analysis of levees for these villages and recommended that Council proceed with a concept design for ring levees. When the concept design is completed, Council would decide whether to proceed to detailed design and construction or to adopt alternative methods.

Smithtown – Gladstone Levee Concept \$50,000

4) New Works (2:1)

i) Stock Flood Mounds

Council has previously resolved to pursue the construction of flood mounds on private property for stock in time of flood. The measure is a useful flood proofing measure that also has the benefit of reducing the chaos caused by stock moving with traffic in time of flood. This project is identified in the Lower Macleay Floodplain Management Plan. If an offer of a grant is made for this project, it is proposed that the landowners benefiting from the construction of the flood mounds contribute the necessary matching funding.

Stock Flood Mounds	\$50,000
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5) Maintenance Program (1:1)

Council's current budget under the 1:1 program for the maintenance of the flood mitigation structures, timber bridges, drains, levees, bank protection, flood control structures and alert system is \$187,200 and is only approximately 50% of that required. DIPNR has not, to date, agreed to increase funding above \$87,200 but Council should seek an increase.

Maintenance of Flood Mitigation System	\$210,000
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There is some concern that, if Council does not maintain its involvement in these existing programs, these projects will no longer be "existing" and will need to be listed as new works. They will then need to compete for both priority and funding with other projects on a statewide basis and may only be deemed eligible for 1:1 funding support.

REPORT IMPLICATIONS:

- *Social/Environmental implications*

All items in the proposed program are considered important in achieving the aims of the Lower Macleay Floodplain Management Plan.

- *Economic (Financial)*

The financial implication of the following recommendation is that Council would need to provide \$315,000, as it's contribution, in the 2005/2006 budget for flood mitigation.

- *Policy or Statutory*

Nil.

- *Director's Review*

Council is urged to support this program by endorsing the recommendation.

RECOMMENDATION:

That the proposals outlined in the report for the 2005/2006 Floodplain Management Program be approved for submission to the Department of Infrastructure and Natural Planning.

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K J Finnie
DIRECTOR SHIRE SERVICES