



DIRECTOR SHIRE SERVICES REPORT

14th February 2006

DSS15 FLOODPLAIN MANAGEMENT PROGRAM 2006 / 2007
FILE: FM500 APV

SUMMARY:

Reporting on proposed projects for submission to Department of Natural Resources for the 2006 / 2007 Floodplain Management Program.



DESCRIPTION:

Council has been invited to submit projects by 24th February 2006 to the Department of Natural Resources for consideration for financial assistance in 2006 / 2007 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. Funding offers in 2005 / 2006 were increased to offset the reduction and it is anticipated that funding offers for 2006 / 2007 will also be

increased 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)

i) Lower Macleay Floodplain Management Study

Stage 4B and 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. Changes in personnel of the consultant have resulted in delays being experienced for this project.

It is proposed that, in 2006 / 2007, 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

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 2005 / 2006 budget to commence the flood modelling for

Drain. This provides for continuation of urgent maintenance of bank protection works on the Lower Macleay Floodplain

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.

Structures were identified that require repairs within the next five years with the cost of repairs estimated at \$2,050,000. 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 2006 / 2007 repair work on the floodgate structures at Schoolhouse Drain, Slaughterhouse Drain and McCabes Drain be undertaken.

Floodgate Restoration **\$225,000**

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 **\$45,000**

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

i) Macleay Voluntary Rural House Raising Audit

Following the flood in March 2001, a number of inquiries were received regarding the possibility of financial assistance

in raising dwellings in flood prone areas. In rural areas often the only viable option is to raise the actual dwelling to reduce the impacts of flooding on the dwelling.

Council has resolved to undertake some preliminary investigations in order to determine if the scheme is viable and what the cost implications would be. A preliminary audit would need to be undertaken to identify the number of houses that might benefit their susceptibility to flooding, and the costs / benefits involved. It is estimated that an amount of \$30,000 is required to undertake the field survey and inspection and cost / benefit assessment.

**Macleay Floodplain Voluntary Rural
House Raising Audit** **\$30,000**

4) New Works (2:1)

i) 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.

Whilst the number of dwellings that will be eligible for subsidy is unknown until after the audit has been undertaken, it is envisaged that a substantial number of properties will meet the criteria. It is estimated that there could be approximately 200 dwellings with a floor level lower than the 1 in 100 year flood level. However only 50% of these dwellings may be assessed as having a cost / benefit ratio that meets the guidelines.

On the basis that the audit will be completed prior to the offer of funding being received, it is proposed that Council lodge a submission for funding for the project. Such funding, sufficient to undertake the raising of up to four dwellings per year, being \$160,000.

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

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 \$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.

Project	Program Funding	Total funding	Council Contribution
Lower Macleay Floodplain Management Study Stage 4B and 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	\$225,000	\$75,000
Water Quality Monitoring	2:1	\$45,000	\$15,000
Voluntary Rural House Raising Audit	2:1	\$30,000	\$10,000
Voluntary Rural House Raising Project	2:1	\$160,000	Nil
Maintenance Flood Mitigation System	1:1	\$210,000	\$122,800
TOTAL		\$905,000	\$301,133

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 \$301,133, as its contribution, in the 2006 / 2007 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 2006 / 2007 Floodplain Management Program be approved for submission to the Department of Natural Resources.

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K J Finnie
DIRECTOR SHIRE SERVICES