



# **Attachment 1 to Item 3.1.1.**

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Floodplain Management Sub Committee  
Business Papers 28 June 2023

Date of meeting: 26 March 2024  
Location: Council Chambers  
Time: 4:00pm





# **Floodplain Management Sub-Committee**

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Date of meeting: 28 June 2023  
Location: Council Administration Building  
Time: 3:00 PM

**BUSINESS PAPER**



**FLOODPLAIN SUB-COMMITTEE**

**Table of Contents**

**Meeting Date: 28 June 2023**

**Table of Contents**

**1. AGENDA..... 5**

    1.1. Welcome ..... 5

    1.2. Apologies ..... 5

    1.3. Declaration of Interests ..... 5

**3. REPORTS FOR DETERMINATION ..... 6**

    3.1.1. FPSC - Election of Chairperson - (161821, 124414, 95498) ..... 6

    3.1.2. FPSC - Terms of Reference and Meetings - (161821, 124414, 95498) ..... 7

    3.1.3. FPSC - Floodplain Risk Management Projects - (161821, 124414, 95498)..... 12

    3.1.4. FPSC - Combined Rivers Project Community Survey - (161821, 124414, 95498) ..... 23

    3.2. Confidential Reports ..... 30

        Nil Reports..... 30

**4. GENERAL BUSINESS ..... 31**

**FLOODPLAIN SUB-COMMITTEE**

**Table of Contents**

**Meeting Date: 28 June 2023**

**FLOODPLAIN SUB-COMMITTEE**

**AGENDA**

**Meeting Date: 28 June 2023**

**1. AGENDA**

**1.1. Welcome**

**1.2. Apologies**

**1.3. Declaration of Interests**

**FLOODPLAIN SUB-COMMITTEE**  
**3. REPORTS FOR DETERMINATION**  
**Meeting Date: 28 June 2023**

**3. REPORTS FOR DETERMINATION**

**3.1.1. FPSC - Election of Chairperson - (161821, 124414, 95498)**

**Directorate:** City Planning

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**PURPOSE OF THE REPORT**

The purpose of this report is to outline the process for the election of a Chairperson and Deputy Chairperson of the Floodplain Management Sub-Committee.

**EXECUTIVE SUMMARY**

Under the Terms of Reference for the Floodplain Management Sub-Committee, it is a requirement that at the first meeting of the Sub-Committee, that a Chairperson and Deputy Chairperson be appointed from the members of the Sub-Committee.

The Sub-Committee members term is for the period to September 2024. As such, it is proposed that the Chairperson and Deputy Chairperson be appointed for the period June 2023 to September 2024.

**OFFICER'S RECOMMENDATION**

That a Chairperson and Deputy Chairperson of the Floodplain Management Sub-Committee for the period from June 2023 to September 2024 be determined.

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**BACKGROUND**

Clauses 5(b) and 5(c) of the Terms of Reference for the Floodplain Management Sub-Committee endorsed by Council on 14 March 2023 provides for the appointment of the Chairperson and Deputy Chairperson, and states:

*"(b) The Sub-Committee shall, at its first meeting following appointment, elect one of its Members from those appointed under Clause 5(a)(i) to be the Chairperson of the Sub-Committee, and one of its members appointed under the same clause to be Deputy Chairperson, who shall act in the absence of the Chairperson.*

*(c) No staff member of Hawkesbury City Council shall be elected as Chairperson or Deputy Chairperson of the Sub-Committee."*

Clause 4 of the Terms of Reference specifies that *"the Sub-committee members' term shall be the time period required to September 2024"*.

**DISCUSSION**

This meeting of the Floodplain Management Sub-Committee will be its first meeting following appointment of members. In accordance with Clause 5(b) of the Terms of Reference for the Floodplain Management Sub-Committee, the nomination and appointment of a Chairperson and Deputy Chairperson for the period June 2023 to September 2024 by appointed Sub-Committee members is to be carried out at this meeting.

**ATTACHMENTS**

There are no supporting documents for this report.

**oooO END OF REPORT Oooo**



**FLOODPLAIN SUB-COMMITTEE**  
**3. REPORTS FOR DETERMINATION**  
**Meeting Date: 28 June 2023**

**3.1.2. FPSC - Terms of Reference and Meetings - (161821, 124414, 95498)**

**Directorate:** City Planning

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**PURPOSE OF THE REPORT**

The purpose of this report is to advise the Floodplain Management Sub-Committee of:

- the Terms of Reference for the operation of the Sub-Committee; and
- the likely meeting frequency and dates for the term June 2023 to September 2024.

**EXECUTIVE SUMMARY**

The Terms of Reference for the Floodplain Risk Management Sub-Committee were endorsed at Council's Ordinary Meeting on 14 March 2023, and specifies the role of the sub-committee and the procedural matters to be followed. A copy of the Terms of Reference is provided as Attachment 1 to this report.

In accordance with the Terms of Reference, meetings of the Sub-Committee are to be held at least three times per year, and no meeting shall be held unless three clear days' notice has been given to all members.

It is proposed that meetings will occur when necessary and, when convened, will be held on the fourth (4) Wednesday of the Month, between 3:00pm and 5:00pm.

**OFFICER'S RECOMMENDATION**

That the Floodplain Management Sub-Committee receive and note:

1. The Terms of Reference for the Floodplain Management Sub-Committee, and
  2. The likely meeting dates and frequency for the period from June 2023 to September 2024, as outlined in the report.
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**BACKGROUND**

Following the cumulative impacts of flood events in 2021 and 2022 and the importance of floodplain management in the Hawkesbury, a number of Notices of Motion were presented to Council's Ordinary Meetings proposing the creation of a floodplain management working group or sub-committee under the Disaster and Emergency Committee.

The rationale for the creation of a working group or sub-committee is two-fold:

1. In accordance with Section 733 of the Local Government Act 1993 Council does not incur any liability for advice furnished in good faith in respect to the likelihood of any land being flooded or the nature or extent of any such flooding. The Act further provides that Council is, unless the contrary is proved, taken to have acted in good faith for the purposes of Section 733 if the advice was provided, or a thing was done or omitted to be done substantially in accordance with the principles contained in the Floodplain Development Manual (2005).

**FLOODPLAIN SUB-COMMITTEE**  
**3. REPORTS FOR DETERMINATION**  
**Meeting Date: 28 June 2023**

The Floodplain Development Manual, prepared in accordance with the NSW Government's Flood Prone Land Policy, guides councils in the development and implementation of detailed local floodplain risk management plans to manage the consequences of flooding on the occupation of the floodplain. It provides the process to be undertaken in the preparation of flood risk management studies and plan. In this regard the Manual requires the establishment of a committee that includes representation from the local community and other public/government agencies.

2. Engagement with the community will contribute to the acceptance and success of a floodplain risk management plan. This can be facilitated through community involvement in the process of the preparation of the Plan through representation on a committee or working group.

Following a Notice of Motion raised at the Ordinary Meeting on 13 September 2022, Council resolved:

*"That Council establish a dedicated Floodplain Management Committee or sub-committee of the Disaster and Emergency Committee to address flood-related issues, and*

1. *To incorporate the existing resolutions which established working groups to look at flood-related issues;*
2. *Invite expressions of interest for representatives to participate from flood-affected areas including MacDonal Valley/St Albans, Upper Colo, Windsor, Pitt Town, South Windsor, McGraths Hill, Richmond Lowlands, North Richmond, Lower Portland, Cumberland Reach and any other areas suffering the impacts of floods;*
3. *Include relevant agencies from State Government and Emergency Services as per the Floodplain Management Manual."*

At the Ordinary Meeting on 14 March 2023 Council endorsed the Terms of Reference for the Floodplain Management Sub-Committee. A copy of the Terms of Reference is provided as Attachment 1 to this report.

## **DISCUSSION**

The Terms of Reference provides the requirements for the operation of the Sub-Committee. In particular, it provides the objectives, roles and authorities, structure and membership, and the term of the Sub-Committee, as well as procedural matters and the requirements for the appointment and election of committee members.

The role of the Sub-Committee is *"to recommend to the Disaster and Emergency Management Committee the review, development and adoption of one or more Floodplain Risk Management Studies and Floodplain Risk Management Plans."*

Clause 7(a) of the Terms of Reference requires the Floodplain Management Sub-Committee to hold meetings at least three times per year. It is proposed that meetings will occur when necessary and, when convened, will be held on the fourth (4) Wednesday of the Month, between 3:00pm and 5:00pm.

In addition, Clause 7(d) requires Sub-Committee members to receive three clear days' notice of a meeting being held. In accordance with this Clause, Sub-Committee members will receive a minimum of three whole days' notice prior to any meeting.

Meetings will be held when projects are at a stage where the Sub-Committee's input is required as identified in the previous report titled "Item 3 FPSC - Floodplain Risk Management Projects".

## **ATTACHMENTS**

**AT – 1** Terms of Reference for the Floodplain Management Sub-Committee.

**FLOODPLAIN SUB-COMMITTEE**  
**3. REPORTS FOR DETERMINATION**  
**Meeting Date: 28 June 2023**

**AT1 - Terms of Reference for Floodplain Management Sub-Committee**

**1. Name**

The Floodplain Management Sub-Committee, hereafter referred to as the 'Sub-Committee'.

**2. Objectives**

- (a) To assist Hawkesbury City Council in the review, development and implementation of one or more Floodplain Risk Management Studies and Floodplain Risk Management Plans for the Hawkesbury region in accordance with the NSW Floodplain Development Manual.
- (b) To assist the Disaster and Emergency Management Committee in monitoring and assessing the effectiveness of these Management Plans during and after their implementation.
- (c) To inform the education and public awareness activities led by the Disaster and Emergency Management Committee to address matters associated with floodplain management.
- (d) To assist the Council by providing input into known flood behaviour as part of the Flood Studies commissioned by Council.
- (e) To facilitate broader community consultation and participation in Floodplain Risk Management initiatives through informing and liaising with member community groups.

**3. Role and Authorities**

- (a) The Sub-Committee shall have the following authority:
  - (i) to recommend to the Disaster and Emergency Management Committee the review, development and adoption of one or more Floodplain Risk Management Studies and Floodplain Risk Management Plans.
- (b) The Council retains the responsibility for all budgetary considerations.
- (c) The General Manager (or his/her delegate) retains, and shall be entirely responsible for the appointment and dismissal of consultants.
- (d) The General Manager (or his/her delegate) retains all responsibility for the direction of any staff member.

**4. Term**

The Sub-Committee members' term shall be the time period required to September 2024

**5. Structure and Membership**

- (a) The structure and membership of the Sub-Committee shall be as follows, and all the undermentioned appointments will have voting rights:
  - (i) Two Councillors of the Hawkesbury City Council
  - (ii) Two Council staff members appointed by the General Manager of Hawkesbury City Council

## FLOODPLAIN SUB-COMMITTEE

### 3. REPORTS FOR DETERMINATION

Meeting Date: 28 June 2023

- (iii) Four representatives from State Government and Emergency Services including New South Wales State Emergency Services (NSW SES), Infrastructure New South Wales, New South Wales Department of Planning and Environment and Recovery New South Wales
  - (iv) Seven community appointments that reside in a flood impacted area of the Hawkesbury and as such, have experience and knowledge of flooding in the Hawkesbury, following the calling of applications as detailed in Clause 6(b) of these Terms of Reference.
- (b) The Sub-Committee shall, at its first meeting following appointment, elect one of its members from those appointed under clause 5(a)(i) to be the Chairperson of the Sub-Committee, and one of its members appointed under the same clause to be Deputy Chairperson, who shall act in the absence of the Chairperson.
  - (c) No staff member of Hawkesbury City Council shall be elected as Chairperson or Deputy Chairperson of the Sub-Committee.
  - (d) Each member of the Sub-Committee that is entitled to vote shall only have one vote except that of the casting vote of the Chairperson in the case of equality of votes.
  - (e) The Sub-Committee may co-opt additional members from time to time, at its discretion, to provide specialist advice or assistance, but such co-opted members shall only serve on the Sub-Committee for the period of time required, and will not, whilst serving in the position of co-opted member, have any voting rights.

#### 6. Appointment and Election of Members

- (a) Two Councillors will be appointed to the Sub-Committee in accordance with practices and procedures of the Council.
- (b) The Council shall advertise inviting nominations from members of the community for membership of the Sub-Committee.
- (c) The Council shall select and appoint the community representatives to the Sub-Committee.
- (d) The Sub-Committee shall have the power to fill casual vacancies at its discretion.
- (e) Members of the Sub-Committee shall cease to hold office:
  - (i) if the Sub-Committee is dissolved by Council;
  - (ii) upon written resignation or death;
  - (iii) if absent without prior approval of the Sub-Committee for three consecutive meetings; or
  - (iv) if the Council by resolution determines that the member has breached Hawkesbury City Council's Code of Conduct (as it is in force from time to time).
- (f) For the purposes of sub-clause 6(e)(iv), the Code of Conduct is to be taken to apply to community and representative members as referred to in clause 5(a) in the same way as the Code of Conduct applies to Councillors.

**FLOODPLAIN SUB-COMMITTEE**  
**3. REPORTS FOR DETERMINATION**  
**Meeting Date: 28 June 2023**

**7. Procedures and General**

- (a) Ordinary meetings of the Sub-Committee shall be held no less than three times per year. Special meetings may be convened at the discretion of the Chairperson.
- (b) The Manager, Strategic Planning shall be the Executive Officer to the Sub-Committee, and will be responsible for preparation of specialist reports, and any and all correspondence associated with the Sub-Committee.
- (c) The Council will provide a Minute Clerk for the purpose of recording the Minutes of the Sub-Committee and for the distribution of Minutes following meetings of the Sub-Committee.
- (d) No meeting of the Sub-Committee shall be held unless three clear days notice has been given to all members.
- (e) The rules governing meetings and the procedures of the Sub-Committee shall, so far as they apply, be those covered by the Hawkesbury City Council's Code of Meeting Practice, as may be altered from time to time by resolution of the Council.
- (f) A quorum of the Sub-Committee shall be constituted by eight voting members.
- (g) Any members having a pecuniary interest in any matters being discussed by the Sub-Committee shall declare such interest at the meeting of the Sub-Committee and refrain from voting or discussion thereon.
- (h) The requirements applying to pecuniary interests for members as detailed in clause (7g) above shall apply equally to any other appointed or invited observers or co-opted members, and also to the Executive Officer/Secretary.
- (i) Any recommendations of the Sub-Committee shall, as far as adopted by the Council, be resolutions of the Council, provided that recommendations or reports of the Sub-Committee shall not have effect unless adopted by the Council.
- (j) It shall be competent for the Sub-Committee to appoint specific Sub-Committees comprised of members or non-members to exercise and carry out specific investigations for the Sub-Committee, and then to report back to the Sub-Committee. These appointed Sub-Committees may be dissolved by the Sub-Committee at any time.
- (k) Any appointed Sub-Committees have no power to make any decisions whatsoever on behalf of the Sub-Committee, and any recommendations of any Sub-Committee will only have effect once adopted by the Sub-Committee, or by the Council, as the case may be.

**LAST CLAUSE**

**oooO END OF REPORT Oooo**

**FLOODPLAIN SUB-COMMITTEE**  
**3. REPORTS FOR DETERMINATION**  
**Meeting Date: 28 June 2023**

**3.1.3. FPSC - Floodplain Risk Management Projects - (161821, 124414, 95498)**

**Directorate:** City Planning

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**PURPOSE OF THE REPORT**

The purpose of this report is to:

- outline the Floodplain Risk Management Studies and Plans currently being undertaken by Council; and
- outline the parameters in which the Sub-Committee contributes to the development of these Studies and Plans.

**EXECUTIVE SUMMARY**

Council currently has two grant funded Floodplain Risk Management projects that are underway:

1. Review of Hawkesbury Floodplain Risk Management Study and Plan 2012.

This Project will undertake a review of the Hawkesbury Floodplain Risk Management Study and Plan 2012 considering the Regional Flood Study for the Hawkesbury Nepean Valley by Infrastructure NSW and update the recommendations of the Plan.

2. Combined Macdonald River, Colo River, Webbs Creek and Greens Creek Flood Study Floodplain Risk Management Study and Plan.

This Project will investigate flooding and recommend flood risk management measures for the Colo River, Macdonald River, Webbs Creek, Greens Creek and their respective tributaries.

The primary objectives of the Floodplain Management Sub-Committee are to assist Council in the review, development and implementation of one or more Floodplain Risk Management Studies and Floodplain Risk Management Plans for the Hawkesbury region in accordance with the NSW Floodplain Development Manual, and to facilitate broader community consultation and participation in floodplain management initiatives.

The development of floodplain risk management studies and plans is generally undertaken in the following stages (where applicable):

- a) Data Collection and Review
- b) Flood Study
- c) Risk Assessment and Emergency Management
- d) Assessment of Preferred Management Options
- e) Draft Floodplain Risk Management Study and Plan and Exhibition
- f) Completion of Floodplain Risk Management Study and Plan
- g) Handover of all Deliverables

**FLOODPLAIN SUB-COMMITTEE**  
**3. REPORTS FOR DETERMINATION**  
**Meeting Date: 28 June 2023**

It is anticipated that input from the Sub-Committee will principally be required in relation to:

- any community consultation, including exhibition of a draft study and plan
- the determination of any floodplain management options following data collection, modelling and assessment of flood data
- the review of the draft Floodplain Risk Management Study and Plan prior to public exhibition; and
- the review of the final Floodplain Risk Management Study and Plan following public exhibition.

#### **OFFICER'S RECOMMENDATION**

That the Floodplain Risk Management Advisory Sub-Committee receive and note:

- the details of the Floodplain Risk Management Studies and Plans currently being undertaken by Council as provided in this report; and
- the matters in which the Sub-Committee will contribute to the development of these Studies and Plans as outlined in this report, being:
  - community consultation
  - the determination of floodplain management options
  - the review of draft Studies and Plans, prior to public exhibition; and
  - the review of the final Studies and Plans following public exhibition.

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#### **BACKGROUND**

##### **Current Floodplain Risk Management Projects**

As outlined in numerous strategies and documents, the Hawkesbury-Nepean Valley has one of the most significant flood risk exposures within Australia. The risks to both property and people resulting from flooding in the Valley have been recognised for some time.

In 2012 the Hawkesbury Floodplain Risk Management Study and Plan was prepared.

The Floodplain Risk Management Study was developed to enable government and the community to recognise more fully and respond more appropriately to the flood risk in the Hawkesbury Local Government Area. The Study reviewed known information in relation to flood risk within the study area and classified the floodplain according to its flood risks. Five flood risk bands comprising, very low, low, medium, high and extreme flood risks have been developed.

The principal outcome of the Study was the preparation of the Floodplain Risk Management Plan.

The Floodplain Risk Management Plan recommends strategies to manage the existing and future flood risks within the study area and includes actions in relation to community flood education and resilience, emergency management, flood risk advice, town planning, voluntary house raising and redevelopment, and updating of flood data.

Since the completion of the Hawkesbury Floodplain Risk Management Study and Plan 2012, Infrastructure NSW released the *Resilient Valley, Resilient Communities - the Hawkesbury-Nepean Valley Flood Risk Management Strategy* in May 2017. This Strategy provides nine key Outcomes with associated Actions to be undertaken, including the development of a regional land use and road

**FLOODPLAIN SUB-COMMITTEE**  
**3. REPORTS FOR DETERMINATION**  
**Meeting Date: 28 June 2023**

planning framework to assist in the future development of the locality in relation to flood risks and the capacity for regional flood evacuation.

One Outcome of the Strategy was the development of a regional flood study, including extensive mapping of flood data within the Hawkesbury-Nepean floodplain. The Hawkesbury-Nepean Valley Regional Flood Study 2019 is a technical document that describes the existing flood behaviour on the main Hawkesbury-Nepean River and the backwater flooding associated with this main river flooding.

The last regional flood studies for the Hawkesbury-Nepean Valley were prepared in 1996 and 1997, and since that time there have been some significant changes in the Valley as well as significant advances in the science of flood modelling. For these reasons, and to ensure accessible and consistent flood risk information is available in accordance with Outcome 4 of the Hawkesbury-Nepean Valley Flood Risk Management Strategy, the new Regional Flood Study for the Hawkesbury-Nepean Valley has been provided by Infrastructure NSW as a key deliverable of the Flood Strategy. The Hawkesbury-Nepean Valley Regional Flood Study Final Report was released in 2019.

The Infrastructure NSW Regional Flood Study represents the best available data and information with respect to flooding on a regional basis within the Hawkesbury-Nepean Valley. Infrastructure NSW is also currently undertaking further flood modelling work and is preparing a 2D Flood Model for the Hawkesbury-Nepean Valley which is expected to be released for public exhibition shortly.

Given that Infrastructure NSW's Flood Study provides the most contemporary data for flooding, and that the Hawkesbury Floodplain Risk Management Study and Plan 2012 is 10 years old, Council applied for and successfully obtained funding under the NSW Floodplain Management Grants Program to assist in a review of the Hawkesbury Floodplain Risk Management Study and Plan 2012.

At the same time, Council also applied for and was successful in obtaining funding to undertake a Flood Study and Flood Risk Management Study and Plan for the Macdonald and Colo Rivers, and Greens and Webbs Creeks.

#### **The Floodplain Management Sub-Committee**

As outlined in the previous Report titled "Item 2 FPSC - Terms of Reference and Meeting", the Floodplain Risk Management Advisory Sub-Committee has been formed by Council for the purpose of assisting Council with the review, development and implementation of Floodplain Risk Management Studies and Plans.

The objectives of the Sub-Committee are:

- (a) *To assist Hawkesbury City Council in the review, development and implementation of one or more Floodplain Risk Management Studies and Floodplain Risk Management Plans for the Hawkesbury region in accordance with the NSW Floodplain Development Manual.*
- (b) *To assist the Disaster and Emergency Management Committee in monitoring and assessing the effectiveness of these Management Plans during and after their implementation.*
- (c) *To inform the education and public awareness activities led by the Disaster and Emergency Management Committee to address matters associated with floodplain management.*
- (d) *To assist the Council by providing input into known flood behaviour as part of the Flood Studies commissioned by Council.*
- (e) *To facilitate broader community consultation and participation in Floodplain Risk Management initiatives through informing and liaising with member community groups.*



**FLOODPLAIN SUB-COMMITTEE**  
**3. REPORTS FOR DETERMINATION**  
**Meeting Date: 28 June 2023**

## **DISCUSSION**

### **Summary of Existing Floodplain Management Projects**

Council currently has two grant funded Floodplain Risk Management projects.

1. Review of Hawkesbury Floodplain Risk Management Study and Plan 2012 – Grant Amount \$53,333.33 – Undertake a review of the Hawkesbury Floodplain Risk Management Study and Plan 2012 considering the release of the Regional Flood Study for the Hawkesbury Nepean Valley by Infrastructure NSW and update requirements.

#### ***Project Outline:***

The Hawkesbury Floodplain Risk Management Study and Plan was finalised in 2012. The Plan includes identification that the Study and Plan should be reviewed every five years or as needed as a result of revised modelling, changes in legislation etc.

Infrastructure NSW's Regional Flood Study provides the most up-to-date flood information for the Hawkesbury-Nepean Valley based on current modelling techniques.

This Project aims to update the Hawkesbury Floodplain Risk Management Study and Plan using the Regional Flood Study data and review the Plan in respect to management of flood prone land through land use planning that incorporates current best practice.

The revised Study and Plan will:

- Use the current ARR2016 methodology. The previous study was based on ARR1987 methodology
- Update flood data by using the most current Regional Flood Study model data provided by Infrastructure NSW
- Use the updated flood data to identify preferred management options
- Use the updated flood data to revise planning controls to mitigate flood risk for future developments, and
- Develop a program for the implementation of management options.

The Hawkesbury Floodplain Risk Management Plan 2012 proposed a number of recommendations for the management of the floodplain. The review will re-evaluate these recommendations. Table 1 below provides a summary of the status of the Hawkesbury Floodplain Risk Management Study and Plan 2012 Recommendations.

**FLOODPLAIN SUB-COMMITTEE**  
**3. REPORTS FOR DETERMINATION**  
**Meeting Date: 28 June 2023**

**Table 1: Status of the Hawkesbury Floodplain Risk Management Study and Plan 2012 Recommendations.**

<b>Hawkesbury Floodplain Risk Management Plan 2012 Recommendations</b>	<b>Status</b>
<p><b>1. Community Flood Education and Resilience</b></p> <p><i>(a) Review and evaluate Regional Public Awareness Program.</i></p> <p><i>(b) Issue flood certificates on regular basis.</i></p> <p><i>(c) Prepare suburb-specific FloodSafe guides.</i></p> <p><i>(d) Prepare flood tolerant housing poster and brochure.</i></p> <p><i>(e) Enhance flood information on Council's web-site.</i></p> <p><i>(f) Commission book and video production on Hawkesbury flooding and vital community responses.</i></p> <p><i>(g) 150 year commemoration of 1867 flood.</i></p> <p><i>(h) Install flood icons/markers at key locations.</i></p> <p><i>(i) Continue to host Business FloodSafe breakfasts.</i></p>	<p>(a) Awareness program for Hawkesbury Nepean Valley recently/currently undertaken by iNSW in conjunction with HCC as a partner, as part of the action of the Hawkesbury Nepean Flood Strategy – Resilient Valley/Resilient Communities.</p> <p>(b) Council has two types of flood certificates; a simple one and a more detailed one which provides information such as hazard to assist with determining which developments controls are applicable under Flood Policy – data based on 2012 Study.</p> <p>(c) See (a)</p> <p>(d) See (a)</p> <p>(e) See (a) Establishment of Emergency Dashboard on Council's website.</p> <p>(f) Flood exhibition included at Hawkesbury Museum in 2018 in conjunction with INSW and SES.</p> <p>(g) Council led the 150 year commemoration carried out in 2018.</p> <p>(h) Have applied for a grant to carry out this recommendation a couple of times, however have been unsuccessful due to NSW Government strategy and work in the Hawkesbury Nepean Valley</p> <p>(i) Nil</p>
<p><b>2. Emergency Management</b></p> <p><i>(a) Implement dual outbound lanes on Jim Anderson Bridge during flood emergencies.</i></p> <p><i>(b) Enhance emergency management assessment tools. Develop best traffic modelling to better assess implications of various evacuation scenarios. Integrate with flood modelling.</i></p> <p><i>(c) Promote construction of community refuges within major new buildings on flood islands to service the existing communities.</i></p>	<p>(a) As part of delivering HNV Flood Strategy, Transport for NSW is undertaking investigations for road improvements (Road Resilience Program).</p> <p>(b) TfNSW and SES.</p> <p>(c) WestInvest funded project to provide community centre at North Richmond.</p> <p>(d) New SES Hawkesbury-Nepean SubPlan released in 2020.</p> <p>(e) iNSW &amp; SES, in collaboration with councils, recently released flood emergency management</p>

**FLOODPLAIN SUB-COMMITTEE**

**3. REPORTS FOR DETERMINATION**

**Meeting Date:** 28 June 2023

<b>Hawkesbury Floodplain Risk Management Plan 2012 Recommendations</b>	<b>Status</b>
<p><i>(d) Continue to prepare and maintain flood emergency management plans for special uses and utilities.</i></p> <p><i>(e) Use caravan park emergency management plan template to raise awareness and increase preparedness.</i></p> <p><i>(f) Review and update Hawkesbury-Nepean Flood Emergency Sub Plan and NSW State Flood Sub Plan.</i></p> <p><i>(g) Provide additional evacuation capacity possibly through a new crossing of South Creek at Eighth Ave, Llandilo.</i></p> <p><i>(h) Identify local evacuation route upgrades and revise FRMP.</i></p> <p><i>(i) Investigate lane duplication options, east of Jim Anderson Bridge.</i></p>	<p>plan template to all caravan parks for use. Council's draft Local Approvals Policy – Caravan Parks</p> <p>(f) New SES Hawkesbury-Nepean SubPlan released in 2020.</p> <p>(g) Hawkesbury-Nepean Valley Road Resilience Program.</p> <p>(h) Hawkesbury-Nepean Valley Road Resilience Program. Pitt Town Evacuation Route</p> <p>(i) Hawkesbury-Nepean Valley Road Resilience Program.</p>
<p><b>3. Future Development – Flood Risk Advice to Consent Authorities</b></p> <p><i>(a) Provide advice to Council and State Government concerning severity of flood evacuation risks as per Tables 4b and 5b.</i></p>	<p>(a) Recommendations of the Flood Inquiry.</p>
<p><b>4. Town Planning</b></p> <p><i>(a) Advise DPI of principal planning recommendations of this Plan.</i></p> <p><i>(b) Amend flood risk provisions of Council's existing DCP.</i></p> <p><i>(c) Amend LEP in Accordance with Volume 3.</i></p> <p><i>(d) Prepare maps to guide application of Codes SEPP.</i></p> <p><i>(e) Revise S149 notifications in accordance with Volume 3.</i></p> <p><i>(f) Lodge application for 'exceptional circumstances' with DPI &amp; OEH.</i></p>	<p>This section was not adopted by Council at that time. However, a number of changes to legislation and state policy has occurred:</p> <p>(b) Council adopted revised Flood Policy in 2020 which was based on a risk approach.</p> <p>Council is currently considering a draft Local Approvals Policy for caravan parks.</p> <p>(c) New flood clauses for LEPs were introduced 5.21 (mandatory) and 5.22 (optional). Council chose not to include Clause 5.22 until the Review of Hawkesbury FRMS&amp;P has been completed.</p> <p>(e) Notifications to be included on planning certificate in relation to flood were changed with the introduction of State Governments Flood Package. Now includes advice for development controls for certain development on land between the flood planning area and the PMF – relates to Clause 5.22 of the Standard Instrument.</p>

**FLOODPLAIN SUB-COMMITTEE**  
**3. REPORTS FOR DETERMINATION**  
**Meeting Date: 28 June 2023**

<b>Hawkesbury Floodplain Risk Management Plan 2012 Recommendations</b>	<b>Status</b>
	(f) No longer required. Removed as part of the changes introduced by the Flood Package.
<p><b>5. VHR and Redevelopment</b></p> <p><i>(a) Survey all houses inundated in 20 year ARI events.</i></p> <p><i>(b) Assess eligibility for voluntary house raising (VHR) redevelopment and possibly for voluntary house purchase (VP).</i></p> <p><i>(c) Report back to Council. Revise FRMP if required.</i></p>	(a) Have applied for a grant to carry out this recommendation a couple of times, however been unsuccessful due to NSW Government Strategy and work.
<p><b>6. McGraths Hill</b></p> <p><i>(a) Feasibility study of 50 year levee including consultation.</i></p> <p><i>(b) Assess community attitudes to levee and refuge mound.</i></p> <p><i>(c) Report back to Council. Revise FRMP if required.</i></p>	No further investigation following release of the Hawkesbury-Nepean Valley Strategy - Resilient Valley, Resilient Communities.
<p><b>7. Updating Flood Behaviour Data in Valley</b></p> <p><i>(a) Utilise latest 2D flood modelling and latest topographical data.</i></p> <p><i>(b) Extend along main tributaries.</i></p> <p><i>(c) Include revised IFD rainfall.</i></p> <p><i>(d) Include for revised climate change influences.</i></p> <p><i>(e) Update data for smaller more frequent flood events.</i></p>	INSW flood study 2019 has provided more contemporary flood data for the Hawkesbury Nepean Valley. They are currently undertaking 2D modelling and updating flood data from that carried out in 2019. This newer data is to be incorporated into the Review of Hawkesbury Floodplain Risk Management Study and Plan.

2. Combined Macdonald River, Colo River, Webbs Creek and Greens Creek Flood Study – Grant Amount \$147,333.33 - Floodplain Risk Management Study and Plan for Macdonald River, Colo River, Webbs and Greens Creek.

**Project Outline:**

Council will investigate flooding and flood risk management measures for the Colo River, Macdonald River, Webbs Creek, Greens Creek and their respective tributaries.

This will give Council and its community essential information for land use planning and emergency management decision making. Intended outcomes will include:

- an understanding of flood risk in catchments where extended isolation and risk to life is present;

**FLOODPLAIN SUB-COMMITTEE**  
**3. REPORTS FOR DETERMINATION**  
**Meeting Date: 28 June 2023**

- a portfolio of flood management options including engineering works, evacuation planning and appropriate development controls.

**Floodplain Risk Management Study and Plan Methodology**

The development of floodplain risk management studies and plans is generally undertaken in the stages (where applicable) as shown in Table 2 below.

**Table 2: Stages in the Development of Floodplain Risk Management Studies and Plans**

Stage	Stage	Activities	Outputs
1	Data Collection and Review	Site Inspection Data Collection and Review List of data/information sourced Summary of available data/information proposed to be used to inform the Study Review of existing flood data, including the Lower Macdonald River Flood Study 2004 Review of existing legislation, plans, policies and procedures Development of survey brief and information gathering from the community Topographic Survey DEM Development Stage 1 Report	Completion of Stage 1 Report - Data Collection and Review
2	Flood Study	Hydrologic Study Hydraulic Model Calibration and Validation Sensitivity Assessment Modelling Stage 2 Report	Completion of Stage 2 Report – Flood Study

**FLOODPLAIN SUB-COMMITTEE**  
**3. REPORTS FOR DETERMINATION**  
**Meeting Date: 28 June 2023**

Stage	Stage	Activities	Outputs
3	Risk Assessment and Emergency Management	<p>Flood hazard assessment</p> <p>Flood function assessment</p> <p>Flood damages assessment</p> <p>Risk to life assessment</p> <p>Emergency management classification</p> <p>Property database</p> <p>Flood Hazard Categorisation and assessment of land use type compatibility with hazards Flood function categorisation Identify risks to existing and new development</p> <p>Identify risks to life</p> <p>Flood planning area</p> <p>Evacuation capability assessment</p> <p>Advice on land use planning Assessment of future growth in the Study Area</p> <p>Identify and assess evacuation constraints and capability</p> <p>Compile Property database spreadsheet Mapping</p> <p>Stage 3 Report</p>	<p>Completion of Stage 3 Report - Risk Assessment and Emergency Management</p>
4	Assessment of Preferred Management Options	<p>Identification and assessment of potential management options</p> <p>Detailed assessment of preferred management options</p> <p>Rationale for preferred management options</p> <p>Ranking of options</p> <p>Program for implementation of management options</p> <p>Stage 4 Report</p>	<p>Completion of Stage 4 Report - Preferred Management Options</p>

**FLOODPLAIN SUB-COMMITTEE**  
**3. REPORTS FOR DETERMINATION**  
**Meeting Date: 28 June 2023**

Stage	Stage	Activities	Outputs
5	Draft Floodplain Risk Management Study and Plan and Exhibition	Finalisation of draft Floodplain Risk Management Study and Plan  Presentation to Officers and Committee  Report to Council for Exhibition  Public exhibition and community consultation  Review of submissions  Further option assessment (if required)	Completion of draft Floodplain Risk Management Study and Plan document for exhibition  Completion of exhibition and community consultation
6	Completion of Floodplain Risk Management Study and Plan	Preparation of final Floodplain Risk Management Study and Plan.  Presentation to Officers and Committee.  Final study and plan submitted to Council for adoption.	Final Floodplain Risk Management Study and Plan considered and/or adopted by Council.
7	Handover of all Deliverables	Handover of all deliverables to DPE EES and to the NSW flood data portal as per clause 3.13 of the Funding Agreement.	Handover of all deliverables outlined in clause 3.13 of the Funding Agreement are received by DPE EES and all deliverables are successfully uploaded into the NSW flood data portal.

**Sub-Committee Contribution to Floodplain Risk Management Studies and Plans**

Having regard to the activities within each stage of the Projects, it is anticipated that Sub-committee members will provide input to the following matters:

- any community consultation, including collection of local flood knowledge and experience, and exhibition of a draft study and plan. Sub-Committee members will also be able to contribute their local knowledge and/or experience of recent or historic flood events through the community consultation process.
- the determination of any floodplain management options following data collection, modelling and assessment of flood data (Stage 4). Sub-Committee members will be able to contribute to the determination of practical options for the management of a subject floodplain.
- the review of the draft Floodplain Risk Management Study and Plan prior to public exhibition (Stage 5); and

**FLOODPLAIN SUB-COMMITTEE**  
**3. REPORTS FOR DETERMINATION**  
**Meeting Date: 28 June 2023**

- the review of the final Floodplain Risk Management Study and Plan following public exhibition (Stage 6).

**COMMUNITY ENGAGEMENT**

Consultation is carried out at different stages and for different purposes during the floodplain risk management assessment process. It involves the collection of local flood knowledge and experience from the community, and the exhibition of draft studies and plans to gauge acceptance of proposed floodplain management options.

The Report titled "Item 4 FPSC - Combined Rivers Project Community Survey" outlines the goals and methodology for consulting with the community.

**ATTACHMENTS**

There are no supporting documents for this report.

**oooO END OF REPORT Oooo**



**FLOODPLAIN SUB-COMMITTEE**  
**3. REPORTS FOR DETERMINATION**  
**Meeting Date: 28 June 2023**

**3.1.4. FPSC - Combined Rivers Project Community Survey - (161821, 124414, 95498)**

**Directorate:** City Planning

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**PURPOSE OF THE REPORT**

The purpose of this report is to present to the Floodplain Management Sub-Committee the community engagement plan to be used to gather information from the community in relation to the Combined Macdonald River, Colo River, Webbs Creek and Greens Creek Flood Study and Floodplain Risk Management Study and Plan Project.

**EXECUTIVE SUMMARY**

Community consultation is to be undertaken for the Combined Macdonald River, Colo River, Webbs Creek and Greens Creek Flood Study and Floodplain Risk Management Study and Plan Project to gather local information and experiences about recent or historical floods, and seeking suggestions related to flooding in the Macdonald River, Colo River, Webbs Creeks and Greens Creek.

This community consultation will have the goals of:

- informing the community of the Study;
- identifying community concerns;
- gathering flood related information; and
- developing a relationship of trust and confidence with the community.

To achieve these goals, it is proposed to engage with the community in the following manner:

- newspaper notification
- council website - Your Hawkesbury Your Say
- mail out of the survey and supporting documents to property owners and residents within the study areas
- face to face engagement via pop-ups in varied locations.

**OFFICER'S RECOMMENDATION**

That the Floodplain Management Sub-Committee endorse the:

- proposed Engagement Plan as outlined in this report; and
  - use of the community survey and supporting documentation is provided as Attachments 1 to 3 to this report.
-

**FLOODPLAIN SUB-COMMITTEE**  
**3. REPORTS FOR DETERMINATION**  
**Meeting Date: 28 June 2023**

## **BACKGROUND**

Consultation is a vital part of succeeding in floodplain management. It provides an opportunity to gather local knowledge in relation to flood behaviour and the impacts of specific events. In addition, community engagement provides opportunities for the community to be heard, and develops trust and confidence in the process, thereby increasing the community buy-in to study outcomes.

The purpose of community consultation is to:

- inform the community about the study
- identify community concerns
- gather information from the community by participation
- develop and maintain community confidence and collaboration with the study results
- inform the community about flood risks in the area
- seek input from the community in respect to floodplain management options.

Consultation is carried out at different stages and for different purposes during the floodplain risk management assessment process.

The first stage of community consultation is to be undertaken for the Combined Macdonald River, Colo River, Webbs Creek and Greens Creek Flood Study and Floodplain Risk Management Study and Plan Project to seek local information in relation to flood events experienced within these catchments.

## **DISCUSSION**

### **Consultation Material**

Consultation material has been prepared for the Combined Macdonald River, Colo River, Webbs Creek and Greens Creek Flood Study and Floodplain Risk Management Study and Plan project, calling for information about recent or historical floods, and seeking suggestions related to the study of flooding in the Macdonald River, Colo River, Webbs Creeks and Greens Creek.

This consultation material includes:

- documentation requesting local knowledge on flooding and explaining the purpose for the request
- a questionnaire/survey
- plan showing the study areas for each of the Macdonald River, Colo River, Webbs Creek and Greens Creek catchments

All documentation details the various methods in which the community can respond, including online, as well as via email or post.

### **Proposed Engagement Plan**

The community engagement plan will have the goals of:

- informing the community of the Study:

**FLOODPLAIN SUB-COMMITTEE**  
**3. REPORTS FOR DETERMINATION**

**Meeting Date: 28 June 2023**

- identifying community concerns;
- gathering flood related information; and
- developing a relationship of trust and confidence with the community.

To achieve these goals, it is proposed to engage with the communities within each of these catchments, as well as with the Hawkesbury community in general, in the following manner:

- newspaper notification
- council website – YourHawkesbury-YourSay
- mail out of the survey and supporting documents to property owners and residents within the study areas
- face to face engagement via pop-ups in varied locations.

**ATTACHMENTS**

**AT - 1** Information for newspaper, website publication – YourHawkesbury-YourSay.

**AT - 2** Community Survey/Questionnaire.

**AT - 3** Map of the Macdonald River, Colo River, Webbs Creek and Greens Creek Study Areas.

FLOODPLAIN SUB-COMMITTEE  
3. REPORTS FOR DETERMINATION  
Meeting Date: 28 June 2023

AT1 - Information for newspaper, website publication – YourHawkesbury-YourSay

# HAVE YOUR SAY



## MACDONALD RIVER, COLO RIVER, WEBBS CREEK AND GREENS CREEK CATCHMENTS

Hawkesbury City Council is currently undertaking a Flood Study & Floodplain Risk Management Study and Plan for the Macdonald River, Colo River, Webbs Creek and Greens Creek Catchments.

-  Council completed the Lower MacDonald Flood Study in 2004
-  Many properties in these catchments can become cut off due to flooding
-  The catchments have experienced significant historic and recent flooding, including in 2020, 2021 and 2022
-  Council is asking the community to provide details of any flooding they have experienced or are aware of

We know some parts of the Local Government Area (LGA) are more prone to flooding than others and we are committed to finding solutions to reduce risk to life and the social and economic damages of flooding in these locations with assistance from the NSW Government through its Floodplain Risk Management Framework.

Council received a grant through the NSW Government's Floodplain Management Program to complete a Floodplain Risk Management Study and Plan for the Macdonald River, Colo River, Webbs Creek and Greens Creek (see attached map for locations). This work will review the 2004 Flood Study based on flooding experienced by the community since 2004 and will identify measures to manage flood risk for impacted communities.

**Do you have any records or local knowledge of flooding in study area?**  
Council would like to hear from you by email, phone or by filling in a brief online survey. The link is available from the Your Hawkesbury Your Say ([yourhawkesbury-yoursay.com.au](http://yourhawkesbury-yoursay.com.au)).

Your responses will help us understand the local flooding problems in more detail. Local knowledge and personal experiences of flooding are an invaluable source of data. There will be opportunities for additional community input at later stages of the project.



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**PLEASE PROVIDE YOUR RESPONSES VIA EMAIL, MAIL, PHONE OR ONLINE THROUGH COUNCIL**  
[yourhawkesbury-yoursay.com.au](http://yourhawkesbury-yoursay.com.au) | Colleen Haron: (02) 4560 4564 | [council@hawkesbury.nsw.gov.au](mailto:council@hawkesbury.nsw.gov.au)  
**SUBMISSIONS CLOSE 8 APRIL 2022**

**FLOODPLAIN SUB-COMMITTEE**  
**3. REPORTS FOR DETERMINATION**  
**Meeting Date: 28 June 2023**

**AT - 2 Community Survey/Questionnaire**



## MacDonald, Colo, Webb's and Greens Creek Floodplain Risk Management Study and Plan

**Community Questionnaire Form**

**Contact Details:**

Name:

Address (including Lot / DP, if known)

Email  Phone

**In which catchment is your home or business?**

MacDonald River       Greens Creek  
 Colo River             Webbs Creek  
 Other (please specify)

**How many years have you lived, worked or visited in the catchment?**

0-1       10-20  
 2-5       20-30  
 5-10      30+

**How aware are you of flooding?** (please select one)

Aware                       Somewhat aware       Not aware

**Do you have any information about recent or historical floods?**

No  
 Yes  
     Photos                       Flood Marks or observations  
     Videos                       Other  
 Flood Events  
     July 2022                   March 2022                   March 2021  
     February 2020               2007                           August 1990  
     March 1978                   1949  
 Other:

**Can Council or our consultant contact you for further information relating to your responses to this survey?**

Yes       No

**Preferred contact method:**

Phone       Email

**Do you give Council permission to use your supplied photos and information relating to your responses to this survey?**

Yes       No

**FLOODPLAIN SUB-COMMITTEE**  
**3. REPORTS FOR DETERMINATION**  
**Meeting Date: 28 June 2023**



**Were you cut off by floodwaters at home or another location in recent flooding?**

- No
- Yes     March 2021     March 2022     July 2022
- <1 day             3-5 days
- 1 day               5-7 days
- 2-3 days           More than 1 week

**How do you anticipate you would respond in a major flood in this area?**

- Evacuate early to an official evacuation centre
- Evacuate elsewhere – please describe
- Remain at my house (is your house elevated or do you have a second storey?)
- Other – please describe
- Don't know/unsure
- I need more information to understand my flood risk and actions

**If you were to evacuate, what would be the reasons for you to evacuate? (Select all that apply)**

- Discomfort/Inconvenience/cost of evacuating
- Need to care for animals
- I know my house can not be flooded and we can cope with isolation
- Concern for security of my property if I evacuate
- Other - please describe:
- Not applicable (I intend to evacuate from my house)

**What information do you look for during a flood event (Select all that apply)**

- Road Closures             Evacuation Notices             Flood Characteristics (magnitude, duration, area impacted etc)
- Other - please describe

**Where do you currently get updates and information (Select all that apply)**

- Websites             Radio             Social Media             Smartphone App
- Other – please describe

**Do you have other concerns or suggestions related to flooding in the MacDonald, Colo, Webs and Green Creek Catchments?**

Please feel free to attach additional pages.

Please provide your responses via email, mail, phone or online

🌐 Online: [yourhawkesbury-yoursay.com.au](http://yourhawkesbury-yoursay.com.au)

☎ For information phone Colleen Haron: 4560 4564

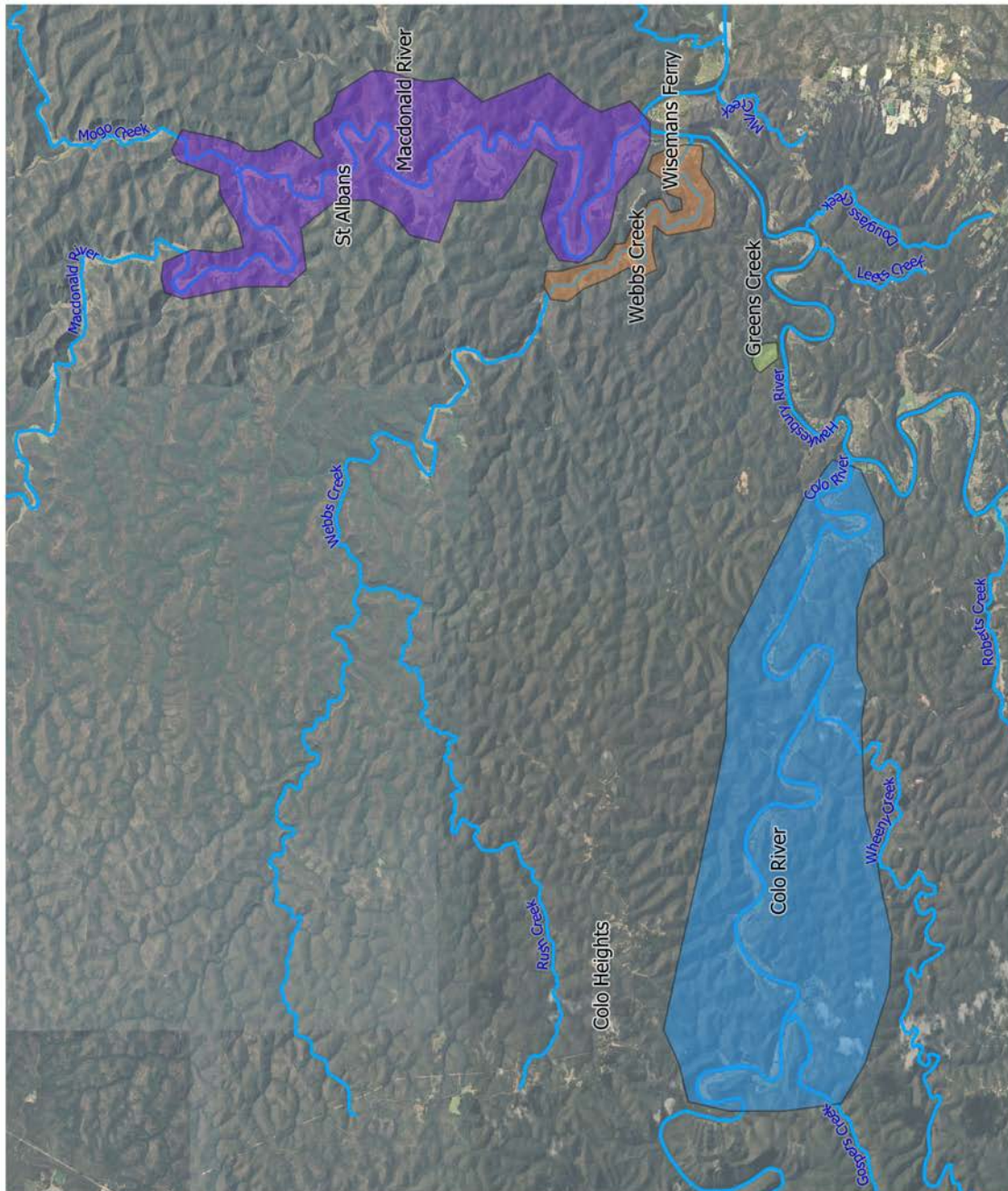
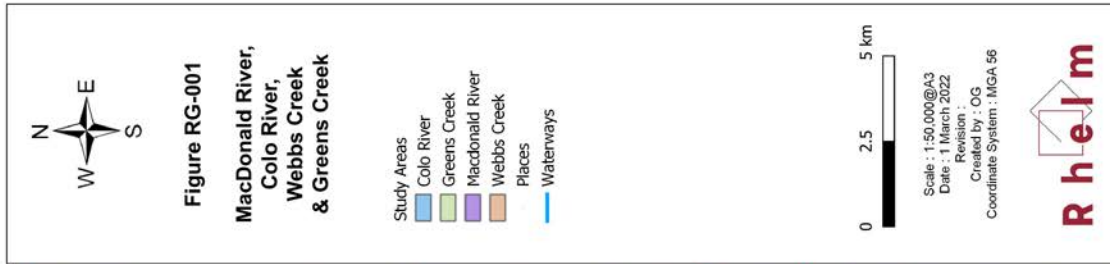
✉ Email: [council@hawkesbury.nsw.gov.au](mailto:council@hawkesbury.nsw.gov.au)

🕒 Submission Close **TBA**

✉ Mail: PO Box 146, WINDSOR NSW 2756

**FLOODPLAIN SUB-COMMITTEE**  
**3. REPORTS FOR DETERMINATION**  
**Meeting Date: 28 June 2023**

**AT3 - Map of the Macdonald River, Colo River, Webbs Creek and Greens Creek Study Areas**



oooO END OF REPORT Oooo

**FLOODPLAIN SUB-COMMITTEE**  
**3. REPORTS FOR DETERMINATION**  
**Meeting Date: 28 June 2023**

**3.2. Confidential Reports**

Nil Reports



**FLOODPLAIN SUB-COMMITTEE**

**4. GENERAL BUSINESS**

**Meeting Date: 28 June 2023**

**4. GENERAL BUSINESS**



# Floodplain Management Sub-Committee Meeting

## End of Business Paper

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