

# Notice of Meeting

## Floodplain Management Advisory Committee Meeting

A Floodplain Management Advisory Committee Meeting of  
Byron Shire Council will be held as follows:

|       |  |
|-------|--|
| Venue | Conference Room, Station Street, Mullumbimby |
| Date  | Thursday, 16 June 2022                       |
| Time  | 2.00pm                                       |

Phillip Holloway  
Director Infrastructure Services

I2022/696  
Distributed 09/06/22



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## CONFLICT OF INTERESTS

**What is a “Conflict of Interests”** - A conflict of interests can be of two types:

**Pecuniary** - an interest that a person has in a matter because of a reasonable likelihood or expectation of appreciable financial gain or loss to the person or another person with whom the person is associated.

**Non-pecuniary** – a private or personal interest that a Council official has that does not amount to a pecuniary interest as defined in the Code of Conduct for Councillors (eg. A friendship, membership of an association, society or trade union or involvement or interest in an activity and may include an interest of a financial nature).

**Remoteness** – a person does not have a pecuniary interest in a matter if the interest is so remote or insignificant that it could not reasonably be regarded as likely to influence any decision the person might make in relation to a matter or if the interest is of a kind specified in the Code of Conduct for Councillors.

**Who has a Pecuniary Interest?** - a person has a pecuniary interest in a matter if the pecuniary interest is the interest of the person, or another person with whom the person is associated (see below).

**Relatives, Partners** - a person is taken to have a pecuniary interest in a matter if:

- The person’s spouse or de facto partner or a relative of the person has a pecuniary interest in the matter, or
- The person, or a nominee, partners or employer of the person, is a member of a company or other body that has a pecuniary interest in the matter.

N.B. “Relative”, in relation to a person means any of the following:

- (a) the parent, grandparent, brother, sister, uncle, aunt, nephew, niece, lineal descends or adopted child of the person or of the person’s spouse;
- (b) the spouse or de facto partners of the person or of a person referred to in paragraph (a)

**No Interest in the Matter** - however, a person is not taken to have a pecuniary interest in a matter:

- If the person is unaware of the relevant pecuniary interest of the spouse, de facto partner, relative or company or other body, or
- Just because the person is a member of, or is employed by, the Council.
- Just because the person is a member of, or a delegate of the Council to, a company or other body that has a pecuniary interest in the matter provided that the person has no beneficial interest in any shares of the company or body.

### Disclosure and participation in meetings

- A Councillor or a member of a Council Committee who has a pecuniary interest in any matter with which the Council is concerned and who is present at a meeting of the Council or Committee at which the matter is being considered must disclose the nature of the interest to the meeting as soon as practicable.
- The Councillor or member must not be present at, or in sight of, the meeting of the Council or Committee:
  - (a) at any time during which the matter is being considered or discussed by the Council or Committee, or

- (b) at any time during which the Council or Committee is voting on any question in relation to the matter.

**No Knowledge** - a person does not breach this Clause if the person did not know and could not reasonably be expected to have known that the matter under consideration at the meeting was a matter in which he or she had a pecuniary interest.

**Non-pecuniary Interests** - Must be disclosed in meetings.

There are a broad range of options available for managing conflicts & the option chosen will depend on an assessment of the circumstances of the matter, the nature of the interest and the significance of the issue being dealt with. Non-pecuniary conflicts of interests must be dealt with in at least one of the following ways:

- It may be appropriate that no action be taken where the potential for conflict is minimal. However, Councillors should consider providing an explanation of why they consider a conflict does not exist.
- Limit involvement if practical (eg. Participate in discussion but not in decision making or vice-versa). Care needs to be taken when exercising this option.
- Remove the source of the conflict (eg. Relinquishing or divesting the personal interest that creates the conflict)
- Have no involvement by absenting yourself from and not taking part in any debate or voting on the issue as of the provisions in the Code of Conduct (particularly if you have a significant non-pecuniary interest)

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## RECORDING OF VOTING ON PLANNING MATTERS

### Clause 375A of the Local Government Act 1993 – Recording of voting on planning matters

- (1) In this section, **planning decision** means a decision made in the exercise of a function of a council under the Environmental Planning and Assessment Act 1979:
- (a) including a decision relating to a development application, an environmental planning instrument, a development control plan or a development contribution plan under that Act, but
- (b) not including the making of an order under that Act.
- (2) The general manager is required to keep a register containing, for each planning decision made at a meeting of the council or a council committee, the names of the councillors who supported the decision and the names of any councillors who opposed (or are taken to have opposed) the decision.
- (3) For the purpose of maintaining the register, a division is required to be called whenever a motion for a planning decision is put at a meeting of the council or a council committee.
- (4) Each decision recorded in the register is to be described in the register or identified in a manner that enables the description to be obtained from another publicly available document, and is to include the information required by the regulations.
- (5) This section extends to a meeting that is closed to the public.

**BYRON SHIRE COUNCIL**  
**BUSINESS OF MEETING**

**1. APOLOGIES**

**2. DECLARATIONS OF INTEREST – PECUNIARY AND NON-PECUNIARY**

**3. ADOPTION OF MINUTES FROM PREVIOUS MEETINGS**

|     |   |   |
|-----|---|---|
| 3.1 | Adoption of Minutes from Previous Meeting ..... | 5 |
|-----|---|---|

**4. STAFF REPORTS**

**Infrastructure Services**

|     |   |    |
|-----|---|----|
| 4.1 | Byron Shire Council Flood Risk Management Plan-Actions and Accomplishments..... | 11 |
| 4.2 | Byron Bay Drainage Upgrade Project.....   | 17 |
| 4.3 | Capricornia Canal and Marshalls Creek .....                                     | 20 |
| 4.4 | Byron Shire Post 2022 Flood Analysis Update .....                               | 26 |
| 4.5 | Voluntary House Raising .....   | 29 |

**ADOPTION OF MINUTES FROM PREVIOUS MEETINGS**

**Report No. 3.1 Adoption of Minutes from Previous Meeting**

**Directorate:** Infrastructure Services

5 **Report Author:** Shelley Flower, Executive Assistant IS

**File No:** I2022/586

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10 **RECOMMENDATION:**

**That the minutes of the Floodplain Management Advisory Committee Meeting held on 21 April 2022 be confirmed.**

15 **Attachments:**

1 Minutes 21/04/2022 Floodplain Management Advisory Committee, I2022/388 , page 7 [↓](#)

## **Report**

The attachment to this report provides the minutes of the Floodplain Management Advisory Committee Meeting of 21 April 2022.

### **5 Report to Council**

The minutes were reported to Council on 26 May 2022. **Comments**

In accordance with the Committee Recommendations, Council resolved the following:

22-226: Resolved that Council notes the minutes of the Floodplain Management Advisory Committee Meeting held on 21 April 2022.

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# Minutes

## Floodplain Management Advisory Committee Meeting

|       |  |
|-------|--|
| Venue | Conference Room, Station Street, Mullumbimby |
| Date  | Thursday, 21 April 2022                      |
| Time  | 2.00pm                                       |

Phillip Holloway  
Director Infrastructure Services

I2022/388



# BYRON SHIRE COUNCIL

ADOPTION OF MINUTES FROM PREVIOUS MEETINGS

3.1 - ATTACHMENT 1

## BYRON SHIRE COUNCIL

FLOODPLAIN MANAGEMENT ADVISORY COMMITTEE MEETING MINUTES 21  
APRIL 2022

### **Minutes of the Floodplain Management Advisory Committee Meeting held on Thursday, 21 April 2022**

**File No:** I2022/388

PRESENT: Cr M Lyon (Mayor), Cr D Dey

Staff: James Flockton (Coordinator Infrastructure Planning)

Sophie Black (Minute Taker)

Shelley Flower

Invited Members: Martin Rose (Environment and Heritage).

Community: Rebecca Brewin, Steven Harris, Karl Allen and Matthew  
Lambourne

*Cr Lyon (Chair) opened the meeting at 2.10pm and acknowledged that the meeting was  
being held on Bundjalung Country.*

#### APOLOGIES:

Cr Coorey, Chad Ellis (SES), Phil Holloway (Director Infrastructure Services), Scott Moffett  
(Flood and Drainage Engineer).

#### DECLARATIONS OF INTEREST – PECUNIARY AND NON-PECUNIARY

There were no declarations of interest.

#### BUSINESS ARISING FROM PREVIOUS MINUTES

There was no business arising from previous minutes.



**BYRON SHIRE COUNCIL**

FLOODPLAIN MANAGEMENT ADVISORY COMMITTEE MEETING MINUTES  
APRIL 2022

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**STAFF REPORTS - INFRASTRUCTURE SERVICES**

**Report No. 3.1      Committee Constitution**  
**File No:              I2022/343**

**Committee Recommendation:**

**That Council:**

- 1. Ratify the draft Committee Constitution with the following amendment to Part five: 6 community representatives including if possible one representing communities near Tallow Creek ICOLL, Belongil Creek ICOLL, Marshalls Creek, Brunswick River.**
- 2. Seek additional Committee members through readvertising.**

(Lyon/Brewin)

*The recommendation was put to the vote and declared carried.*

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**Report No. 3.2      Post Flood Event Update**  
**File No:              I2022/345**

**Committee Recommendation:**

**That Council:**

- 1. Note the Report.**
- 2. Receive a further report from the Floodplain Management Advisory Committee on reviewing the North Byron Floodplain Risk Management Plan.**

(Lyon/Lambourne)

*The recommendation was put to the vote and declared carried.*

**BYRON SHIRE COUNCIL**

FLOODPLAIN MANAGEMENT ADVISORY COMMITTEE MEETING MINUTES 21  
APRIL 2022

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**Report No. 3.3 Flooding and Drainage Grants Update**  
**File No: I2022/346**

**Committee Recommendation:**

**That Council:**

- 1. Note the Report.**
- 2. Receive a report, via the Floodplain Management Advisory Committee, which includes a detailed list of the recommended flood mitigation works from each of Council's Floodplain Management Plans.**

(Lyon/Brewin)

*The recommendation was put to the vote and declared carried.*

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**Report No. 3.4 Belongil Catchment Drainage Board Update and Actions**  
**Required**  
**File No: I2022/347**

**Committee Recommendation:**

**That Council:**

- 1. Note the Report.**
- 2. Nominates a sitting Councillor and alternate as a representative on or to the Board.**

(Lyon/Brewin)

*The recommendation was put to the vote and declared carried.*

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*There being no further business the meeting concluded at 4.20pm.*

STAFF REPORTS - INFRASTRUCTURE SERVICES

**Report No. 4.1      Byron Shire Council Flood Risk Management Plan-Actions and Accomplishments**

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**Directorate:** Infrastructure Services  
**Report Author:** Scott Moffett, Drainage & Flood Engineer, IS - Works - Infrastructure Planning  
**File No:** I2022/632

10 **Summary:**

Council has adopted three sets of Flood Risk Management Studies (FRMS) and Plans (FRMP) for the shires three main catchments. These are:

- Brunswick River Catchment (North Byron)
- Tallow Creek Catchment
- Belongil Creek catchment

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A summary of prioritised actions has been prepared based on the outcomes of the three adopted Flood Risk Management Plans

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**RECOMMENDATION:**

**That Council note the current Byron Shire Council Flood Mitigation Program, attachment 1 (E2022/52007), and the Floodplain Management Advisory Committee receive a further report with all actions prioritised as per discussion with the committee.**

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**Attachments:**

- 1      BSC Flood Mitigation Program, E2022/52007 , page 14 [↓](#)

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## Report

Council has adopted three sets of Flood Risk Management Studies and Plans for the shires three main catchments. These are:-

- Brunswick River Catchment (North Byron);
- 5 • Tallow Creek Catchment; and
- Belongil Creek catchment.

The Brunswick River Catchment is drained by three major tributaries, Marshalls Creek (North Arm), Simpsons Creek (South Arm) and the Brunswick River (West and Main Arm).

10 A North Byron detailed flood study and subsequent FRMS and FRMP were developed and adopted in 2020. The FRMP listed 25 recommended actions with associated priority rankings.

15 The Tallow Creek Catchment is drained by Tallow Creek and receives a large proportion of the urban Suffolk Park district runoff. A detailed flood study and subsequent FRMS and FRMP were developed and adopted in 2009 with an update being adopted in 2015. The FRMP listed 24 recommended actions with associated priority rankings. Tallow Creek opens to the ocean and is known as an intermittently closed and open lagoon system (ICOLL).

20 The Belongil Creek Catchment is drained by Belongil Creek and receives a large proportion of the urban Byron Bay central business district runoff in addition to wetland and agricultural runoff. A detailed flood study and subsequent FRMS and FRMP were developed and adopted in 2015. The FRMP listed 10 recommended actions with associated priority rankings. Belongil Creek opens to the ocean and is known as an intermittently closed and open lagoon system (ICOLL).

25 A summary of prioritised actions has been prepared based on the outcomes of the three adopted Flood Risk Management Plans, as per attachment 1 (E2022/52007)..

## Key issues

Several key issues have been identified that will impact the delivery of the flood mitigation program. These include, however, not limited to:-

- 30 • Available budget-Council budgets are limited. It is likely that grant funding will be required to financially assist Council with delivery;
- Timing and community expectations-Following the recent 2022 flood natural disaster the community expect a quick delivery of the actions. Realistic delivery programs will need to be communicated effectively with the community highlighting budgetary and resource constraints; and
- 35

- Local Council and State responsibilities- Following the recent 2022 flood natural disaster the community has an expectation that Council can undertake any and all works. This is sometimes not the case with many actions the responsibility of various state departments such as SES, Crown, Marine Parks, Fisheries and the National Parks and Wildlife Services. Realistic delivery programs will need to be communicated effectively with the community highlighting budgetary and resource constraints.

**Next steps**

Further prioritisation of actions, budget sourcing and delivery program development. The committee may recommend prioritise at the meeting and further prioritised report provided.

**Strategic Considerations**

**Community Strategic Plan and Operational Plan**

| <b>CSP Objective</b>   | <b>CSP Strategy</b>  | <b>DP Action</b>   | <b>Code</b>    | <b>OP Activity</b>                                |
|--|--|--|----------------|---|
| <b>Community Objective 1: We have infrastructure, transport and services which meet our expectations</b> | 1.1: Provide a road network which is safe, accessible and maintained to an acceptable level of service | 1.1.6: Provide stormwater infrastructure to manage flood mitigation, social and environmental outcomes | <b>1.1.6.1</b> | Review and update 10 year Stormwater Levy program |

**Recent Resolutions**

Not Applicable

**Legal/Statutory/Policy Considerations**

Not Applicable

**Financial Considerations**

It is likely that grant funding will be required to financially assist Council with delivery

Byron Shire Council - 2022 - Whole Flood Mitigation Program'

|    | Floodplain Management Plan | Proposed Mitigation Action  | Priority           | Responsibility            | Approx Value  | Comments  |
|----|----------------------------|---|--------------------|---------------------------|---|---|
| 1  | North Byron                | Flood Planning Levels revised based on the recommendations of the FRMS.   | Complete           | Complete                  | Staff Time  | Complete  |
| 2  | North Byron                | Section 10.7 (5) certificates to provide further detail of flood behaviour. Consideration to providing property-level flood information via an online GIS platform  | Complete           | Complete                  | Staff Time  | Complete  |
| 3  | North Byron                | Byron Shire Council and SES to consider the findings and recommendations of the FRMS in the development of the Flood Warning Network for North Byron.   | Complete           | Complete                  | Staff Time  | Complete  |
| 4  | North Byron                | Identify key roads and implement automatic warning signs and depth indicators.  | High               | BSC - IPT                 | \$100,000   | Grant being investigated                                      |
| 5  | North Byron                | Council consider updating the DCP to incorporate the recommendations detailed in the FRMS; Provide more detailed guidance on the principles of wet proofing, appropriate design and materials, with direct reference to available guidelines; include a requirement for an assessment of property level protection as part of the DCP2014 planning matrix criteria FL4; Implement the recommendations regarding appropriate fill areas in the DCP2014 | Partially complete | BSC - SEE / IPT           | Staff Time  | To be discussed with SEE                                      |
| 6  | North Byron                | Development a whole of catchment drainage model and overland flow path investigation.   | High Priority      | BSC - IPT                 | \$250,000   | 2:1 grant submitted May 22                                    |
| 7  | North Byron                | Undertake more detailed assessment of properties which may benefit from property level protection   | High               | BSC - IPT                 | \$50,000  | Will form part of the scope of Shire overland flow path study |
| 8  | North Byron                | Implement debris control measures for Federation Bridge and Billinudgel Railway Bridge.   | Design underway    | BSC - IPT                 | \$100,000   | Grant funded for design phase only                            |
| 9  | North Byron                | Undertake an Evacuation Assessment for Mullumbimby.   | High Priority      | SES (tech intel from IPT) | Staff Time  | Underway by SES   |
| 10 | North Byron                | Changes to land use zoning should consider flood compatibility based on the recommendations of the FRMS.  | Complete           | Complete                  | Staff Time  | Complete  |
| 11 | North Byron                | Further investigate raising eligible residential properties to reduce flood damages.  | Moderate           | BSC - IPT                 | Staff Time (pending Council decision on VHR Council/State contribution) | Underway as part of VHR/VHP scheme                            |
| 12 | North Byron                | Further detailed assessment of Saltwater Creek upgrade assessment and mitigation options for Mullumbimby.   | Moderate           | BSC - IPT                 | Refer to item 6   | Will form part of the scope of Shire overland flow path study |
| 13 | North Byron                | Form a committee, comprising council, state, emergency services and community member representatives to oversee the implementation of the FRMP  | Complete           | Complete                  | Complete  | Complete  |
| 14 | North Byron                | Council and the SES to update the Local Flood Plan based on findings of the FRMS.   | Moderate           | SES (tech intel from IPT) | Staff Time  | Underway by SES   |
| 15 | North Byron                | Revise the Flood Planning Area based on the recommendations of the FRMS.  | Complete           | Complete                  | Staff Time  | Complete  |
| 16 | North Byron                | Engage with the community to prepare an ongoing flood education program, with appropriate evaluation by Council and SES following implementation.   | Moderate           | SES/BSC - IPT / Comms     | \$20,000  | Funding to be sought  |
| 17 | North Byron                | Further consideration of Avocado Court drainage modification.   | Moderate           | BSC - IPT                 | Refer to item 6   | Will form part of the scope of Shire overland flow path study |
| 18 | North Byron                | Byron Shire Council compliance team investigate illegal builds south of North Heads Road.   | Ongoing            | BSC - SEE                 | Staff Time  | To be discussed with SEE                                      |
| 19 | North Byron                | Develop a sediment transport model to investigate modification to the rock walls, as part of the Coastal Management Program for the Brunswick Estuary.  | Moderate           | BSC - SEE / IPT           | \$150,000   | Being considered as part Coastal Management Plan              |
| 20 | North Byron                | Further consideration of Billinudgel infrastructure improvements.   | Moderate           | BSC - IPT                 | Refer to item 6   | Will form part of the scope of Shire overland flow path study |
| 21 | North Byron                | Develop guidance on the design and installation of fencing traversing waterways and channels.   | Moderate           | BSC - IPT                 | \$15,000  | Funding to be sought  |

BYRON SHIRE COUNCIL

|    |              |   |                 |                           |   |   |
|----|--------------|---|-----------------|---------------------------|---|---|
| 22 | North Byron  | Consider establishing a Voluntary House Purchase scheme for eligible properties.  | Complete        | BSC - IPT                 | Staff Time (pending Council decision on VHR Council/State contribution) | Grant submitted May 22  |
| 23 | North Byron  | More detailed assessment of potential raising of River Street to provide improved flood immunity and evacuation.  | Low             | BSC - IPT                 | Refer to item 6   | Will form part of the scope of Shire overland flow path study |
| 24 | North Byron  | Implement the recommendations of the South Golden Beach levee audit.  | Low             | BSC - IPT                 | \$200,000   | Funding to be sought  |
| 25 | North Byron  | Further consider viable options to implement the recommendations of the New City Road drainage assessment.  | Low             | BSC - IPT                 | Refer to item 6   | Will form part of the scope of Shire overland flow path study |
| 26 | Tallow Creek | New Byron Local Environment Plan to more robustly protect existing development from increased flooding impacts resulting from future development and update to be in line with NSW Floodplain Development Manual (2005) | Complete        | Complete                  | Staff Time  | Complete  |
| 27 | Tallow Creek | Commence undertaking to rezone the land identified as high flood hazard for the 1 in 100 year ARI flood to preclude these areas from future development   | Complete        | Complete                  | Staff Time  | Complete  |
| 28 | Tallow Creek | Adopt FPLs as part of the DCP 2002 as the extent of flood prone land in the Tallow Creek catchment that consider climate change conditions (Scenario 4)   | Complete        | Complete                  | Staff Time  | Complete  |
| 29 | Tallow Creek | Implementation of design measures and evacuation plans to minimise impacts on future planned community uses as identified in the DCP No. 9  | Medium Priority | BSC - SEE                 | Staff Time  | To be discussed with SEE                                      |
| 30 | Tallow Creek | Adopt prescribed areas of fill exclusion.   | Complete        | Complete                  | Staff Time  | Complete  |
| 31 | Tallow Creek | Ensure future developments within the catchment utilise on-site stormwater detention measures to maintain pre-development peak runoff characteristics.  | Complete        | Complete                  | Staff Time  | Already part of BSC DCP                                       |
| 32 | Tallow Creek | Prepare a section contribution plan for all civil works in this plan.   | Complete        | Complete                  | \$20,000  | Wasn't supported or adopted by Council                        |
| 33 | Tallow Creek | Update 149 certificates and any lots with additional controls over them, including add 1495 certificates for lots effected by PMF and not within the FPL.   | Complete        | Complete                  | Staff Time  | Complete  |
| 34 | Tallow Creek | Adopt new version of the hydraulic model to allow for assessment of all proposed development  | Complete        | Complete                  | Staff Time  | Complete  |
| 35 | Tallow Creek | Establish relationship between flood return period, sand bar levels and flooding conditions in Tallow Lake to assist in SES flood evacuation planning   | Underway        | BSC - IPT                 | \$15,000  | Contract awarded.   |
| 36 | Tallow Creek | Support SES in inclusion of Suffolk Park in Flood Response Plan   | Complete        | SES (tech intel from BSC) | Staff Time  | To be discussed with SES                                      |
| 37 | Tallow Creek | Install flood gauge at Broken Head Road culvert showing example flood levels  | Underway        | BSC - IPT                 | \$500   | To be completed in June 2022                                  |
| 38 | Tallow Creek | Install lake level and rainfall monitoring station on Tallow Lake and connect to Council's flood warning system   | Complete        | Complete                  | \$25,000  | Complete  |
| 39 | Tallow Creek | Upgrade Broken Head Road Crossing of South Tallow Creek   | Medium Priority | BSC - IPT                 | \$355,000   | 2009 price - needs to be increased to current day value       |
| 40 | Tallow Creek | Upgrade Coogera Circuit Detention   | Medium Priority | BSC - IPT                 | \$380,000   | 2010 price - needs to be increased to current day value       |
| 41 | Tallow Creek | Raise footpath at Tallow Lake footbridge to ensure trafficable up to a lake level of 2.5mAHD.   | Complete        | Complete                  | \$44,000  | Complete  |
| 42 | Tallow Creek | Develop and implement asset management and maintenance plan   | Complete        | Complete                  | \$20,000  | Complete  |
| 43 | Tallow Creek | Implement interim management plan through water level and quality monitoring  | Complete        | Complete                  | \$100,000   | Complete  |
| 44 | Tallow Creek | Develop data collection program for variables such as sand bar and lake stored level, to support development of long-term management plan.  | Complete        | Complete                  | Staff Time  | Complete  |
| 45 | Tallow Creek | Inspect the sand bar and record its level every year prior to the onset of the rainfall season  | Complete        | Complete                  | Staff Time  | Complete  |
| 46 | Tallow Creek | Monitor the level of the opening during the rainfall season and undertake maintenance earthworks to restore the level as per the accepted Interim Sandbar Management Strategy.  | Complete        | Complete                  | Staff Time  | Complete  |
| 47 | Tallow Creek | Update Council Geographic Information Systems (GIS) to include outputs of this plan and update any lots with additional controls over them.   | Complete        | Complete                  | Staff Time  | Complete  |
| 48 | Tallow Creek | Ensure authority uses the GIS layers to prepare property reports.   | Complete        | Complete                  | Staff Time  | Complete  |
| 49 | Tallow Creek | Add adopted document to Council's website, plus additional A1 pdf of FPL  | Complete        | Complete                  | Staff Time  | Complete  |

BYRON SHIRE COUNCIL

|                            |   |   |                    |                   |                     |  |
|----------------------------|---|---|--------------------|-------------------|---------------------|--|
| 50                         | Belongil Creek                            | Preferred Byron Drainage Strategy               | Immediate Priority | BSC - IPT         | \$1,300,000         | Grant awarded for design phase only. Contract award by August 22   |
| 51                         | Belongil Creek                            | Preferred Byron Drainage Strategy Construction  | High Priority      | BSC - IPT         | \$15,000,000        | Grant awarded for design phase only. Contract award by August 23. Construction phase grant application required. |
| 52                         | Belongil Creek                            | Development Controls                            | Complete           | Complete          | Staff Time          | Complete   |
| 53                         | Belongil Creek                            | Community Flood Awareness                       | Immediate Priority | BSC - IPT / Comms | \$10,000            | Funding to be sought   |
| 54                         | Belongil Creek                            | Emergency Planning ( SMS Messaging)             | Complete           | Complete          | \$220,000           | As part of flood warning network and emergency dashboard   |
| 55                         | Belongil Creek                            | Flood Information Dataset                       | Complete           | Complete          | \$220,000           | As part of flood warning network and emergency dashboard   |
| 56                         | Belongil Creek                            | Belongil Creek Entrance Strategy                | Complete           | Complete          | \$125,000           | Complete   |
| 57                         | Belongil Creek                            | Flood Gauges                                    | Complete           | Complete          | \$75,000            | This is always ongoing, upgrading gauges/telemetry etc   |
| 58                         | Belongil Creek                            | Drainage Infrastructure Maintenance             | High Priority      | BSC - Operations  | \$1,092,400         | One of clean of main drains in Byron Bay   |
| 59                         | Belongil Creek                            | Voluntary House Raising Scheme                  | Medium Priority    | BSC - IPT         | \$8,550,000         | Grant submitted May 22 for 2/3 funding for upto 2 houses. Total Scheme is 57 houses at \$150 per house.          |
| 60                         | Staff Recommended Not Supported By A Plan | SGB Flood Pump Generator                        | Funded             | BSC - IPT         | \$140,000           | Protection from power failures.  |
| 61                         | Staff Recommended Not Supported By A Plan | Investigate Options for SGB Flood Gate Upgrades | High Priority      | BSC - IPT         | \$30,000            | Better solutions? No pipes? flood gates with automated knife valves for full closure?                            |
| 62                         | Staff Recommended Not Supported By A Plan | Design SGB and Fern Beach Flood Levy Upgrades   | High Priority      | BSC - IPT         | \$100,000           | Levy over topped in 2022. Propose to raise Levy.   |
| 63                         | Staff Recommended Not Supported By A Plan | Investigate Flood Levy for Western SGB          | Medium Priority    | BSC - IPT         | \$30,000            | Post 2022 flood, investigate the benefits of a levy for west of Capricornia Canal.                               |
| <b>Total Program Value</b> |   |   |                    |                   | <b>\$27,587,900</b> |  |



**Report No. 4.2      Byron Bay Drainage Upgrade Project**

**Directorate:** Infrastructure Services

**Report Author:** Scott Moffett, Drainage & Flood Engineer, IS - Works - Infrastructure Planning

5 **File No:** I2022/633

**Summary:**

Council have been successful in obtaining Commonwealth grant funding to deliver the Byron Bay Drainage Strategy Design (Total funding value \$1.282M).

10 The tender document has been prepared for the design phase and will be released in mid June 2022.

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**RECOMMENDATION:**

15 **That Council notes the current progress of the Byron Bay Drainage Strategy and the Floodplain Management Advisory Committee receive a further report with a consultation plan for the project.**

20

**Report**

The Byron Drainage Strategy will design the town centres flood mitigation plan and the prioritisation of stormwater drainage infrastructure upgrades.

5 The Strategy will include a technical assessment of work to date, model updates and modelling to prepare concept drainage layouts. Understanding, and resolving social and environmental conflicts, key stakeholder inputs. Once a concept layout is complete detail survey will be completed and detail designs prepared. Upon completion the project will be construction ready.

10 The Strategy will detail a drainage system adaptable to future projected sea-level rise, ocean storm surges and increased rainfall intensities associated with climate change. It will also provide updated information to the NSW State Emergency Service to effectively prepare and implement local flood plans to deal with flood emergency response within the Byron Bay town centre.

15 The request for tender will be released in the month of June 2022 with the project due to commence in August 2022.

**Next steps**

The following will be undertaken in 2022:

- Request for Tender release
- Consultancy engagement
- 20 • Data collection
- Initial survey commencement
- Initial model development
- Reporting to the Floodplain Management Advisory Committee

**Strategic Considerations**

25 **Community Strategic Plan and Operational Plan**

| <b>CSP Objective</b>   | <b>CSP Strategy</b>  | <b>DP Action</b>   | <b>Code</b>    | <b>OP Activity</b>                                |
|--|--|--|----------------|---|
| <b>Community Objective 1: We have infrastructure, transport and services which meet our expectations</b> | 1.1: Provide a road network which is safe, accessible and maintained to an acceptable level of service | 1.1.6: Provide stormwater infrastructure to manage flood mitigation, social and environmental outcomes | <b>1.1.6.1</b> | Review and update 10 year Stormwater Levy program |

**Recent Resolutions**

Not applicable

**Legal/Statutory/Policy Considerations**

Not applicable

**5 Financial Considerations**

\$1,282,000 in funding is available. \$1,080,000 in grant funding (Preparing Australian Communities) and \$220,000 in Council funding.

**Consultation and Engagement**

10 A consultation plan will be prepared with Council's Comms team to ensure the project consults with the committee and community appropriately.

**Report No. 4.3 Capricornia Canal and Marshalls Creek**

**Directorate:** Infrastructure Services

**Report Author:** Scott Moffett, Drainage & Flood Engineer, IS - Works - Infrastructure Planning

5 **File No:** I2022/636

**Summary:**

Cr Asren Pugh recently raised a Notice of Motion detailed below.

10 *“Refers the requests raised by the North Byron Shire community regarding dredging the Capricornia Canal and Marshalls Creek to Council’s Water and Sewer Advisory Committee, Coastal and ICOLL Advisory Committee, and Floodplain Management Committee with a view to consider the requests; in particular the option of removing the Marshalls Creek rock walls at Brunswick Heads and its potential to reduce siltation of Marshalls Creek”.*

15 This report reproduces Council staff response to the Notice of Motion (refer File Number I2022/498) and facilitates further discussion by the Flood Advisory Committee.

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**RECOMMENDATION:**

20 **That the Floodplain Management Advisory Committee receive a further report with a proposed scope that includes recommendation received from the committee.**

## Report

Council have resolved that Council's Floodplain Management Advisory Committee and Coastal and ICOLL Advisory Committee consider the requests raised by the North Byron Shire community regarding dredging the Capricornia Canal and Marshalls Creek with a view to consider the requests; in particular the option of removing the Marshalls Creek rock walls at Brunswick Heads and its potential to reduce siltation of Marshalls Creek.

### Flood Risk Management Options (Dredging and Removal of Rock Walls)

The North Byron Floodplain Management Study notes the following on page 109 and can be found at <https://www.byron.nsw.gov.au/files/assets/public/hptrim/land-use-and-planning-planning-strategies-working-documents-north-byron-coastal-creeks-flood-study/e2021-43013-north-byron-floodplain-risk-management-study-web.pdf>

#### Option MC – Marshalls Creek Dredging at Ocean Shores

Option MC investigates dredging along Marshalls Creek. The option is modelled assuming the river bed was lowered by 0.5 m from just to the east of the Pacific Motorway Bridge near Billinudgel down to the confluence of Marshalls Creek with Brunswick River (approximately 7.5 km). Diagram 32 shows the location and extent of dredging along Marshalls Creek.



Diagram 32: Option MC - Marshalls Creek Dredging.

#### Option MC Preliminary Results

Preliminary results for MC show a maximum decrease in flood levels of potentially up to 0.05 m in Ocean Shores and New Brighton and 0.01 m in South Golden Beach.

Due to the limited impact on flood behaviour, and the likely considerable economic and environmental impacts, this option is not recommended for further consideration.

5 It is not unusual for dredging to provide limited if any flood mitigation results when modelled. This is usually because it does not create more storage or a mechanism to greatly alter flood levels because the dredged area fills with water and only allows for an increase in flow velocities. Further it can fill in again quite quickly with sediment moving in the creek system.

A number of rock wall alterations were also modelled in the study, none provided a level of flood mitigation that resulted in them being a recommended action in the Floodplain Management Plan. Further details can be found from page 102 of the above document.

10 The Brunswick Estuary is a system dominated by ocean processes in the lower reaches, like all the Shire's estuaries/ICOLLs. There is a constant push of sand into the lower reaches due to the high littoral drift of sediment up the coast from south to north. This is evident in the formation of bars within the entrance. As such, lower catchment flood levels tend to be dominated by ocean levels.

15 Dredging campaigns in the Brunswick Estuary have historically been undertaken to improve the navigability of the estuary entrance for the commercial fishing fleet. Generally, the benefits have been short-lived with the dredging channels quickly filling in due to sediment deposits from the high littoral transport system along the coastline. Dredging activities have, however, changed the tidal prism of the Brunswick Estuary and have therefore altered the salinity regime, increased turbidity, and reduced areas of  
20 important habitat, such as shallow water, seagrass and intertidal mud banks. The ecological value of the estuary is unique falling within the Cape Byron Marine Park, and the impact of dredging to this waterway would be significant.

25 The North Byron Floodplain Management Study was developed by a reputable consultant with expertise in flood modelling and flood risk management. The development of flood plans follows a step by step process in accordance with the State Government Flood Manual and close consultation with experts within the flood department. The inclusion of options within a Flood Management Plan is based on robust science, modelling, sensitivity testing and expert knowledge.

30 Staff are aware that historical / legacy issues arise each time there is a flood event and our community has been significantly impacted, however to pursue management options that have already been assessed through a robust scientific process and deemed unfeasible results in loss of focus and distraction from implementation of actions in an endorsed Plan.

### **Recommended Investigation**

35 A recommended action from the North Byron Floodplain Management Plan is *to Develop a sediment transport model to investigate modification to the rock walls, as part of the Coastal Management Program for the Brunswick Estuary*. This modelling is aimed at managing sedimentation from an estuary health perspective not flood mitigation.

40 Council is in the process of preparing Coastal Management Programs (CMPs) for its parts of the Byron Shire coastline, prioritising the Open Coast and ICOLLs in the four-stage process set out to develop the long-term strategy. Council has not yet commenced the development of a CMP for the Brunswick Estuary.

5 However, as part of Council's preparation of CMPs for the Open Coast and ICOLLs, the Byron Shire Coastal Hazard Assessment, currently underway, which will cover the entire spatial extent of the Shire's coastline and will inform the CMP. A key task of the Hazard Study is the development of a quantified conceptual sand transport model for the coastal zone. The preparation of sand transport model will include detailed assessment of:

- coastal geomorphology and geophysical setting
- marine and shoreline sediments
- wave climate and coastal processes
- time history of anthropogenic changes along the coastline (including minor and major works such as the Brunswick River training works)
- sediment budgets and the influence of natural and anthropogenic changes on sediment sources and sinks (sediment gains or losses determine whether shorelines will either erode or accrete).

10  
15  
20  
Development of the sediment budget requires consideration of the various possible sources of sand, transport pathways, sinks, and agents of transport. The Brunswick River entrance is a known key source and sink of sediment which will be assessed in detail through this analysis as part of the study. Development of a quantified conceptual sand movement model is important as it focuses on sand transport (or sediment transport) and the key drivers that govern the processes of sand movement. The forcing agents (where does the sand come from and how?) will also be considered in the context of a changing climate. Understanding sediment transport is essential to inform decision making on potential coastal management options to address coastal hazards and/or key issues such as sedimentation.

25 Council has not yet commenced the development of a CMP for the Brunswick Estuary. Stage 1 of development of the CMP process comprises a Scoping Study to:

- collate existing information on the study area;
- carry out stakeholder and community engagement;
- understand values and management issues (i.e. such as community concerns regarding sedimentation of Marshalls Creek);
- identify any information gaps; and
- outline studies required to be carried out to inform the later stages of the CMP development.

35 It is not until Stage 3 of the CMP process where management options are identified and evaluated through risk assessment and cost, benefit analysis. Any management options such as dredging or rock wall alterations (to deal with sedimentation issues) would need to be supported as a feasible option in Stage 3 for inclusion in a CMP before it could proceed.

### Key issues

40 The process followed in the North Byron Floodplain Management Plan has not resulted in the broader community accepting that dredging or rock wall changes will have limited impact on flood levels.

**Options**

1. Do nothing.
2. Complete further studies.

**Next steps**

- 5 It is proposed to discuss at the committee meeting the following questions:
  1. Why haven't the outcomes of the North Byron Floodplain Management Plan been accepted by the community?
  2. Should we do further complete further studies?
  3. If further studies were completed, what should be included in the scope?

**10 Strategic Considerations**

**Community Strategic Plan and Operational Plan**

| <b>CSP Objective</b>   | <b>CSP Strategy</b>   | <b>DP Action</b>                            | <b>Code</b>    | <b>OP Activity</b>   |
|--|---|---|----------------|--|
| <b>Community Objective 3: We protect and enhance our natural environment</b> | 3.3: Partner to protect and enhance the health of the Shire's coastlines, estuaries, waterways and catchments | 3.3.1: Implement Coastal Management Program | <b>3.3.1.1</b> | Continue preparing a Coastal Management Program (CMP) in accordance with the staged process for Cape Byron to South Golden Beach |

**Recent Resolutions**

No Applicable

**Legal/Statutory/Policy Considerations**

- 15 Not applicable

**Financial Considerations**

Development of a conceptual sand/sediment transport model is part of the Byron Shire Coastal Hazard Assessment is not funded. Any other studies are currently unfunded.

- 20 Commencement of a Coastal Management Program for the Brunswick Estuary is currently unfunded. However, the planning of this process may commence in the 2022/23 FY pending funding and staff capacity.



Estimating the costs of further studies is difficult without a clear scope.

### **Consultation and Engagement**

Extensive consultation and engagement was undertaken during the public exhibition stage of the North Byron Flood Risk Management Study and Plan prior to adoption in 2020.

**Report No. 4.4      Byron Shire Post 2022 Flood Analysis Update**

**Directorate:**                      Infrastructure Services

5      **Report Author:**                      Scott Moffett, Drainage & Flood Engineer, IS - Works - Infrastructure Planning

**File No:**                                  I2022/651

**Summary:**

10      Following the recent flooding and rain events, Council has been working closely with State Emergency Services (SES), the Department of Planning & Environment (DPE) and specialist flooding consultants to undertake a post events data collection and summary report.

This report provides a summary of actions and ongoing activities for discussion by the Floodplain Management Advisory Committee (FMAC).

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**RECOMMENDATION:**

20      **That Council notes the report and the Floodplain Management Advisory Committee continue to receive progress reports on the Post 2022 Flood Analysis.**

## Report

5 Following the recent flooding and rain events, Council has been working closely with State Emergency Services (SES), the Department of Planning & Environment (DPE) along with specialist flooding external consultants to undertake a post event/s data collection and summary report.

Council initiated the first phase internal post event survey protocols immediately following the recent events. Council's Flooding and Drainage Engineer was contacted by SES to collaborate in obtaining post event survey marks.

10 SES contracted Public Works Advisory (PWA) to provide survey resourcing across the Byron Shire. DPE then became involved to oversee the data collection. Council's Flooding and Drainage Engineer worked closely with SES, DPE and PWA to isolate the areas of interest with a focus on the main urbanised areas of the shire.

15 Post event survey has now been completed and SES, DPE and PWA, along with Council are currently collating the data and undertaking quality assurance checks. This data will be available for use by Council in the coming weeks. Survey has covered the Brunswick River, Belongil, Tallow Creek catchments and Bangalow.

20 Council then initiated the second phase of post event survey protocols. This has involved releasing media alerts to all shire residents to ask for assistance with collection of additional private property survey. This initiative has been very successful with over 200 responses received so far and more coming in every day. Council has mobilised survey resources to begin the final stage of the survey involving surveying private property recorded flood marks. The scope, timing and funding arrangements have now been negotiated with various Government departments and authorities together with Council.

25 Council contacted DPE to initiate a post event technical analysis. Following discussions with Council's Flooding and Drainage Engineer, DPE agreed to fund all the post event technical analysis.

30 The post event technical analysis will cover the Brunswick River, Belongil, Tallow Creek catchments and Bangalow. Consultants WMA have been commissioned by DPE for the Brunswick River catchment and BMT have been commissioned by DPE for the Belongil and Tallow Creek catchments. QIT, Council Emergency Dashboard provider have also been commissioned to undertake a post event analysis of Councils flood warning system.

There is a large amount of works involved to complete the post event technical analysis and current estimates from DPE and consultants is likely to take two to three months as a minimum.

35 Council staff will provide a digital GIS presentation of all post event survey information gained to date at the committee meeting.

**Key issues**

- Timing of works (reliance on DPE and third-party consultants)
- Privacy of data

**Next steps**

- 5
- Quality assurance and sorting of phase one survey data
  - Process survey for phase two data collection
  - Review draft post event technical analysis
  - Finalise reporting and report back to the Floodplain Management Advisory Committee

10 **Financial Considerations**

- Council's Flooding and Drainage Engineer's time and resource allocation
- All other activities are fully funded by DPE and SES (approx. \$150 000)

**Consultation and Engagement**

- 15 Community consultation has been in the form of digital flood survey mark requests via media releases and Council's website.

**Report No. 4.5 Voluntary House Raising**

**Directorate:** Infrastructure Services

5 **Report Author:** Scott Moffett, Drainage & Flood Engineer, IS - Works - Infrastructure Planning

**File No:** I2022/686

**Summary:**

Council has applied under the Department of Planning and Environment 2022-23 Floodplain Management Grant for Voluntary House Raising funding.

10 Under this program, state government provide two thirds funding with a remaining one third contribution required. The following provides an overview of the program, draft guidelines and proposes that the landowner provides the remaining one third funding contribution.

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**RECOMMENDATION:**

**That Council support:**

- 20 1. **The Draft Byron Shire Council Voluntary House Raising Scheme Guidelines Attachment 1 (E2022/29988) being placed on public exhibition as per Council policy;**
- 25 2. **The benefiting landowner being responsible for the one third funding contribution under the NSW Floodplain Management Program Voluntary House Raising funding grant**
- 30 3. **That for any approved Voluntary House Raising dwellings, Council's development applications fees be waived in order to minimise the costs related to these essential works**
- 35 4. **The Floodplain Management Advisory Committee receive a further report that maps and details the number of houses across the shire with floors levels below the 100 year flood level that are ineligible for funding under the NSW Floodplain Management Program Voluntary House Raising funding grant and the number houses with floors between the 100 year flood level and the probable maximum flood**

# BYRON SHIRE COUNCIL

## STAFF REPORTS - INFRASTRUCTURE SERVICES

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### **Attachments:**

- 1 BSC Voluntary House Raising Scheme - DRAFT Guidelines, E2022/29988 , page 35 [↓](#)

5

## Report

5 Each year, the Department of Planning and Environment Floodplain Management Grant for Voluntary House Raising funding supports local government to manage flood risk. The main aim of the NSW Floodplain Management Grant Program is to reduce the impact of flooding and flood liability on communities and reduce the damage floods cause using environmentally friendly methods.

Within this program is the opportunity to apply for Voluntary House Raising (VHR) further information can be found here [Floodplain management grants | NSW Environment and Heritage](#)

10 Council has applied for VHR, under the 2022-23, round and will continue in future years. If successful, Council will manage and administer the VHR Scheme. The grant outcome is anticipated to be known in November 2022.

15 The VHR scheme is aimed at reducing flood damage to houses by raising the habitable floor level of individual buildings, therefore, reducing the economic and social burden of flooding on the community and government.

Benefits of VHR include:

- reduced flood damage to houses and their contents
- reduced personal loss, stress and post-flood trauma
- reduced frequency of household disruption
- 20 • reduced clean up after floods
- improved safety (if isolated)

A VHR scheme is part of an overall floodplain risk management strategy for the Byron Shire rather than a stand-alone program.

To be eligible for consideration under the VHR scheme properties need to be:

- 25 • With floor heights below the Flood Planning Level (0.5 metres above the 1% predicted flood level)
- Not identified in a designated Voluntary House Purchase area
- Constructed prior to 1986
- Constructed of a material that is suitable for raising (i.e., wood, not brick)

30 Funding is available on a 2:1 basis. The NSW Government will fund two-thirds of the eligible cost of raising the dwelling and it is recommended that the property owner is responsible for the remaining one-third of costs.

35 Council is unable to financially contribute the remaining one-third to the VHR scheme as the raising is not being undertaken in compensation for other flood mitigation works, and the private owner of the property receives significant benefit from the raising of their house in the form of reduced flood exposure and potential increased property value.

5 Based on feedback from Council's working within the VHR Scheme, it is likely to cost approximately \$150,000 to raise a house; this is dependent on the size of the house, location, materials, labour availability and design. It is also recognised that due to the severe and wide-reaching impacts of the 2022 Storm and Flood event and the COVID-19 building boom within the Northern Rivers, that contractors and materials may be hard to source and further increase costs and or delays.

Inclusion of a property within the VHR Scheme is not necessarily confirmation that the property will be eligible for access to State Government funding. Further checks against the VHR Guidelines will be undertaken at the application stage for each property.

10 Attachment 1 (E2022/29988) details how the Voluntary House Raising Scheme will be managed and recognises that is entirely voluntary and properties are under no obligation to participate.

15 The owner of the property is responsible for managing the various activities associated with the actual raising the dwelling. Council officers will provide oversight, guidance and administration of the VHR scheme.

The property owner is responsible for:

- Gaining the relevant development approvals
- Seeking quotes for raising works
- Engaging a suitable contractor

20

- Monitoring the works
- Organising certification of the works
- Submission of grant funding claims to Council

25 It will also be a condition of approval for all raised dwellings that the areas below design flood level (the lower storey) are not to be used for habitable purposes (i.e. enclosed as bedrooms, rumpus rooms, ground floor secondary dwellings or similar). In this regard the lower level can be used as a garage and storage and in some cases a laundry. The area under the house should be left open to enable the free flow of floodwaters in the event of a flood.

### **Eligible and ineligible costs**

30 Costs **eligible** for funding are those that are essential to raise the footprint of the existing habitable floor area or relocate the existing dwelling to a location on higher ground within the same lot (as applicable). Such costs include but are not limited to:

- plan and document preparation, including survey costs
- development application costs

35

- site preparation costs
- disconnection of services and provision of temporary services (water, electricity, communications, gas and stormwater, including rainwater tanks)
- preparation for and raising of the floor to the required minimum flood design level

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- installation of supporting structure for the elevated floor
- reconnection of services



# BYRON SHIRE COUNCIL

## STAFF REPORTS - INFRASTRUCTURE SERVICES

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- the installation of front and back doorsteps or ramp and associated safety rails/devices
- costs associated with inspection and approval by the council
- relocating the house to an appropriate site within the same property if this is considered the most cost-effective option to meet the required minimum design floor level.

Costs which are **not eligible** for funding include but are not limited to:

- any additional features, improvements, renovations and substitutions of services requested by the homeowner, such as landscaping and concrete floor to the understorey
- raising the property above the minimum design floor level that is required
- accommodation for the homeowner while works are being done
- remedial works to the house
- expenses incurred prior to a funding agreement being entered (unless otherwise agreed to in writing by the department).

(Source: <https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Water/Coast-estuary-and-flood-grants/floodplain-management-program-guidelines-voluntary-house-raising-schemes-220095.pdf?la=en&hash=B11D5E75BE8DC1D17B0C1C7BBAE74B471160E9F9>)

## Strategic Considerations

### Community Strategic Plan and Operational Plan

Aligned within upcoming 2022-23 Delivery Program:

- 3.3.2 Floodplain Management – Mitigate the impact of flooding on private and public property.

## Recent Resolutions

### 22-001 Resolved:

That Council notes the report and Attachment 1 (#E2022/30893) for Byron Shire Council's grant submissions as of 31 March 2022.

That Council receives a report in June on the Voluntary House Raising Scheme detailing the process and co-contribution funding requirements. (Dey/Lyon)

*motion was put to the vote and declared carried.*

## Financial Considerations

No Council financial contributions are recommended; however, staff resourcing to manage the funding and provide guidance on the house raising will be required. Feedback from

neighbouring Tweed Shire has advised that it can take up to 3 years for house raising to occur: from grant application to construction completion.

### **Consultation and Engagement**

5 The Voluntary House Raising Scheme is managed as per the NSW Department of Planning and Environment Floodplain Management Program Guidelines.

Council considered the property owner contribution at a recent Strategic Planning Workshop on 2 June.

# Byron Shire Voluntary House Raising Scheme

Floodplain Risk Management



Byron Shire Council Voluntary House Raising

Version Control

| VERSION | AMENDMENT DETAILS         | CLAUSES AMENDED | DATE ISSUED |
|---------|---------------------------|-----------------|-------------|
| 1.0     | Draft for Internal Review |                 | 05/04/2022  |
| 1.1     |                           |                 |             |
| 1.2     |                           |                 |             |
| 1.3     |                           |                 |             |
|         |                           |                 |             |
|         |                           |                 |             |
|         |                           |                 |             |

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## Byron Shire Council Voluntary House Raising

### 1. Background

The Byron Shire contains many flood prone houses that are subject to over-floor flooding even in minor and moderate flood events. The economic and social burden of flooding on the community can be reduced by raising these dwellings to increase their flood immunity.

Voluntary House Raising (VHR) is aimed at reducing the flood damage to houses by raising the habitable floor level of individual buildings.

Both the Byron Shire Coastal Creeks Floodplain Risk Management Plans recommend the establishment of VHR Schemes.

The February 2022 flood event has further highlighted the need for a VHR scheme with many dwellings experiencing over floor flooding or being damaged in the event, and many more experiencing 'near misses'.

This document aims to define the Byron Shire's proposed VHR scheme and outline a process for the owners of identified properties to access the scheme.

### 2. Voluntary House Raising

VHR is aimed at reducing the flood damage to houses by raising the habitable floor level of individual buildings.

The primary aim of the VHR scheme is to reduce the economic and social burden of flooding on the community by avoiding property damage.

Benefits of VHR include:

- reduced flood damage to houses and their contents
- reduced personal loss, stress and post-flood trauma
- reduced frequency of household disruption
- reduced clean up after floods
- improved safety (if isolated)

The VHR scheme will form part of an overall floodplain risk management strategy for the Byron Shire. It is not a stand-alone program.

It should be noted that VHR schemes can actually increase residual risk (risk leftover after mitigation) if the occupants of a raised dwelling incorrectly assume that raising has eliminated all flood risk. In most cases the dwelling will still be susceptible to over floor flooding in extreme events. **Occupants are still advised to evacuate their properties when advised to do so by emergency services.**

### Byron Shire Council Voluntary House Raising

VHR schemes in NSW are supported by the NSW Department of Planning, Industry and Environment (formerly the Office of Environment and Heritage). The State Government's guidelines for VHR schemes are attached as Appendix 1.

### 3. The Byron Shire VHR Scheme

The Byron Shire Voluntary House Raising Scheme incorporates recommendations from the North Byron Floodplain Risk Management Study and Belongil Creek Floodplain Risk Management Plan.

- [North Byron Floodplain Risk Management Study and Plan - Byron Shire Council \(nsw.gov.au\)](#)
- [Belongil Creek floodplain - Byron Shire Council \(nsw.gov.au\)](#)

Both North Byron and Belongil Floodplain Risk Management Plans contain identified properties are eligible for VHR. Following the recent February/March AGRN1012 flooding event, North Byron and Belongil floodplain flood height inundation will be reviewed, and additional houses could be added or removed to the VHR list following the outcomes and associated actions of the NSW Flood Inquiry.

Using Council's latest flood studies, topography data, floor level survey, historic flood records and dwelling type information a more detailed scoping study has been completed for the VHR scheme.

To be eligible for consideration under the VHR scheme, properties needed to be:

- Affected by over floor flooding below a 1% AEP flood event
- Not identified in a designated Voluntary House Purchase area
- Constructed prior to 1986
- Constructed of a material that is suitable for raising (i.e. wood, not brick)

Those properties that were eligible were then prioritised according to the following criteria:

- Depth of over floor flooding in a 20% AEP (minor) event
- Depth of over floor flooding in a 1% AEP (major) event

The shortlisted properties from the above prioritisation will be ground-truthed to confirm their suitability for the VHR scheme when funding becomes available.

**The prioritised, VHR eligible property list is confidential and kept internally at Council due to the sensitive, property specific information it contains.**

The proposed VHR scheme outlined in this document and (confidential) priority list does not exactly match the draft schemes outlined in the Floodplain Risk Management Plans. This is due to a variety of reasons, including:

- March 2017 flood highlighted other/additional dwellings

### Byron Shire Council Voluntary House Raising

- Renovations/Replacement of dwellings since the Floodplain Risk Management Plans
- Further investigations and more detailed flood modelling in some suburbs may uncover additional suitable properties
- Further investigations proved some Floodplain Risk Management Plans listed properties are not suitable
- Confirmation of Voluntary House Purchase Schemes.

It should be noted that the VHR property list excludes any property identified in a Designated Voluntary House Purchase Area.

In scoping the VHR scheme, it is acknowledged that there may be some gaps in the data relied upon and it is possible that some suitable, eligible properties may have been overlooked. Should any overlooked property come to light in future it will be assessed and considered for the scheme on a case-by case basis.

The recent February/March AGRN 1012 natural disaster flooding event may see some changes to the VHR scheme property list following the outcomes and associated actions of the NSW Flood Inquiry.

## 4. Funding

Funding for VHR is provided by the State Government, via the Department of Planning, and Environment (DPE). Council does not currently have funding available under this grant program but has applied under the 2023 round and will continue in future years. If successful, Council will manage and administers the VHR program.

Funding is available on a 2:1 basis. The NSW Government will fund two-thirds of the eligible cost of raising the dwelling. The owner of the dwelling is responsible for the remaining one-third of costs.

Council is unable to financially contribute the remaining one-third to the VHR scheme as the raising is not being undertaken in compensation for other flood mitigation works, and the private owner of the property receives significant benefit from the raising of their house in the form of reduced flood exposure and potential increased property value.

Inclusion of a property within this VHR Scheme is not necessarily confirmation that the property will be eligible for access to State Government funding. Further checks against the VHR Guidelines will be undertaken at the application stage for each property.

VHR grant funding is paid to the landowner in arrears upon submission of evidence of spending and confirmation of completion of milestones. Therefore, the landowner must be prepared to pay all expenses associated with the house raising upfront and then be

### Byron Shire Council Voluntary House Raising

reimbursed later. Milestones will be established through the house raising process, such as completion of DA approvals, to ease cash flow constraints.

**Importantly, only the costs directly related to raising the dwelling are eligible for grant funding.** Ancillary building activity costs (i.e. renovations) cannot be funded under scheme. These activities can occur in parallel to house raising, but the costs need to be separated and carefully monitored; the homeowner is responsible for the additional costs.

Quotes for the raising of a dwelling will need to be itemised. Where additional works are also to occur Council may require additional assurances to be satisfied that only the eligible activities are being funded.

## 5. The VHR Process

**The VHR scheme is entirely voluntary. Properties listed are under no obligation to participate.**

The owner of the property is responsible for managing the various activities associated with the actual raising the dwelling. Council officers only provide oversight, guidance and administration of the VHR scheme.

Therefore, the owner is responsible for:

- Gaining the relevant development approvals
- Seeking quotes for raising works
- Engaging a suitable contractor
- Monitoring the works
- Organising certification of the works
- Submission of grant funding claims to Council

Council officers will be available to assist and provide guidance, where appropriate.

It will also be a condition of approval for all raised dwellings that the **areas below design flood level (the lower storey) are not to be used for habitable purposes** (i.e. enclosed as bedrooms, rumpus rooms, ground floor secondary dwellings or similar). In this regard the lower level can be used as a garage and storage and in some cases a laundry. The area under the house should be left open to enable the free flow of floodwaters in the event of a flood.

Council officers will inspect raised dwellings periodically going forward to ensure compliance with Development Control Plan Section C2 – Areas Affected by Flood.

- [Development Control Plan 2014 - Byron Shire Council \(nsw.gov.au\)](#)
- [Development Control Plan 2010 - Byron Shire Council \(nsw.gov.au\)](#)



Byron Shire Council Voluntary House Raising

Answers to various common “Frequently Asked Questions” are also attached as Appendix 2.

**6. Appendix 1 – NSW OEH Guidelines for Voluntary House Raising Schemes**

- [Guidelines for voluntary house raising schemes \(nsw.gov.au\)](https://www.nsw.gov.au/guidelines-for-voluntary-house-raising-schemes)

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Byron Shire Council Voluntary House Raising

## 7. Appendix 2 – Voluntary House Raising Frequently Asked Questions

### What is the Voluntary House Raising (VHR) scheme?

VHR is aimed at reducing flood damage to houses by raising the habitable floor level of individual buildings therefore reducing the economic and social burden of flooding on the community and government.

Benefits of VHR include:

- reduced flood damage to houses and their contents
- reduced personal loss, stress and post-flood trauma
- reduced frequency of household disruption
- reduced clean up after floods
- improved safety (if isolated)

Unfortunately, there is currently no funding available for Byron Shire eligible houses, however, Council will be seeking funds under the [Department of Planning and Environment 2022 Floodplain Management Grant](#).

If Council is successful in being awarded funding, the following information will help guide Byron Shire's VHR scheme and the process for the owners of identified properties to access the scheme.

VHR is limited to those dwellings that are structurally compatible with raising (such as pier and beam construction, but not slab on ground or masonry). The raising will include provision of engineered footings and piers, reconnection of services, and extensions to accesses, such as stairways. It also includes necessary development applications, fees, inspections and certification. Funding does not extend to further renovations or improvements to the raised structure, or money already spent on flood repairs.

A VHR scheme is part of an overall floodplain risk management strategy for the Byron Shire rather than a stand-alone program.

VHR schemes in NSW are supported by the NSW Department of Planning and Environment (formerly the Office of Environment and Heritage). Refer to the [Guidelines for voluntary house raising schemes](#)

The Byron Shire VHR Scheme incorporates recommendations from the:

- [North Byron Floodplain Risk Management Plan](#).
- [Belongil Creek Floodplain](#)

Staff have used Council's latest flood studies, topography data, floor level survey, historic flood records and dwelling type information to complete an assessment of properties for the VHR scheme.

### Byron Shire Council Voluntary House Raising

To be eligible for consideration under the VHR scheme properties need to be:

- With floor heights below the Flood Planning Level (0.5 metres above the 1% predicted flood level)
- Not identified in a designated Voluntary House Purchase area
- Constructed prior to 1986
- Constructed of a material that is suitable for raising (i.e., wood, not brick)

#### **Why is Council applying for VHR funding?**

The Byron Shire contains many flood prone houses that are subject to over-floor inundation during floods, including minor events. Flooding of these dwellings causes property damage, household disruption, stress, personal loss, trauma, clean-up costs, demand on emergency services and many other negative costs on the community.

Byron Shire Council's adopted Floodplain Risk Management Plans recommend the establishment of Voluntary House Raising Schemes.

The February/March 2022 flood event further highlighted the need for a VHR scheme with many isolated residents experiencing 'near misses' and a number of dwellings experiencing over floor flooding or being damaged in the event.

#### **What areas will the VHR scheme cover?**

The scheme covers selected properties in the Brunswick River and Belongil Creek catchments.

The owners of selected properties will be notified in writing of their eligibility for the scheme.

#### **What is the application process?**

Council will apply for funding through the NSW Floodplain Management Program each year and, if access to the funding pool is granted, will enter into an agreement with the homeowners. As funding is limited, those dwellings higher on the priority list will be given priority over those lower on the list. The 2021-2023 funding round is currently open.

#### **How do I access the funding?**

There is no application process as Council identifies the priority list for the VHR scheme and will contact priority list property owners directly. However, if you would like to lodge an Expression of Interest, email Council on [council@byron.nsw.gov.au](mailto:council@byron.nsw.gov.au) with your property and contact details.

Council will contact you requesting your interest when funding is available. This will depend on where your dwelling is located on the priority list and how much funding the NSW Department of Planning and Environment has granted Byron Shire.

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#### **How much is the VHR subsidy?**

Generally, the subsidy is a ratio of 2:1 (the standard grant offered by the department).

The amount will vary from house to house depending on the location and the minimum height. However, Councils can also elect to 'cap' the subsidy to support equitable access to landowners.

As per the program, grant payments can be claimed in three stages.

- Stage 1 - House raised, foundations and columns in place.
- Stage 2 - All steel work completed, and façade completed.
- Stage 3 - all works required by the Development Application have been completed and signed off by Principal Certifying Authority.

#### **Who organises the quotes?**

It is the responsibility of the property owner to arrange three quotes for the works and provide to Council together with a statement of which one is their preferred one and why (if it is not the lowest quote).

#### **What does Council do?**

Council supports owners with obtaining the grant funding, managing the payments, and ensuring the works are completed in accordance with the grant requirements.

#### **As a homeowner what do I have to do?**

Council is only a facilitator of the grant. It is the owner's responsibility to:

- Obtain three quotes for the work,
- Once an agreement has been signed by Council and the owner, the owner is to engage the approved contractor.
- It is the owner's or their contractor's responsibility to obtain development consent and have Construction Certificate issued prior to work commencing,
- Obtain a surveyor's certificate showing the floor has been built in accordance with the approvals and Flood Planning Level.

#### **What costs are eligible for funding?**

Currently the funding is only available for:

- Plan and document preparation, including surveying costs
- Development application costs
- Site preparation
- Disconnection of services and provisions of temporary services
- Preparation for and raising of the floor to at least the Flood Planning Level
- Installation of supporting structure for the elevated floor
- Reconnection of Services

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- Installation of front and back doorsteps or ramp and associated safety rails
- Costs associated with inspections and approval by the Council.
- relocating the house to an appropriate site within the same property if this is considered the most cost-effective option to meet the required minimum design floor level.

#### **What costs are not eligible for funding?**

- Additional features, improvements, renovations, and substitutions of services requested by the homeowner such as landscaping and concrete floor to the understorey
- Any relocation costs incurred during work
- Remedial works to the house if the house needs to be brought up to a standard to allow it to be raised
- Retrospective works

The scheme will only contribute to costs directly related to house raising. The following are examples of costs that are NOT eligible for funding:

- Additional Renovations
- Repairing Existing Damage
- Ground Floor Slabs
- Painting
- Landscaping
- Home Maintenance
- Storage
- New Non-Habitable Downstairs Rooms (i.e. second bathroom)

#### **Can I undertake other work at the same time?**

Yes. But the VHR Scheme will not contribute to these costs.

Owners may wish to add a veranda, concrete under the house or some other improvements once it is lifted. They can do as much renovation as they wish and permits allow. The program only pays a contribution towards the raising component of the plans, Development Application, and building costs. All other costs of improvements, renovation/extension are at the owners own expense but the work can be undertaken at the same time.

All quotes and contracts will need to be detailed and itemised to ensure only eligible costs are funded by the VHR scheme. Council Officers will oversee this to ensure public money is only allocated towards the intended program outcomes.

#### **Do I have to get a Development Approval (DA)?**

Yes. All the usual planning and/or building approvals still apply and it is the landowner's responsibility to acquire them. Any other approvals (i.e. construction certificate, sewer

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etc.) will be required too.

#### What plans are required for my Development Application?

- Existing floorplan and elevations
- Proposed floorplan and elevations

Other plans or reports may be required, depending on the complexity of the application. Further guidance is available on Council's website:

<https://www.byron.nsw.gov.au/Development>

#### What plans will be required for my Construction Certificate?

- Existing floorplan and elevations
- Proposed floorplan and elevations
- Engineering plans and certification

Other plans or reports may be required, depending on the complexity of the application. Further guidance is available on Council's website: Building & development - Byron Shire Council (nsw.gov.au)

#### Are the Development Application fees waived?

No. But you can claim part of the cost back through the VHR scheme.

#### Do I have to get the raised house Engineered?

Yes. This would be part of the Development Application process. This is important because flood waters can impose significant loads on the supporting structure of a house, including impact loads, debris loads and buoyancy forces.

#### How high can I raise my house?

At minimum, you'll need to raise the floor to "Minimum Habitable Floor Level" for flooding as defined by Development Control Plan Section C2 – Areas Affected by Flood.

At maximum, building height limits for your land use zone will limit building height, a variation to the height controls may be considered in special circumstances.

#### Do I have to get the building works inspected by Council?

Yes. The costs associated with this are eligible for grant funding.

#### What if I don't want to wait for funding under the VHR scheme?

In this instance, owner initiated and funded house raising can occur subject to development approvals from Council being obtained. **VHRs funding cannot be sought retrospectively.**

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#### **What if my property is not identified as part of the VHR scheme?**

If your property does not meet the criteria and is not on the priority list it is unable to access VHR grant funds. In this instance, owner initiated and funded house raising can occur subject to development approvals from Council being obtained.

#### **What if I am outside of the scheme areas but was badly impacted by the February/March 2022 flood?**

The VHR schemes are likely to take many years to implement. During this time, Council will continue to update its flood studies and risk management plans, and will consider other areas outside of those currently identified

You can still submit an Expression of Interest, which will trigger a review of your property.

#### **What happens if I say no to the VHR funding?**

Nothing. VHR schemes are entirely voluntary. If you are not interested now, you can simply do nothing. You can change your mind in future and your property can be reassessed against the prioritised list of properties for available funding. You will remain eligible.

#### **Are businesses eligible for these schemes?**

No. VHR schemes only apply to residential land containing an existing and permanent habitable dwelling.

#### **Need help?**

Should you require further information or wish to discuss the above, please do not hesitate to contact Council's Flood and Drainage Engineer on 02 6626 7000 or email [council@byron.nsw.gov.au](mailto:council@byron.nsw.gov.au).