



## **DIRECTOR SHIRE SERVICES REPORT**

13<sup>th</sup> February 2007

**DSS4 FLOODPLAIN MANAGEMENT PROGRAM 2007 / 2008**  
**FILE: FM500 APV {Folio No. \*}**

### **SUMMARY:**

Reporting on proposed projects for submission to Department of Natural Resources for the 2007 / 2008 Floodplain Management Program.



### **DESCRIPTION:**

Council has been invited to submit projects by 23<sup>rd</sup> February 2007 to the Department of Natural Resources for consideration for financial assistance in 2007 / 2008 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 restoration work is 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.

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)**

## **i) Lower Macleay Floodplain Management Study Stage 4C - Kempsey**

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 2007 / 2008, the Management Study and Plan for the Kempsey Urban Area (Stage 4C) will be undertaken.

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

## **ii) 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. Funding in the amount of \$30,000 is provided in the 2006 / 2007 budget to commence the flood modelling for this study. Proposals will be sought from consultants to undertake this component.

Further funding in the amount of \$30,000 will be required to investigate and develop the management options for this study. When the concept design and management options are completed, Council will be in a position to decide whether to proceed to detailed design and construction.

**Smithtown – Gladstone Levee Concept** **\$30,000**

## **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 for the purchase of properties was increased to \$100,000 per annum. Council has just

finalised the purchase of one property and should re-apply for funding to continue the project in 2007 / 2008.

**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. Some \$800,000 of work has been identified as currently requiring upgrading.

It is proposed that in the 2007 / 2008 program, upgrading of the bank protection will be undertaken on the rock bank in Killick Creek, Crescent Head. This work was listed as a high priority in the Killick Creek Estuary Management Plan.

**Macleay Bank Protection      \$60,000**

### **ii) Floodgate Restoration**

Council is responsible for 181 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.

This project provides for repairs to failed concrete structures and restoration of concrete 'cancer'. It is proposed that in 2007 / 2008 repair work on the floodgate structures at Saltwater Inlet, Belmore Union Drain and Big Hill Drain be undertaken.

**Floodgate Restoration      \$185,000**

### **iii) Water Quality Monitoring**

The project provides for monitoring water quality data at 7 locations 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      \$45,000**

## iv) Macleay Floodplain Voluntary Rural House Raising Project

Under the Voluntary House Raising Program, the Government provides financial assistance, two-thirds of the cost up to \$40,000, to raise a dwelling in order to put the floor level at the Flood Planning Level. This scheme is very effective in reducing flood damages and has obvious social benefits. The program could operate such that the matching one third component is contributed by the benefiting property owner with Council's in-kind contribution limited to facilitating and managing the program.

A survey of properties in the Macleay floodplain has been undertaken and a report is currently being prepared by Webb McKeown. Funding in the amount of \$75,000 has been provided in 2006 / 2007 for this project. It is proposed that funding of \$160,000 per year, sufficient to undertake the raising of up to four dwellings, be sought.

### **Macleay Floodplain Voluntary Rural House Raising Project** **\$160,000**

## v) 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 \$206,700 and is only approximately 50% of that required. DNR has not, to date, agreed to increase funding above \$87,200 but Council should seek an increase.

### **Maintenance of Flood Mitigation System** **\$210,000**

There is some concern that, if Council does not maintain its involvement in these existing programs, these projects will no longer be "existing projects" 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 state-wide basis and may only be deemed eligible for 1:1 funding support.

Funding details of the proposed projects are summarised in the table below.

<b>Project</b>	<b>Program Funding</b>	<b>Total Funding</b>	<b>Council Contribution</b>
Lower Macleay Floodplain Management Study Stage 4C – Kempsey	1:1:1	\$45,000	\$15,000
Smithtown – Gladstone Levee Concept	1:1:1	\$30,000	\$10,000
Kempsey Floodway Voluntary Purchase	1:1:1	\$100,000	\$33,333
Macleay Bank Protection	2:1	\$60,000	\$20,000
Floodgate Restoration	2:1	\$185,000	\$61,667

Water Quality Monitoring	2:1	\$45,000	\$15,000
Voluntary Rural House Raising Project	2:1	\$160,000	Nil
Maintenance Flood Mitigation System	1:1	\$210,000	\$122,800
<b>TOTAL</b>		<b>\$835,000</b>	<b>\$277,800</b>

**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 \$277,800, as its contribution, in the 2007 / 2008 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 2007 / 2008 Floodplain Management Program be approved for submission to the Department of Natural Resources.**

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**A P Vermeulen**  
**DIRECTOR SHIRE SERVICES**