



## **Business Paper**

### **Shire Infrastructure Committee Meeting**

**Monday, 1 May 2017**

**Commencing at the conclusion of the Corporate Governance  
Committee and Shire Services Committee Meetings**

**Committee Rooms 203 and 204,  
Level 2, Administration Building  
4-20 Eton Street, Sutherland**

## **ORDER OF BUSINESS**

**1. ACKNOWLEDGEMENT OF COUNTRY**

**2. APOLOGIES**

**3. DISCLOSURES OF INTEREST**

**4. CONFIRMATION OF MINUTES OF THE PREVIOUS MEETING**

**5. PRESENTATIONS**

**6. REPORTS FROM OFFICERS**

INF015-17          Update on Council's Floodplain Risk Management Process

**7. QUESTIONS**

**8. CONSIDERATION OF BUSINESS IN CLOSED SESSION**

**9. CONFIDENTIAL REPORTS FROM OFFICERS**

INF012A-17          T687/16 Sylvania Wharf Upgrade

INF013A-17          T651/16 Construction of Barden Ridge Reserve

INF014A-17          T703/17 Design and Construct the Sandy Point Rural Fire Station

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**INF015-17      UPDATE ON COUNCIL'S FLOODPLAIN RISK MANAGEMENT  
PROCESS**

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**Attachments:** Nil

**EXECUTIVE SUMMARY**

- Council is continuing to pursue a program of Floodplain Risk Management in accordance with the NSW Government's Flood Prone Land Policy in order to reduce the risk to life and property from flooding.
- Council has prepared, but not yet formally adopted, Floodplain Risk Management Studies and Plans (FRMS&Ps) for Lower Georges River, Gwawley Bay catchment and Kurnell Township. These identify, assess and recommend measures to address the flood problem.
- Following Council's adoption of a Sea Level Rise Policy in December 2016, there is a need to update the three FRMS&Ps to reflect the new policy. This will involve additional flood modelling as well as reviewing and refining Council's approach to determining and communicating levels of flood risk. This work will provide the basis for updating Section 149 planning certificates for flood affected properties.
- Work will commence this financial year with the expectation that the reports will be finalised and submitted for formal adoption by Council in late 2017 and early 2018.

**REPORT RECOMMENDATION**

That the report Update on Council's Floodplain Risk Management Process be received and noted.

## **PURPOSE**

The purpose of this report is to provide information on the work required to update and finalise Floodplain Risk Management Studies and Plans prepared for the Lower Georges River, Gwawley Bay catchment and for Kurnell Township, so that they may be formally adopted by Council to enable the updating of Section 149 planning certificates.

## **BACKGROUND**

The waterways of the Sutherland Shire are a significant natural asset and are highly valued by the local community as described in the draft 2017 Sutherland Shire Community Strategic Plan (CSP) and community consultation undertaken to prepare the CSP. Like most coastal areas, these waterways, as well as the local catchments draining to them, are at risk of flooding. This risk has been exacerbated by urban development in flood affected areas, which historically did not always take full account of flood risk.

Floods have occurred regularly at different locations across the Shire causing both tangible and intangible damage. Notable floods have occurred in Kurnell in 1990 and 1998, Caringbah in 1998 and Taren Point in 2003.

In recognition of this flood risk, Council has for many years pursued a program of Floodplain Risk Management in accordance with the NSW Government's Flood Prone Land Policy, as outlined in the 2005 Floodplain Development Manual, as well as procedures outlined in industry guidelines such as Australian Rainfall & Runoff. This program involves undertaking flood studies to describe flood behaviour and the nature of the flood problem. The preparation of Floodplain Risk Management Studies and Plans (FRMS&Ps) to identify, assess and recommend measures to address the problems, and to progressively implement adopted measures.

Council initially focussed on addressing flood problems associated with mainstream waterways such as Bundeena Creek, Woronora River and the Lower Georges River. This has led to the preparation of FRMS&Ps for the Woronora River in 1995 and the Lower Georges River in 2011.

Following revisions to the NSW Flood Prone Land Policy in 2001 and damage caused by overland flooding in 2003, Council undertook an initial assessment of overland flooding across the Shire in 2004 (WKS053-05). The assessment provided an indication of flood extents for the 1% annual exceedence probability (AEP) event and for an extreme event. Higher risk catchments were prioritised for more detailed overland flood studies. Section 149(5) Planning Certificates were later updated for properties identified by this initial assessment as flood affected (PLN010-09).

Detailed overland flood studies were subsequently undertaken for catchments draining to Kurnell Township (SAF005-09), Gwawley Bay (EHR042-13) and Woollooware Bay (EHR088-14). Draft FRMS&Ps were then prepared for Kurnell Township (SAF174-12) and Gwawley Bay (EHR100-15). The flood studies and FRMS&Ps were prepared in consultation with the local community and overseen by Council's catchment based Floodplain Risk Management committees.

In recognition of the potential impact of sea level rise on coastal and catchment flooding in the Shire, Council commissioned a sea level rise risk assessment in 2009 (ENV041-09). The sea level rise risk assessment was completed in 2011 and adopted by Council in 2015 (Mayoral Minute No. 34/14-15). Prior to this, sea level rise was considered during the preparation of the flood studies and FRMS&Ps noted above based on policy advice issued by the NSW Department of Environment & Climate Change in 2009.

Council has subsequently prepared and publicly exhibited and adopted its own sea level rise policy (EHR058-16) and (PLN009-17). Section 149 Planning Certificates for properties identified under the policy are now in the process of being updated.

As part of the adoption of the Sea Level Rise Policy, Council resolved to update its flood studies and FRMS&Ps to reflect the new policy. This will involve undertaking additional flood modelling to determine the influence of increased sea levels on mainstream and overland flood behaviour. This update work will also provide the opportunity to review and refine Council's approach to determining and communicating levels of flood risk.

Section 149 Planning Certificates will need to be updated to reflect the outcomes of the above work. This will require ensuring that the wording of notations is appropriate and that there is consistency:

- across catchments;
- with State Environmental Planning Policies (SEPPs) and the 2015 Sutherland Shire Local Environmental Plan (LEP); and
- with flood-related development controls given in the 2015 Sutherland Shire Development Control Plan (DCP).

Ultimately, the completion of this work will allow the FRMS&Ps for Lower Georges River, Gwawley Bay Catchment and Kurnell Township to be finalised and reported to Council for formal adoption. It also allows for Section 149 Planning Certificates to be updated for flood affected properties. The implementation of measures outlined in the adopted plan can be programmed for implementation.

## DISCUSSION

### Gwawley Bay Catchment Floodplain Risk Management Study and Plan

It is proposed that the above work commence with updating the 2015 Gwawley Bay Catchment FRMS&P. This work will initially focus on reviewing and refining the modelled representation of flood behaviour in Sylvania Waterways, which is affected by both tidal inundation from the Lower Georges River as well as overland flow from the Gwawley Bay catchment. It is expected that refinements to the representation of flood behaviour in this area will provide increased confidence in the estimated level of flood affectation and greater certainty in the application of flood-related development controls.

The existing two dimensional hydraulic model will be updated and re-run to account for increased tailwater levels in the Lower Georges River in line with Council's Sea Level Rise Policy. Results from the modelling will be tabulated and mapped, making them easily read by the public. At the same time, guidance will be prepared regarding the practical implementation of the Sea Level Rise Policy through Council's DCP. This guidance can be incorporated as part of the next scheduled update of the DCP.

Discussions are currently being held with Sylvania Waterways Ltd regarding the most cost-effective process for providing flood-affected property owners with updated flood information as well as surveyed floor information collected during preparation of the FRMS&P. This process will be considered in light of recent efforts to move towards automating the production of flood information sheets.

The representation of flood risk within the FRMS&P and its use for landuse planning and development control purposes will be reviewed and refined. This will likely involve:

- refining the current draft mapping of the three flood risk precincts;
- assessing if the current 500mm freeboard remains appropriate for flood-related development controls in overland flow areas;
- determining the need for maintaining development controls above the 1% AEP plus 500mm freeboard and considering consistency with Section 117 directions and guidelines issued by NSW Department of Planning regarding development controls in low flood risk areas;
- determining an appropriate flood planning area for inclusion in the next update of the Sutherland Shire LEP; and
- identifying flood control lots that are suitable for assessment under the SEPP (Exempt and Complying Development Codes) 2008.

Current notations on the Section 149 Planning Certificates for flood-affected properties will be updated to reflect the level of flood risk. This will draw on previous discussions held by Council's Floodplain Management committees regarding appropriate wording for notations. Consideration will be given to how the Section 149 notation can best be linked to the process for providing property specific flood information.

The FRMS&P will briefly consider the implications of the release of the updated Australian Rainfall & Runoff industry guideline, including updated rainfall intensity-frequency-duration data and updated rainfall temporal patterns. Although the use of new modelling methodologies and new data for flood modelling would likely result in changes to current modelled flood behaviour, this work would constitute a major update to the flood study. The time and expense in updating and re-running the flood models to account for the new methodologies and data is likely to be significant, and is not considered to warrant an update at this stage. The models can be updated at a later date, either as part of a major review process or following a major flood if observed rainfall and flood level data is available.

Ultimately it is expected that the above work will help inform the updates to the FRMS&Ps for Lower Georges River and Kurnell Township as well as the preparation of future FRMS&Ps, such as for Woollooware Bay. In doing so, it will be important to balance the need for maintaining a degree of consistency across catchments with accommodating any catchment specific land use planning and development control measures.

#### **Lower Georges River Floodplain Risk Management Study and Plan**

It is proposed to review and update the 2011 Lower Georges FRMS&P following the update and finalisation of the Gwawley Bay Catchment FRMS&P. This review and update will be less involved than for the Gwawley Bay Catchment FRMS&P due to the less complex flood modelling methodology employed for the Lower Georges River, the nature of mainstream flood behaviour and the comparatively limited mainstream flood risk.

The work will initially involve updating and re-running the existing one-dimensional flood model of the Lower Georges River to account for increased tailwater levels in line with Council's Sea Level Rise Policy. Results from the modelling will be tabulated and mapped.

Drawing from the outcomes of the Gwawley Bay FRMS&P update, the update to the Lower Georges River FRMS&P will look at:

- confirming the extent of the study area and the degree of interaction with the study areas for other FRMS&Ps;
- refining the flood risk precinct mapping, confirming an appropriate freeboard and mapping the flood planning area;
- the need for refining flood-related development controls; and
- reviewing and potentially updating proposed structural flood mitigation options.

Some properties affected by mainstream flooding from the Lower Georges River will also be affected by overland flooding, particularly in the Woollooware Bay catchment. Consideration will be given to how the notations on the Section 149 Planning Certificate can be appropriately worded to account for the two types of flood risk.

### **Kurnell Township Floodplain Risk Management Study and Plan**

The proposed update to the Kurnell Township FRMS&P will follow a similar scope of work to that described for the Gwawley Bay Catchment FRMS&P above. This will include reviewing and refining flood-related development controls, particularly for driveway access and car parking, to ensure that desired reductions in flood risk are balanced with the need to maintain good urban design and to comply with other provisions of the DCP more broadly.

### **Proposed 2017/18 Floodplain Risk Management Program**

The outcomes of the updates to the three FRMS&Ps will be used to inform projects proposed as part of the 2017/18 Floodplain Risk Management Program as outlined within Council's 2017/18 Operational Plan. The proposed projects include:

- continuation of Bundeena FRMS&P;
- Shire-wide Overland Flood Study;
- Woollooware Bay FRMS&P;
- Woronora River and Catchment Flood Study; and
- Flood Information Automation project.

Subject to Council's adoption of the 2017/18 Operational Plan, Four Year Delivery Program and Resourcing Strategy, as well as the availability of grant funding assistance through the NSW Government's Floodplain Management Program, the projects will be initiated in 2017/18, with implementation phased over two to three financial years. The strategic direction and progress of these projects will be discussed as part of the work of Council's Floodplain Risk Management Committee, which will be reconvened shortly.

### **BUDGET AND RESOURCES**

The update to the Gwawley Bay Catchment FRMS&P will commence this financial year using existing funding from Council's 2016/17 Stormwater Levy. It is proposed that the project be carried forward to 2017/18 with the expectation that the FRMS&P report be finalised and presented to Council for adoption in late 2017.

The update to the Lower Georges River FRMS&P will also be initiated this financial year however the bulk of the work is expected to be completed in 2017/18. The project will be funded through Council's 2016/17 and 2017/18 Stormwater Levy. It is expected that the FRMS&P report be finalised and presented to Council for adoption by late 2017.

The update to the Kurnell Township FRMS&P will commence in 2017/8 using funding allocated from Council's 2017/18 Stormwater Levy. The timeframe for finalising the FRMS&P report will depend on the outcomes from the updates of the above two FRMS&Ps and the required scope of work, however the aim will be to present the FRMS&P for Council's adoption in early 2018.

**POLICY**

Council will continue to satisfy its duty of care under the NSW Flood Prone Land Policy and Section 733 of the *Local Government Act 1993* by acting in accordance with the existing un-adopted FRMS&Ps, for example, by providing flood information available in the FRMS&Ps. It is however important that the FRMS&Ps be updated, finalised and adopted as quickly as possible, so that Section 149 Planning Certificates can also be updated to reflect the available flood information.

**CONCLUSION**

As part of Council's ongoing Floodplain Risk Management program and following Council's adoption of a Sea Level Rise Policy in December 2016, there is a need to update and finalise FRMS&Ps for Lower Georges River, Gwawley Bay catchment and the Kurnell Township so that they may be presented to Council for formal adoption. This work will mainly involve additional flood modelling and reviewing of flood planning matters. It will also be recommended that Section 149 Planning Certificates be updated to reflect the adopted FRMS&Ps and to enable Council to continue to satisfy its duty of care under the NSW Flood Prone Land Policy and Section 733 of the *Local Government Act 1993*.

**RESPONSIBLE OFFICER**

The officer responsible for the preparation of this report is the Stormwater and Waterway Assets Manager, Mr Erin Sellers, who can be contacted on 9710 0587.

File Number: 2015/36431

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**CONFIDENTIAL REPORTS FROM OFFICERS**

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In accordance with Section 10A(1) of Local Government Act 1993, the following matters will be considered in the Closed Session:

**INF012A-17      T687/16 SYLVANIA WHARF UPGRADE****Section 10A(2)(d)(i) Commercial Information of a Confidential Nature:**

This matter is being considered in Closed session as it relates to commercial information the disclosure of which would be likely to prejudice the commercial position of the person, company or tenderer who supplied it. On balance, the public interest in preserving the confidentiality of information provided by persons, companies or tenderers outweighs the public interest in maintaining openness and transparency in council decision-making because the disclosure of this information could reveal information that is commercial in confidence and the release of which could damage the commercial position of the person, company or tenderer who supplied it.

**INF013A-17      T651/16 CONSTRUCTION OF BARDEN RIDGE RESERVE****Section 10A(2)(d)(i) Commercial Information of a Confidential Nature:**

This matter is being considered in Closed session as it relates to commercial information the disclosure of which would be likely to prejudice the commercial position of the person, company or tenderer who supplied it. On balance, the public interest in preserving the confidentiality of information provided by persons, companies or tenderers outweighs the public interest in maintaining openness and transparency in council decision-making because the disclosure of this information could reveal information that is commercial in confidence and the release of which could damage the commercial position of the person, company or tenderer who supplied it.

**INF014A-17      T703/17 DESIGN AND CONSTRUCT THE SANDY POINT RURAL FIRE STATION****Section 10A(2)(d)(i) Commercial Information of a Confidential Nature:**

This matter is being considered in Closed session as it relates to commercial information the disclosure of which would be likely to prejudice the commercial position of the person, company or tenderer who supplied it. On balance, the public interest in preserving the confidentiality of information provided by persons, companies or tenderers outweighs the public interest in maintaining openness and transparency in council decision-making because the disclosure of this information could reveal information that is commercial in confidence and the release of which could damage the commercial position of the person, company or tenderer who supplied it.