

## Meeting Agenda

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# Central Floodplain Risk Management Committee

Meeting Date: Wednesday, 21 April, 2021

**Location**: Council Chambers, City Administrative Centre, Bridge Road, Nowra

**Time**: 4.00pm

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### **Agenda**

1.	Apologies		
2.	Confirmation of Minutes		
	<ul> <li>Central</li> </ul>	Floodplain Risk Management Committee - 25 November 2020	1
3.	Declarations of Interest		
4.	Presentations		
	CFM21.1	Floodplain Risk Management Presentation	
		Department of Planning, Industry & Environment	
	CFM21.2	Draft Currarong Creek Flood Study Presentation	
		Water Modelling Solutions	
5.	Reports		
	CFM21.3	Draft Currarong Creek Flood Study	7
	CFM21.4	Update on the St Georges Basin Floodplain Risk Management Study & Plan	.11
6.	General Business		



#### Membership

Clr Proudfoot (Chairperson) All Councillors CEO or nominee

Community representatives:-Richard Carpenter David Tarbert Zachariah Cleary Peter Foggitt Janice Natt

Government Agency representatives:-Local Aboriginal Land Council NSW State Emergency Services Department of Planning, Environment and Industry (DPIE) Other relevant Government Agency representatives

Quorum – Three (3) provided that a minimum of the Chairperson and two community representatives are present.

#### Purpose:

The principal objective of the Central Floodplain Risk Management Committee is to assist Shoalhaven City Council in the development and implementation of one or more floodplain risk management plans for the central area of the Council. This will need to be in accordance with the NSW Floodplain Development Manual. The central area applies to the following catchments:

- St Georges Basin (includes Sussex inlet);
- Jervis Bay;
- Currambene Creek;
- Moona Moona Creek;
- Currarong Creek;
- Berrara Creek
- Callala Creek; and
- Swan Lake

#### Role:

- 1. To assist the Council in the development and implementation of the floodplain management plan for the areas listed under 'Purpose' (see above);
- 2. To assist the Council monitoring and assessing the effectiveness of the management plans during and after its implementation; and
- 3. To assist the Council providing input into known flood behaviour as part of the flood study.



## MINUTES OF THE CENTRAL FLOODPLAIN RISK MANAGEMENT COMMITTEE

Meeting Date: Wednesday, 25 November 2020

**Location**: City Administrative Centre, Bridge Road, Nowra

**Time**: 4.00pm

The following members were present:

Clr John Wells Clr Amanda Findley Clr Patricia White – Chairperson

North (remotely) Central (remotely) Southern (remotely)

John GouldZachariah ClearyMichael BrungsDavid BrawnPeter FoggittAdam CrossleyMark KiellyJanis NattHolly GuntonPlaxy RoweDavid Laidlaw

Len White Phil Guy

Stephen Dunshea - Chief Executive Officer (remotely) Kelie Clarke - Environmental Services Manager

#### Also present:

John Murtagh – Department of Planning, Industry and Environment (remotely)
John Bucinskas – Department of Planning, Industry and Environment (remotely)
Joanne Allen – Nowra Commander SES (remotely)
William McInnes – Flood Planning Ulladulla SES (remotely)
Phil Costello – Director City Development
Mark Stone – Floodplain & Stormwater Quality Engineer
Tanvir Ahmed – Floodplain Engineer
Colin Wood – Manager Building & Compliance (remotely) from 4.25pm

#### **Election of Chairperson**

**RESOLVED** (Clr Wells / Michael Brungs)

That Councillor White be appointed as the Acting Chairperson for this meeting..

**CARRIED** 

#### **Apologies / Leave of Absence**

Apologies were received from Tracy Provest and Rod Feltham (SES representatives).



#### **Declarations of Interest**

Nil

CIr Findley welcomed Committee members and gave an Acknowledgement to Country.

#### **PRESENTATIONS**

#### NFM20.1 Terms of Reference

HPERM Ref: D20/519228

Kelie Clarke, Environmental Services Manager, summarised the main points of the Terms of Reference (http://doc.intranet/displaydoc.aspx?record=POL20/59).

CIr Wells proposed that the Committee recommend to Council that Currarong Creek be added as an area to the Terms of Reference for the North Floodplain Risk Management Committee. Following the meeting it was found that Currarong Creek is already included in the Central FRMC Terms of Reference.

#### **RESOLVED** (Clr Wells / Plaxy Rowe)

That the Committees receive the Terms of Reference for information.

**CARRIED** 

## NFM20.2 Overview of NSW Floodplain Development Manual and Purpose of Floodplain Risk Management Committees

HPERM Ref: D20/519208

John Murtagh, Senior Natural Resource Officer, Biodiversity and Conservation, Department of Planning, Industry and Environment (DPIE), provided an overview presentation (attached to these Minutes).

SCC has 13 adopted Floodplain Risk Management (FRM) plans which identify risk and management options across the City. Other ongoing elements in the FRM program are the:

- Lower Shoalhaven River Flood Mitigation Maintenance (North)
- Lower Shoalhaven River FRMP Review (North)
- Currarong Creek Flood Study (North)
- St Georges Basin FRMP Review (Central)
- Millards Creek Flood Study (South)

John set out the purpose of the Floodplain Development Manual and explained the chance and probability measures used to determine flood risk.

He described the function of the Committees in overseeing the FRM process. This process starts with data leading to an individual Flood Study, which determines whether the data discloses any significiant risk that requires management. If so, a Floodplain Risk Management Study is conducted. Once all available measures have been analysed, the selection is made of those that Council should include in its FRM Plan. As Council continues to implement the plan, circumstances will change, and consequently the flood risk changes; thus the process resumes from the beginning.

The Committees are important as a forum to contribute ideas, professional expertise, experience, and local knowledge. Its role is advisory – Council makes the decisions, and adopts and implements the Plan. Committees meet on an as needs basis, typically at decision points in the process such as:

input to or review the consultant brief.



- review model results.
- advise on options to be assessed
- review draft reports and plans
- · recommend exhibition
- recommend Adoption by Council

The Committee Handbook is available at:

https://doc.shoalhaven.nsw.gov.au/DisplayDoc.aspx?record=D19/336266

Technical working groups may be convened with membership based on expertise.

#### **RESOLVED** (By consent)

That the Committees receive the Overview of NSW Floodplain Development Manual and Purpose of Floodplain Risk Management Committees for information.

**CARRIED** 

#### **REPORTS**

#### NFM20.3 Floodplain Management Program and Projects Update

HPERM Ref: D20/505916

Tanvir Ahmed – Floodplain Engineer, presented a summary of Council's Floodplain Management Program.

Flood Study and Flood Risk Management Study and Plan

Two Flood Studies (Millards Creek & Currarong Creek) and two Floodplain Risk Management Studies and Plans (Lower Shoalhaven River & St Georges Basin) are in progress – see below.

Shoalhaven Flood Alert Network

Council currently manages 21 water level gauges and 46 rainfall gauges, feeding data to BoM. Some locations also have gauges owned by Manly Hydraulics Laboratory (MHL) and used by Council.

SMART Management Water Program

The Illawarra Shoalhaven Joint Organisation (ISJO) grant-funded research project in collaboration with the University of Wollongong (UoW) to utilise smart technology to better manage water quality, flood mitigation and entrance management is ongoing.

Management of Flood Mitigation Assets

Council manages levees (23km), flood mitigation drains (48.3km, 50 channels) and flood gates to control flood and tidal inundation.

Shoalhaven River Flood Levee Rehabilitation Project

Council conducted a levee audit after the August 2015 flood event. The identified flood damage has been repaired, funded by the NDRRA and Council.

A visual audit of the Riverview Road and Terara levee following the February and August 2020 flood events, recently undertaken by Public Works, identified some damage. Council will apply for NDRRA funding to undertake repairs.

Some flood damage has also been identified on a levee on Comerong Island. Council will apply for NDRRA funding to undertake repairs. Council is also seeking to engage Public Works to audit all other levees in the Lower Shoalhaven River.

Development Applications, Planning Proposal and Council Projects

Council's Flood Engineers provide professional advice on DAs, planning proposals and Council



infrastructure projects in flood prone land. Within the 2020/21 financial year over 150 application referrals have been completed.

#### Flood Certificates

Council issues flood certificates (site specific detailed flood information) in 12 catchments within the LGA. This information assists with development applications and planning proposals in flood prone land.

Kelie Clarke, Environmental Services Manager, advised that the automation of flood certificates has been a new inhouse project which now offers better support for applicants.

Clr Wells asked what measures Council has to resolve drain issues. Mark Stone – Floodplain & Stormwater Quality Engineer advised that they are inspected and maintained by Works & Services, and that the flood levee network is audited after a flood event, to identify and repair any damage. He confirmed the levees were not breached during the last flood event, despite some damage.

John Murtagh sought clarification on the Nowra Bridge and Terara flood gauges not appearing on the BoM website. Staff advised these had been present when checked recently but will confirm.

#### **RESOLVED** (By consent)

That the Committees receive the Floodplain Management Program and Projects report for information.

**CARRIED** 

## NFM20.4 Lower Shoalhaven River Floodplain Risk Management Study and Plan Update

HPERM Ref: D20/488282

Mark Stone – Floodplain & Stormwater Quality Engineer presented the FRM Studies and Plans for the Lower Shoalhaven River and St Georges Basin together. (Presentation attached to these Minutes.)

The consultant, Cardno, was engaged in 2018. To date the initial community consultation and data analysis have been completed; Shoalhaven Heads Entrance modelling and comparison of flood frequency analysis (FFA) with Australian Rainfall & Runoff (ARR) are ongoing.

Issues are the compex nature of the catchment, and that there are not many rainfall or flow gauges in these catchments. Another issue is the consultant's sometimes unsatisfactory progress.

The change in Study type from FMRS&P to Flood Study has been extended to November 2021.

The agreement with Cardno is an operational matter. The Committee were advised that Council is pursuing provisions to cover any costs if the deadline is exceeded. It is acknowledged that some delays caused by the bushfies and COVID-19 are beyond all partners' control.

The Draft Flood Study, due April/May 2021, may not be ready in time for the next FRM Committee meeting. Cardno will be asked to give a presentation.

It was confirmed that, in relation to St Georges Basin, the study will take into consideration scenarios of ocean inundation. The CMP will use information from the flood study on coastal inundation in the Sussex Inlet / St Georges Basin area.

John Murtagh advised that many factors determine how much penetration will occur into a tidal inlet, such as swell. DPIE actively consider these factors when undertaking flood studies in tidal areas.

Clr White noted the need to educate the community on the possibility of flooding from the sea, in the absence of rain.

Len White asked whether impact of e.g. wombat activity is considered. Staff confirmed that surveys are conducted on the surface for erosion impacts. The roughness factor is considered that affects speed of water flow. However, flood studies do not look at erosion, but are based on the current



best capture of topography at the time.

John Gould noted the community will want to know the currency of the data, and how long it will it remain relevant. It was clarified that outcomes remain current until there is a significant change to the catchment such as development, topography, or design standards. Generally it is reviewed every 5-10 years.

#### **RESOLVED** (By consent)

That the Committees receive the Lower Shoalhaven River Floodplain Risk Management Study and Plan report for information.

**CARRIED** 

### NFM20.5 St Georges Basin Floodplain Risk Management Study and Plan Update

HPERM Ref: D20/519480

This item was addressed in conjunction with NFM20.4 - Lower Shoalhaven River Floodplain Risk Management Study and Plan Update.

#### RESOLVED (CIr Wells / John Gould)

That:

- 1. The Committees receive the St Georges Basin Floodplain Risk Management Study and Plan report for information.
- The Northern and Central Floodplain Risk Management Committees make a determination at their next meeting in the new year as to whether the Lower Shoalhaven River and St Georges Basin Floodplain Risk Management Study & Plan (FRMS&P) are completed in full or whether a Flood Study only is completed.

**CARRIED** 

#### NFM20.6 Currarong Creek Flood Study Update

HPERM Ref: D20/519493

Tanvir Ahmed presented the Flood Studies for Currarong Creek and Millards Creek together. (Presentation attached to these Minutes.)

The consultant, Water Modelling Solutions (WMS), was engaged 2018. In Council's comments have been provided and awaiting feedback. Once completed, the Flood Studies will be presented to the Southern Committee in February, then placed on public exhibition. The draft may not be ready this year for review over the seasonal break. The final report is due April/May 2021.

Funding for both studies was \$100,000.

#### **RESOLVED** (By consent)

That the Committee receive the Currarong Creek Flood Study report for information.

**CARRIED** 



#### NFM20.7 Millards Creek Flood Study Update

HPERM Ref: D20/519465

This item was addressed in conjunction with NFM20.6 - Currarong Creek Flood Study Update.

#### **RESOLVED** (By consent)

That the Committee receive the Millards Creek Flood Study report for information. CARRIED

#### **GENERAL BUSINESS**

A package of information and weblinks will be circulated to members.

John Murtagh offered to conduct a "Floodplain 101" session prior to the next meeting.

There being no further business, the meeting concluded, the time being 5.50pm.

Clr Patricia White ACTING CHAIRPERSON



#### CFM21.3 Draft Currarong Creek Flood Study

**HPERM Ref:** D21/139378

**Department:** Environmental Services

**Approver:** Phil Costello, Director - City Development

#### **Reason for Report**

To provide the Central Floodplain Risk Management Committee (FRMC) with an update on the Currarong Creek Flood Study and seek endorsement from the FRMC to commence community engagement of the Draft Flood Study report.

#### Recommendation (Item to be determined under delegated authority)

The Committee receive the draft Currarong Creek Flood Study report for information and endorse the commencement of community engagement for the Draft Flood Study.

#### **Options**

1. The Committee receive the draft Currarong Creek Flood Study report for information and endorse the commencement of community engagement for the Draft Flood Study.

Implications: Nil.

2. The Committee could choose to provide an alternative recommendation for consideration by Council.

<u>Implications</u>: This option could delay the progress of the project, result in additional project costs and/or prevent the completion of a Flood Study within the project timeframe.

#### **Background**

The Currarong Creek catchment and associated tributaries are located in Currarong, and discharges to the Tasman Sea.

The objective of this study is to improve understanding of flood behaviour and impacts, and better inform management of flood risk in the study area in consideration of the available information. The study will also provide a sound technical basis for any further studies if this is found to be required. The scope of this flood study includes investigating both riverine and overland flooding within the Currarong Creek catchment.

The need for a Flood Study for the Currarong Creek catchment was identified as part of Council's floodplain programme. The study outputs will inform decision making for investing in the floodplain, managing flood risk through prevention, preparedness, response and recovery activities, and informing and educating the community on flood risk and response to floods.

#### **Current Status of the Project**

The draft Currarong Creek Flood Study report has been completed by Water Modelling Solutions (WMS). A link will be provided to the draft Flood Study report with the FRMC meeting agenda.



WMS will provide a presentation to the Central FRMC on the Currarong Creek Flood Study development and outcomes.

The draft Currarong Creek Flood Study report has been reviewed by Council Flood Engineers and the NSW Department of Planning, Industry and Environment (DPIE). The draft Flood Study report has been provided to the NSW State Emergency Service (SES) for review. Whilst no feedback has currently been received from the NSW SES, this is still welcome and will be incorporated into the final Flood Study report.

The next step in the project programme is community engagement for the Draft Flood Study report.

#### **Overland Flooding Policy and Development Control Plan Amendments**

The draft Currarong Creek Flood Study includes modelling for both riverine flooding along Currarong Creek and its main tributaries and overland flooding where floodwaters will be concentrated along roads and within natural depressions, including through existing urban areas. Overland flooding has occurred during historic rainfall events over the Currarong Creek catchment. The modelling of riverine and overland flooding is discussed in the draft Currarong Creek Flood Study report in more detail.

The draft Currarong Creek Flood Study identifies the main locations in which overland flooding will occur in the catchment.

Council does not currently have a policy with regard to flood specific development controls that apply to locations mapped with overland flooding.

It is noted that the Millards Creek Flood Study which is in progress has also investigated both riverine and overland flooding. The Lake Wollumboola Flood Study completed in 2015 also investigated overland flooding within Culburra Beach. Future flood studies are also likely to investigate overland flooding in other Shoalhaven communities.

The inclusion of overland flooding in the draft Currarong Creek Flood Study provides an opportunity for Council to develop a policy on overland flooding and associated minor amendments to *Development Control Plan (DCP) Chapter G9: Development on Flood Prone Land*, to provide appropriate flood specific development controls for new and redeveloped buildings located in areas that have been identified as comprising overland flooding.

The following is noted with regard to a potential overland flooding policy.

- Would not be a prohibition on development controls only for new development and replacement buildings.
- Would work in the same way as the existing controls for riverine flooding by raising floor levels – provides protection to the house and contents.
- Would not be applied retrospectively to existing development in the catchment.

DCP Chapter G9 identifies flood specific development controls for the Shoalhaven LGA. This includes the provision of a 0.5m freeboard above the 1% AEP peak flood level to determine the associated Flood Planning Level for habitable floor levels. This freeboard is commonly used for riverine flooding throughout NSW.

Due to the shallower flood depth and generally lower flood hazard as defined using a velocity x depth product in areas mapped as having overland flooding, it is considered that a lower freeboard of 0.3m would be appropriate in these areas to determine the Flood Planning Level. Using a 0.3m freeboard to determine the Flood Planning Level (used to define minimum habitable floor levels) for areas with overland flooding has the benefits of reducing flood damages to new and redeveloped buildings in these areas, but also does not burden property owners with alternative and potentially more expensive construction techniques.



If Council adopts an overland flooding policy, it would be proposed to undertake some minor housekeeping amendments to *DCP Chapter G9: Development on Flood Prone Land.* This would include an additional section for Currarong Creek in the Site Specific Flood Related Development Controls in Section 5.4 of this DCP Chapter. The Currarong Creek site specific flood related development controls could include the following:

- The current provisions in DCP Chapter G9 would apply to all areas mapped as Riverine Flood Planning Area in the Currarong Creek catchment.
- A reduced freeboard of 0.3m could be applied to the 1% AEP event peak flood level to determine the Flood Planning Level in areas mapped as Overland Flood Planning Area. With the exception of the reduced freeboard, all current provisions in DCP Chapter G9 could apply to Overland Flood Planning Areas.

The housekeeping amendments for DCP Chapter G9 could also include Site Specific Flood Related Development Controls for the Millards Creek catchment and other minor housekeeping amendments as required. These DCP Chapter G9 amendments would undergo public exhibition and then be reported to Councils Development & Environment Committee for consideration following the adoption of the Currarong Creek and Millards Creek Flood Studies.

No potential amendments to DCP Chapter G9 would undergo community engagement at the same time as the draft Currarong Creek Flood Study. It is however important that the Central FRMC are aware of the overland flooding component of the draft Flood Study so feedback can be provided on this as required. Council is requesting any feedback from the FRMC on a potential overland flooding policy and DCP amendments for the Currarong Creek catchment before this is developed.

#### **Community Engagement**

The first round of community consultation was undertaken between December 2018 and January 2019. A project website was published by Council's Get Involve Page to inform the community about the Flood Study. This page was designed to get feedback from community about their flooding experience within the catchment.

Council is seeking endorsement from the Central FRMC to undertake community exhibition of the draft Currarong Creek Flood Study. The community exhibition phase has been scheduled from the 3 to 28 May 2021 (pending endorsement from the FRMC). The following forms of community engagement are proposed.

- Media release to inform the community of the community engagement period.
- Mail out to all property owners and residents within the study area of the Flood Study.
- An online questionnaire will be available through the projects Get Involved website to seek feedback from the community.
- Flood engineers from the consultant undertaking the study, along with engineers from Council and DPIE will be available at a drop-in session to provide further information and discussion on the draft Flood Study. The NSW SES have been invited to attend this drop in session as well.

#### **Financial Implications**

The Currarong Creek Flood Study is 2/3 funded by DPIE and 1/3 funded by Council. There have been no increases in project cost beyond the original approved funding. Any potential delays to the community engagement period could however prevent the project being completed and adopted by Council prior to the end of the DPIE milestone funding term and this could result in increased project costs.



#### **Policy Implications**

Council does not currently have a policy with regard to flood specific development controls that apply to locations mapped with overland flooding. The inclusion of overland flooding in the draft Currarong Creek Flood Study provides an opportunity for Council to develop a policy on overland flooding and associated minor amendments to *Development Control Plan (DCP) Chapter G9: Development on Flood Prone Land*, to provide appropriate flood specific development controls for new and redeveloped buildings located in areas that have been identified as comprising overland flooding.



## CFM21.4 Update on the St Georges Basin Floodplain Risk Management Study & Plan

**HPERM Ref:** D21/141237

**Department:** Environmental Services

**Approver:** Phil Costello, Director - City Development

#### **Reason for Report**

To provide Council and the Central Floodplain Risk Management Committee (FRMC) with an update on the review of the Floodplain Risk Management Study & Plan (FRMS&P) for the St Georges Basin catchment.

#### Recommendation (Item to be determined under delegated authority)

The Committee receive the report for information and endorse the continuation of this flood investigation through to the completion of the FRMS&P.

#### **Options**

1. The Committee receive the report for information and endorse the continuation of this flood investigation through to the completion of the FRMS&P.

Implications: Nil.

2. The Committee could choose to provide an alternative recommendation for consideration by Council.

<u>Implications</u>: This option could delay the progress of the project, result in additional project costs and/or prevent the completion of a Flood Study and FRMS&P within the project timeframe.

#### **Background**

The study area comprises of St Georges Basin itself, the Estuary area, Sussex Inlet and upstream residential areas along the tributary creeks. The entire catchment covers an area of approximately 358 square kilometres with approximately 10% of the catchment area covered by the Basin itself. The catchment area of the Basin contains a number of creeks including Pats Creek, Home Creek, Wandandian Creek, Tomerong/Cockrow Creek, Cow Creek, Tullarwalla Creek and Worrowing Creek. The Basin connects to the ocean through the Sussex Inlet Channel and there are no recorded periods of closure of the Basin's entrance.

The objective of this study is to improve understanding of flood behaviour and impacts, and better inform management of flood risk in the study area in consideration of the available information. The study will also provide a sound technical basis for any further studies.

The previous Floodplain Risk Management Study and Plan (FRMS&P) for the St Georges Basin was completed in 2013. A review was recommended as per the NSW Floodplain Development Manual. It is noted that the Australian Rainfall and Runoff (ARR) Guidelines were updated in 2019 and this resulted in a number of changes to input parameters for design event flood modelling such as Bureau of Meteorology (BoM) design rainfall depths and ARR rainfall losses and design temporal patterns.



The study outputs will inform decision making for investing in the floodplain, managing flood risk through prevention, preparedness, response and recovery activities, and informing and educating the community on flood risk and response to floods.

Funding was approved by DPIE for this study in October 2017 and Cardno were engaged to prepare the St Georges Basin FRMS&P in June 2018.

#### **Current Status of the Project**

The data collection, model development and calibration phases of the investigation have been completed. The hydrological and hydraulic models have been calibrated against a number of historic flood events and found to provide a reasonable overall calibration.

The design event modelling is underway and will be completed for the full range of design flood events from 20% Annual Exceedance Probability (AEP) to the Probable Maximum Flood (PMF).

The outcomes from the hydrological and hydraulic modelling are currently being peer reviewed by an industry expert. At the time of preparing this report, the findings from the peer review were expected to be issued to Council within the next couple of weeks. Following the completion of the peer review, the flood study tasks can continue through to the completion of a draft St Georges Basin Flood Study report. The findings from the draft Flood Study report will be presented to a future FRMC meeting to seek endorsement to undertake community consultation and public exhibition of the Flood Study report. At this time input will also be requested for options to be considered in the FRMS&P.

The project completion date is 20 November 2021. The complex nature of the St Georges Basin catchment has resulted in some programme delays associated with completing the model calibration however achieving a robust model calibration was critical to ensure confidence in the model results.

At the FRMC meeting in October 2020, it was identified that Council did not believe that a FRMS&P could be completed in the project timeline and as a result it was suggested that consideration should be given to completing this investigation at the end of the Flood Study phase. It is expected that the Flood Study phase and part of the FRMS&P phase will be completed by the project completion date. In addition to this, the aspects of the FRMS&P that are not completed by the project completion date are expected to be able to be funded through a capital budget bid (if successful) and Councils flood program budget. It is therefore recommended that this project continues through to the completion of the FRMS&P.

It is noted that Cardno have continued to work on the Flood Study tasks in parallel with the peer review. Council staff have also undertaken additional project tasks such as preparing a floor level database for the St Georges Basin floodplain that can be used for the flood damages assessment. These tasks will assist to reduce the timeframe required to complete the Flood Study when the peer review has been completed. Cardno have estimated that it will take approximately 3 to 4 months to complete the draft Flood Study report following the completion of the peer review.

#### **Community Engagement**

The first round of community consultation was undertaken between November 2018 and February 2019. A project website was published by Council to inform the community about this project.

Following the completion of the draft St Georges Basin Flood Study, the outcomes will be presented at a FRMC meeting to seek endorsement to commence community consultation and public exhibition.



#### **Financial Implications**

The St Georges Basin FRMS&P is 2/3 funded by DPIE and 1/3 funded by Council. This funding has been approved under the NSW State Government 'Floodplain Management Program' on a 2:1 basis. Council's matching 1/3 contribution comes from the existing general Floodplain Management Program budget. There have been no increases in project cost beyond the original approved funding.

The aspects of the FRMS&P that are not completed by the project completion date are expected to be able to be funded through a capital budget bid (if successful) and Councils flood program budget.