Shoalhaven Natural Resource & Floodplain Management Committee

Meeting Date: Tuesday, 06 June, 2017
Location: Seven Mile Room, Nowra Administrative Centre
Time: 4.00 pm

Please note: Council’s Code of Meeting Practice permits the electronic recording and broadcast of the proceedings of meetings of the Council which are open to the public. Your attendance at this meeting is taken as consent to the possibility that your image and/or voice may be recorded and broadcast to the public.

Agenda

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5. General Business
Membership
Clr Findley – Chairperson
All Councillors
General Manager or nominee

Community representatives:-
Jessica Zealand
David McCorkell
Duncan Marshall
Ian Stewart
Dr Michael Brungs
Dirk Treloar
Annie Boutland
Thomas Booler
Helen Moody
David Reynolds
Kaye Milsom
Brett Stevenson
Chris Grounds
Mike Clear
Paul Beckett

Government Agency representatives:-
Jerrinja LALC
Ulladulla LALC
NPWS
SRCMA
OEH
RMS
DPI Fisheries
Local Lands Service
Crown Lands
NSW Office of Water
Jervis Bay Marine Park Authority
SES

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

Objective
To foster sustainable management of Shoalhaven’s natural resources including floodplains, coast and estuaries.

Role of Committee
1. Provide overall guidance for the management of natural resource management including floodplain management, estuary management and coastal zone management in accordance with Federal, State and Local Government Policy and Legislative instruments;
2. Advise Council on natural resource management including floodplain management, estuary management and coastal zone management matters;
3. Formulate agreed vision, goals, objectives, and targets sought from the Natural Resource Management Plans;
4. Facilitate the preparation of Natural Resources Management Plans;
5. Provides input into the identification of management options for Natural Resources Management Plans;

6. Facilitate broad community consultation;

7. Monitor State and Federal Government natural resource management direction and advises Council on appropriate response;

8. Monitor advances in knowledge and science of natural resource management issues (such as sea level rise and climate change) and integrate this knowledge in new Natural Resource Management Plans as well as in the review of existing Plans; and

MINUTES OF THE SHOALHAVEN NATURAL RESOURCE & FLOODPLAIN MANAGEMENT COMMITTEE

Meeting Date: Tuesday, 29 November 2016
Location: Jervis Bay Rooms 1-3, Level 3, Nowra Administrative Centre, Nowra
Time: 6.07pm

The following members were present:

Clr Findley – Chairperson
Clr White
Clr Watson
Clr Alldrick
Clr Pakes
Clr Gartner
Clr Cheyne
Clr Kitchener
Clr Levett
Clr Proudfoot
John Bucinskas – OEH
Jason Carson – LLS
Duncan Marshall
Mike Clear
Brett Stevenson
Annie Boutland
Chris Grounds
David Reynolds
John Murtagh – OEH
Matt Carr – JBMP
Alex Deura – NPWS
Jillian Reynolds – DPI Fisheries
Mohammed Ullah – OEH
Helen Moody
Ian Stewart
Paul Beckett
Tim Fletcher - Director Planning & Development Services

Others present:
Kelie Lowe - Environmental Services Manager
Isabelle Ghetti – Natural Resource and Floodplain Manager
Ailsa Schofield – Senior Floodplain Engineer
Apologies / Leave of Absence

An apology was received from David McCorkell, Ian Borrowdale, Michael Brungs, Dirk Treloar, Kaye Milsom, Allan Lugg, Mike Hammond and David Zerafa.

David Reynolds and Annie Boutland left early during the Presentations.

Confirmation of the Minutes

Recommendation

That the Minutes of the Shoalhaven Natural Resource & Floodplain Management Committee held on Wednesday 20 July 2016 be confirmed.

Note:

- Item 4 in the previous Minutes should note that: Shoalhaven City Council’s current Community Engagement Policy is based on the IAPP2 model.
- Chris Grounds advised that the Item 7 – Sub Committee met and developed the TOR for the Committee.
  - Staff advised that there is a report in the Agenda which relates to this item
- Item 6 – It was noted in the previous meeting that there were two (2) resolutions by the Committee in regard to sea level rise

  These recommendations were reported to Council for their consideration. Council resolved to receive the recommendations for information.

  A question was also asked as to whether or not the legal advice that the General Manager had sought peer review had been done. Staff advised that Council had sought legal advice on similar matters in regard to provisions under Section 733 of the Local Government Act 1993 and the advice was consistent with that of previous advice.

RESOLVED (By consent)

That the Minutes of the Shoalhaven Natural Resource & Floodplain Management Committee held on Wednesday 20 July 2016 be confirmed.

CARRIED

Declarations of Interest

Nil
REPORTS

SN16.2 Community engagement on Coastal Management - Our Coast Our Lifestyle
HPERM Ref: D16/351599

Note: A presentation was made by Nicola Wass from Straight Talk in relation to recent survey and results.

Recommendation

That Council
1. Place the full report on Council’s website and inform the community via media release and emails to stakeholders who participated in this project
2. The outcomes of ‘Our Coast Our Lifestyle’ inform the development of a future Coastal Management Program for the Shoalhaven.

Recommendation (Helen Moody / Mike Clear)

That:
1. Council place the full report on Council’s website and inform the community via media release and emails to stakeholders who participated in this project
2. The outcomes of ‘Our Coast Our Lifestyle’ inform the development of a future Coastal Management Program for the Shoalhaven.

CARRIED

SN16.3 Shoalhaven Coastal Hazard Review
HPERM Ref: D16/361774

Note: A Presentation was made by Chris Adamantidis, Principal Coastal Engineer from Advisian in relation to Coastal Hazard Review

Recommendation

That the committee:
1. Receive the presentation on the draft Shoalhaven Coastal Hazard Review.
2. Recommend Council consider placing the draft Shoalhaven Coastal Hazard Review on public exhibition.

Recommendation (Mike Clear / Clr Levett)

That:
1. The Committee receive the presentation on the draft Shoalhaven Coastal Hazard Review;
2. Subject to Councils affirmation of the current policy position on sea level rise which will be reported to the upcoming meeting of Strategy and Assets Committee Meeting on 13 December 2016, Council place the draft Shoalhaven Coastal Hazard Review on public exhibition.

CARRIED
Recommendation
That the Committee recommend that Council write to the Office of Environment and Heritage to seek direction on how adopted Floodplain Risk Management Studies and Plans are to be revised in light of changes to modelling inputs or catchment characteristics.

Recommendation (Clr Watson / Clr Gartner)
That Council write to the Office of Environment and Heritage to seek direction on how adopted Floodplain Risk Management Studies and Plans are to be revised in light of changes to modelling inputs or catchment characteristics.
CARRIED

Recommendation
That Council:
1. Write to the Minister for the National Disaster Relief Assistance Program funding thanking him for providing the funding to Council to repair the 2015 flood levee damages.
2. Note that based on the successful 2015 National Disaster Relief Assistance Program funding application, works will be prioritised to utilise the NDRA funding and Council contribution to undertake levee repairs.

Recommendation (Clr Gartner / Clr Pakes)
That Council:
1. Write to the Minister for the National Disaster Relief Assistance Program funding thanking him for providing the funding to Council to repair the 2015 flood levee damages.
2. Note that based on the successful 2015 National Disaster Relief Assistance Program funding application, works will be prioritised to utilise the NDRA funding and Council contribution to undertake levee repairs.
CARRIED

Recommendation
That the Committee recommend that Council
1. Proceed with detailed design, Review of Environmental Factors, Aboriginal Heritage assessment for long-term coastal erosion management works at Currarong including a trial geotextile sand groyne and sand nourishment. That further community consultation be undertaken as part of this process.
2. Council recognise the opportunity provided by the August 2015 and June 2016 East Coast Lows to investigate adaptive strategies to the management of Council’s Coastal Assets such as retreat, relocate and/or rationalisation of the number of assets where possible.
Recommendation (Clr Watson / Clr Gartner)
That Council:
1. Proceed with detailed design, Review of Environmental Factors, Aboriginal Heritage assessment for long-term coastal erosion management works at Curraong including a trial geotextile sand groyne and sand nourishment. That further community consultation be undertaken as part of this process.
2. Recognise the opportunity provided by the August 2015 and June 2016 East Coast Lows to investigate adaptive strategies to the management of Council’s Coastal Assets such as retreat, relocate and/or rationalisation of the number of assets where possible.

CARRIED

SN16.7 Natural Resources and Floodplain Management Committee - Terms of Reference - review

Note: Chris Grounds advised the Committee that the Sub Committee met and developed the attached draft TOR.

Mike Clear thanked Chris Grounds and John Murtagh for their involvement in developing this important document for this Committee.

Recommendation
That the Committee discuss and consider adoption of the revised Terms of Reference provided in attachment 2 of this report.

Recommendation (Clr Watson / Chris Grounds)
That the revised Terms of Reference (Attached) be submitted to Council for Adoption.

CARRIED

SN16.8 Water Quality Remote Sensor Installation - Shoalhaven Heads

Recommendation (Item to be determined under delegated authority)
That the Committee receive the report for information.

RESOLVED (Clr Gartner / Brett Stevenson)
That the Committee receive the report for information.

CARRIED

SN16.9 Sea Level Rise Projection in Shoalhaven - Science & Policy

Note: The Committee discussed precautionary measures in relation to sea level rise projections and science and policy.

Recommendation (Item to be determined under delegated authority)
Submitted to the Committee for discussion.
RESOLVED (By consent)
That the report regarding Sea Level Rise Projection in Shoalhaven – Science and Policy be received for information.
CARRIED

SN16.10 Current Methods of Protection of the Environment  
HPERM Ref: D16/351252

Recommendation (Item to be determined under delegated authority)
Submittee to the Committee for discussion.

RESOLVED (Clr Watson / Clr Gartner)
That the report regarding Current Methods of Protection of the Environment be received for information and the Committee thanked Paul for his information.
CARRIED

GENERAL BUSINESS

SN16.12 Attendance at the Floodplain Management Conference

Note: Mike Clear thanked the Committee and Council for the opportunity to attend the Floodplain Management Conference.

RESOLVED (Mike Clear / Brett Stevenson)
That the Committee thank Council for the opportunity for members and Councillors to attend the Floodplain Management Conference.
CARRIED

SN16.13 Appreciation for Ailsa Schofield - Senior Floodplain Engineer

Note: Clr Findley, Tim Fletcher, Kelie Lowe, Isabelle Ghetti and the Committee expressed their appreciation and thanks to Ailsa Schofield and wished her well in her future endeavours as Ailsa has resigned from Council as Senior Floodplain Engineer to take up a position with SES.
ADDENDUM REPORTS

SN16.11 Member Resignation - Thomas Booler

Recommendation

That:

1. The Membership resignation of Thomas Booler be accepted and that he be thanked for his contribution to the Shoalhaven Natural Resources and Floodplain Management Committee.

2. That Council advertise the vacant community representative position.

Recommendation (Clr Watson / Duncan Marshall)

That:

1. The resignation of Thomas Booler be accepted and that he be thanked for his contribution to the Shoalhaven Natural Resources and Floodplain Management Committee.

2. Council advertise the vacant community representative position.

CARRIED

There being no further business, the meeting concluded, the time being 7.09pm.

Clr Findley
CHAIRPERSON
SN17.1 Vacant Community Member Position

HPERM Ref: D17/168184

Group: Finance Corporate & Community Services Group
Section: Human Resources, Governance & Customer Service

Attachments: 1. Membership applications received

Purpose / Summary
To advise the Committee of the potential new community member to fill the vacant position.

Recommendation
That
1. Mr Peter Hanson be appointed as a Community Member on the Shoalhaven Natural Resources and Floodplain Management Committee, filling the current vacancy on the Committee.
2. Mr Hanson be notified of his appointment and be invited to all future meetings.
3. That the ten (10) other persons who applied for the position be thanked for their applications and interest in the Committee.

Options
1. As recommended.

   Implications: this appointment will fill the community member vacancy on the committee.

2. That the Shoalhaven Natural Resources and Floodplain Management Committee adopt an alternative recommendation.

Background
Thomas Booler (community member) resigned Wednesday 20 July 2016. The community member position was advertised and applications closed Tuesday 28 February 2017. Shoalhaven City Council received 11 applications for the community member position.

The matrix in attachment 1 lists those people that applied. A simple score rating was used to assist in selecting a person to recommend to the Committee.

It is recommended Peter Hanson be appointed as the community member for the Shoalhaven Natural Resources and Floodplain Management Committee.

Mr Hanson is a resident of Nowra who has lived in the Shoalhaven for over 60 years. His family history includes goldmining and fishing in the Shoalhaven, which provides a historical connection to those using natural resources as their livelihood. Mr Hanson is an active member of Shoalhaven River Watch who carry out Natural Resources Management Activities within the catchment and along riverbanks.
Community Engagement

The vacancy was advertised on 2ST and PowerFM, the South Coast Register and Milton Ulladulla Times and social media platforms.
| Name           | Locality         | Did the response to question 2 indicate that the person has a broad interest in natural resource management? | Did the applicant answer yes to all of the attribute questions? | Is the person a member of an existing group or consultative body? | Does the person have professional experience in natural resources or related field? | Which part of the Shoalhaven and which waterways does the person have particular interest in? |
|----------------|------------------|----------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|----------------------------------------------------------------|--------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------
| Ian Zandstra   | Nowra            | ✓                                                                                                       | ✓                                                                  | ✓                                                                | ✓                                                                               | Northern                                                                                                                                     |
| Michael Leggett| North Nowra      | ✓                                                                                                       | ✓                                                                  | ✓                                                                |                                                                                  | Northern/Central                                                                               |
| Robyn Kerves   | Lake Conjola     | ✓                                                                                                       | ✓                                                                  | ✓                                                                |                                                                                  | Southern/Lake Conjola                                                                 |
| Dawn Thompson  | Vincentia        | ✓                                                                                                       | ✓                                                                  | ✓                                                                | ✓                                                                               | Central/Jervis Bay                                                                 |
| Robyn Flack    | Shoalhaven Heads | ✓                                                                                                       | ✓                                                                  | ✓                                                                |                                                                                  | Northern                                                                                                                                     |
| Jane Curran    | Tapitallee       | ✓                                                                                                       | ✓                                                                  | ✓                                                                |                                                                                  | Northern                                                                                                                                     |
| Deborah Hargraves| Nowra            | ✓                                                                                                       | ✓                                                                  | ✓                                                                | ✓                                                                               | Northern                                                                                                                                     |
| Peter McVay    | Vincentia        | ✓                                                                                                       | ✓                                                                  | ✓                                                                | ✓                                                                               | Northern/Central                                                                       |
| Peter Hanson   | Nowra            | ✓                                                                                                       | ✓                                                                  | ✓                                                                | ✓                                                                               | Northern/Central                                                                       |
| Anne Norton    | Currarong        | ✓                                                                                                       | ✓                                                                  | ✓                                                                | ✓                                                                               | Central                                                                                                                                     |
| Robert Stafford| Bomaderry        | ✓                                                                                                       | ✓                                                                  | ✓                                                                | ✓                                                                               | Northern                                                                                                                                     |
SN17.2 Update on the status of the Broughton Creek and Shoalhaven River water quality buoys

HPERM Ref: D17/79973

Group: Planning Environment & Development Group
Section: Environmental Services

Purpose / Summary

1. To provide an update on the use of remote water quality sensors deployed and located in Broughton Creek and the Shoalhaven River at Shoalhaven Heads.
2. To seek funding for the ongoing maintenance, repairs and web hosting of the two existing water quality buoys.

Recommendation (Item to be determined under delegated authority)

1. That an update of the functions of remote sensor water quality buoys installed in the Shoalhaven River and Broughton Creek be received for information.
2. That Council consider allocating to Environmental Services budget for the ongoing maintenance and repairs of the two existing water quality buoys located at Shoalhaven Heads and Broughton Creek to allow the program to continue.

Options

1. The Committee recommend to Council the allocation of the funds to allow for the ongoing maintenance and repairs of the remote water quality sensors.
   
   Implications: This will ensure the equipment ongoing live streaming of real-time data to Council’s website and will greatly enhance the accuracy of data collected for access by the Public.

2. Not allocate funding.

   Implications: The equipment was originally provided to Council free of charge with only the cost of installation having to be borne by Council. Unfortunately, the equipment has proved to require a lot of maintenance as by its very nature, the water quality sensors must be continuously immersed in salt water and so attracts marine growth, which requires regular removal.

   Probes do not last indefinitely and also require ongoing maintenance or replacement.

   Without adequate funding, this asset will inevitably become unserviceable.

Background

Council was gifted a number of water quality sensors known as “Hydro-labs” which were previously used in Botany Bay. These were offered free of charge, having been surplus to requirements by Australian Laboratory Supplies (ALS). Two of these sensors and associated buoys have been deployed, one in the Shoalhaven River at Shoalhaven Heads and another in Broughton Creek.
Prior to receiving this equipment from ALS, it was a requirement that it was decontaminated to ensure no marine organisms from another catchment would be introduced into our waterways. This was done by mechanically removing all marine debris and leaving the equipment in the sunlight for a minimum of 4 weeks. Then as a final measure, the equipment immersed in chlorine solution.

Real time data from these sensors is accessed through the “AQUADATA” portal, which is available to the public on Council’s website. Please see below example of “real time” data reporting.

This is a Council initiative to provide web-based communication of real-time water quality indicators of estuary health for access by the public, developers and Government agencies as well as by Shoalhaven Water and Waste Services to satisfy their statutory water quality monitoring requirements by the Environment Protection Authority (EPA).
This snapshot of data shows real-time recording of pH, salinity, conductivity, and temperature over a week period from 7th – 13th March 2017. (Note that the dissolved oxygen shown is static due to that sensor never being installed.)

The salinity level from the 7th March 2017 shows that the water had next to zero salinity following 53mm of rainfall experienced in the previous 24hrs. This rainfall event impacted the catchment for two days. Then salinity can be seen to increase back to normal tidal influences over the next couple of days.

Similar trends can be observed with the other parameters such as a decrease in temperature of a couple of degrees and increase in the pH over the same period.

**Maintenance**

Currently, the water quality buoys need to be serviced every fortnight to remove marine buildup. One sonde is swapped out for another to allow for defouling and calibration. This is labour intensive but as the Shoalhaven has high marine biological activity is a very necessary step to keep them functioning day in day out.

However, as these sondes are constantly submerged in a marine environment the life expectancy is only a few years at best without failure of some of the equipment. Replacing individual probes costs in the order of $1500 each and with each sonde having multiple probes the risk of damage to one of them and requirement for replacement increases.

If this project is to continue beyond the current life expectancy, an ongoing budget will be required. Currently, Environmental Services has absorbed the cost of installation and maintenance but will not be capable of replacing the inevitable failed sonde. This is why consideration needs to be given for planning replacement of this equipment.
Community Engagement

Accessibility of water quality data obtained in this way is a method of providing the community with data on environmental estuary health and recreational water quality.

Water quality data, particularly to determine salinity profiles in the Shoalhaven River at Shoalhaven Heads has been requested in the past by the Committee and local oyster farmers. Data is also of interest to the general public and developers when needed to access base-line water quality indicators.

Water quality monitoring provides much needed information to Council when making estuary management decisions as well as monitoring and responding to point source and diffuse pollution sources within the catchment.

Policy Implications

Data obtained satisfies the requirements stated in the Council’s Estuary Management Plans and Community Strategic Plan.

Financial Implications

Without ongoing operational budget the continuing maintenance and replacement of parts such as probes, will mean that Council will not be able to continue this project beyond the life of the existing hardware. For example, one pH probe costs $1408.00 to replace with the whole sonde costing in the vicinity of $20,000.

On top of this, the data is made available from sites hosted by Australian Laboratory Supplies (ALS). This presently costs $960 per year for the two sites.
SN17.3 Update on the certification process for the draft CZMP and update on the development of the new Coastal Management Plan

HPERM Ref: D17/159762

Group: Planning Environment & Development Group
Section: Environmental Services

Purpose / Summary
To inform the Shoalhaven Natural Resource & Floodplain Management committee (NR&FMC) of progress to date of

- Certification of the 2012 draft Coastal Zone Management Plan and
- Development of the new Coastal Management Plan.

Recommendation
The Committee recommend to Council that:

1. Allocate $40,000 from the 2018/19 coast and estuary budget, as its 50% contribution, towards the development of the Coastal Management Plan subject to the Coastal Management Act being enacted; and

2. Allocate $30,000 from the 2018/19 coast and estuary budget to update three (3) estuary health report cards to inform the development of the Coastal Management Program.

Options
1. As recommended.
   Implications: This will mean that Council will provide funding to engage a consultant to develop a Coastal management Plan in accordance with the new coastal legislation when it is adopted.

2. Receive the report for information only and not support the allocation of $40,000/50% contribution towards the development of a Coastal Management Plan
   Implications: Not providing a 50% contribution towards the development of a Coastal Management Plan will affect Council’s future ability to secure on-going grant funding under the NSW Coastal Program for coastal/estuary works and review of Estuary Management Plans

3. Request further information.
   Implications: A further report will be provided to the Committee.

   Implications: Unknown.
Background

The NSW Coastal Reforms

In November 2014, the NSW Government announced Stage 2 of its coastal reforms. Stage 1 reforms were announced in September 2012. This was unfortunate timing for Shoalhaven as the draft Shoalhaven Coastal Zone Management Plan (CZMP) had been completed in May 2012. As a component of the reforms, the NSW Government announced that certification of draft CZMPs would be deferred until the Stage 2 reform process had been completed. So the Shoalhaven CZMP remained in draft form.

Stage 2 reforms provide a new legislative and regulatory framework for coastal management. This takes the form of the new Coastal Management Act 2016 (still not gazetted) to replace the Coastal Protection Act 1979.

The new Act requires Council to prepare a Coastal Management Plan (CMP) which will replace the 2012 draft CZMP. A new Coastal Management Manual has been prepared to guide councils through the preparation process and 50% funding is available to engage a consultant to prepare the document.

Stage 1, in the preparation of a CMP, is the preparation of a Scoping Study for Shoalhaven City Council's Coastal Management Program.

The Scoping Study

A draft Scoping Study for Shoalhaven City Council’s Coastal Management Program is being prepared by Environmental Services. The draft must be reviewed by NSW Office of Environment Heritage (OEH). NSW OEH officers from the Wollongong office Coast and Estuaries Section have agreed to ‘workshop’ the draft Scoping Study with Council staff within the next three months.

The Scoping Study sets the scene for the CMP and provides a framework for what needs to be included in the CMP that is specific to Shoalhaven.

It will identify:

- Which of the four management areas are applicable (all four in Shoalhaven)
  - Coastal wetlands and littoral rainforest area
  - Coastal vulnerability area
  - Coastal environment area Coastal use area
  - Current management practices for each of the management areas
- Gaps in current management
- Which of the management areas need more focus
- Opportunities for improvement
- Any additional information or studies that are required
- The way forward in the process of developing the CMP

The current draft of the Scoping Study provides information for all these items. Some of the major gaps identified to date include,

- Six estuary management plans/natural resource management strategies need reviewing
• Seven Estuary Health Report Cards need updating
• Dedicated resources required for estuary management, including facilitating the process for updating EMPs and NRM strategies and ensuring implementation of the actions
• Resources required for a Communications Plan and ongoing community education

The Coastal Management Plan
In accordance with section 14 of the new Coastal Management Act, a local Council must prepare a CMP in accordance with the coastal management manual and give effect to the coastal management areas defined in Part 2 of the new Act. Section 18 of the new Act requires that Council review its CMP at least once every 10 years.

On 15 December 2016, Council resolved to:

1. Adopt and submit Council’s draft 2012 Coastal Zone Management Plan and adopted estuary management plans to the Minister for Planning, The Hon Rob Stokes MP, for certification, to ensure Council is eligible to apply for future grant funding for works under the NSW Government’s coast and estuary program, while Council prepares a new Coastal Management Program.

2. The Minister be advised that Council is aware that the hazard lines within the revised hazard study do not reflect Council’s adopted sea level lines and is urgently reviewing those lines.

3. Council commits to amending the certified Coastal Zone Management Plan (CZMP) as soon as the revised coastal hazard study has been adopted and by 30 June 2017

In accordance with the new Act, the preparation of a CMP must comply with the new coastal management manual, which is still only in draft form. At this time, due to the following reasons Council is not in a position to commence preparation of a CMP:

• The Scoping Study is a preliminary requirement to a CMP. Whilst the preparation of the Scoping Study is well underway, it requires the collation and distillation of a large amount of information and the input of several staff and, as stated above, will need to be reviewed by OEH staff.

• In preparing the 2012 draft CZMP, Council was very much ‘ahead of the game’. This worked against us for reasons outlined above. Given the uncertainty and lack of information flowing from the NSW Government regarding the status of the Coastal Management Act 2016, and when it may commence, it’s advisable to take a circumspect, ‘wait-and-see’ approach to the preparation of the CMP.

From the date of commencement (gazettal) of the new Act, Council would have 5 years to complete the CMP. OEH have further advised that, even without a certified CZMP, Council can apply to the NSW Government for funds to engage a consultant to develop the CMP. Five years would be a comfortable amount of time to prepare a quality CMP.

• The Stage 2 Coastal reforms are still in progress. The new Act and supporting legislation have not been enacted and the draft coastal management manual and supporting technical information are still in draft form. Therefore, there is no certainty that if Council progresses with the development of a CMP that this will comply with legislative requirements and the manual as these could change.

Therefore, Council needs to be in a position to commence preparation of a CMP once the Stage 2 coastal reforms are finalised.
2012 Draft CZMP

Schedule 3 of the new Act provides a savings provision for councils and a certified CZMP is taken to be a CMP prepared and adopted under the new Act for a period of 5 years. The funding guidelines for NSW coast and estuary grant funding program changed in 2016 and councils are only eligible to apply for funding for projects identified within a certified CZMP or CMP. Therefore, Council resolved in December 2016 to seek certification of the draft 2012 CZMP.

Council has recently been advised by OEH staff on the status of the draft CZMP. After having gone to OEH and then to the Minister for Planning, who passed it on to the Coastal Panel, it is now back with the Minister and we understand that amendments will need to made before certification can be provided. OEH have advised that this would be the best course of action for Council, i.e. to amend the draft CZMP and have it certified, whilst at the same time, continuing with the Scoping Study and applying for funds to prepare the CMP.

OEH have further advised that Council can also amend the three most recently reviewed Estuary Management Plans and submit them for certification with the CZMP, i.e. St Georges Basin, Lake Conjola and Tabourie Lake.

Council officers have concerns as to the full extent of the amendments that may be required by NSW OEH in relation to both the CZMP and the Estuary Management Plans. There is also concern about the length of time that this process could take, as this will have a direct impact on Council's resources and ability to implement both the CZMP and Estuary Management Plans. This is because the plans will remain uncertified during the time it takes to update them, which means that Council will not be eligible to apply for funding to implement the plans.

Community Engagement

The Our Coast Our Lifestyle community engagement project was completed in 2016.

The purpose of the project was to

- Educate the community about the risk of coastal erosion and the coastal management options that are available to respond to that risk
- Understand community preferences for these different management options and the factors Councils should be considering when making decisions in response to coastal erosion risk and storm damage.

The final report was received in September 2016 and provides Council with clear community views about the management of coastal risks. With this information already gathered, it is not proposed that another major citywide consultation will be undertaken in the development of the Scoping Study. However, the amended draft CZMP, together with the three amended EMPs, will need to go on public exhibition prior to being sent back to the Minister for certification.

Policy Implications

Council’s Coast and Estuary Programs and Policies are linked, in one way or another to the certification of the CZMP and the development of the CMP. The on-going uncertainty of the Stage 2 Coastal Reforms has impacted on Council’s ability to plan with any certainty the management of our Coast and Estuary program and related polices/strategies.
Financial Implications

The Scoping Study is being prepared by Environmental Services and will be reviewed by OEH. Therefore, no dedicated budget will be required. The CMP will be prepared by consultants and the NSW Government will provide 50% funding to coastal councils for this purpose, it is estimated that the total cost will be $80,000, requiring SCC to provide $40,000. However, the scoping study may identify that additional matching funds are required to complete the CMP to fill information gaps. Whilst Council can apply for state government funds to develop a CMP, without a certified CZMP or CMP, Council is unable to apply for funding to implement other projects under the NSW Coast and Estuary Grants.

Risk Implications

The risk of not seeking certification of Council’s draft 2012 CZMP whilst progressing developing of a CMP will be that Council will have limited opportunities to apply for grant funds to implement coast and estuary management projects within our City.
SN17.4  Update on the Lower Shoalhaven River and St Georges Basin Flood Risk Management Study and Plan

HPERM Ref: D17/164327

Group: Planning Environment & Development Group

Section: Environmental Services

Purpose / Summary
To provide the Committee with an update of the review of the Flood Risk Management Study and Plan for the Lower Shoalhaven River and St Georges Basin (FRMS&P).

Recommendation (Item to be determined under delegated authority)
That the Shoalhaven Natural Resources and Floodplain Management Committee receive the report for information regarding the status update of the review of the Flood Risk Management Study and Plan for the Lower Shoalhaven River and St Georges Basin for information.

Options
1. As recommended.
   Implications: this will allow for Council to continue to met its milestones and funding obligations to commence the review of the flood flood risk management studies and plans.

2. Alternative recommendation.
   Implications: Unknown.

Background
Council is seeking Consultants to undertake the review of the Flood Risk Management Study & Plan (FRMS&P) for the Lower Shoalhaven River and St Georges Basin catchments. The successful Consultant/s will be required to undertake detailed flood modelling of the catchments as well as undertake floodplain risk management options assessment and consultation in accordance with the NSW Floodplain Development Manual 2005, Australian Rainfall & Runoff: A Guide to Flood Estimation 2016 and industry best practice.

Shoalhaven City Council is currently inviting tenders for the carrying out of Consultancy these services. Tenders are closing 8 June 2017.

Community Engagement
The community will continue to be involved as part of the FRMS&P’s for the Lower Shoalhaven River and St Georges Basin. Status updates will continue to be reported to and discussed with members of the Shoalhaven Natural Resources and Floodplain Management Committee.
Financial Implications

The FRMS&P’s are 2/3 funded by OEH and 1/3 funded by Council.
SN17.5 Shoalhaven River Levee Repair Works Update

HPERM Ref: D17/164448

Group: Planning Environment & Development Group
Section: Environmental Services

Attachments:
2. MIN - Flood - Shoalhaven River - Flood Levee - Category 1 - Advance Restoration - 2016 / 2017 Budget bid

Purpose / Summary
To update the Committee on the Shoalhaven River Levee Flood Damage Restoration 2017 Project.

Recommendation (Item to be determined under delegated authority)
That Committee receive the report on the Shoalhaven River Flood Levee Works Update for information.

Options
1. As recommended.
   **Implications:** Council will continue the tender process to undertake levee repair works.

2. Alternative recommendation.
   **Implications:** Unknown.

Background
Council received National Disaster Relief Authority (NDRA) program funding to repair the levee flood damages that occurred in 2015 ($1.13 million) which was reported to this committee on 29 November 2016 (attachment 1). Council also submitted a NDRA claim ($272,470) to repair flood damages occurred in June 2016 and this is still pending. NDRA is a joint funding initiative from Commonwealth and State Governments to provide disaster relief and recovery payments and infrastructure restoration to assist communities recover from the effects of natural disasters.

Council engaged NSW Public Works immediately following the August 2015 flood event to inspect and prepare estimates to repair the levee system to pre-flood condition. Council also engaged NSW Public Works to project manage the current Shoalhaven River Levee Flood Damage Restoration 2017 project. In addition, a Review of Environmental Factors for the restoration works has been prepared by Ecological Consultants Australia.

Council invited tenders on 21 March 2017 to select a suitable contractor to conduct the restoration of Shoalhaven River levee damages that occurred during August 2015 and June 2016 flood including the high priority levee audit defects that were identified prior to August 2015 flood. The tender closing date was 18th April 2017.
The tender evaluation is underway and Council will receive a tender evaluation report from the NSW Public Works. The tender evaluation report will be submitted directly to the Ordinary Council Meeting pursuant to Clause 3 of Council’s “Acceptance of Tenders – Reports to Council” Policy. It is anticipated that Council will be in a position to engage a contractor during July 2017.

In accordance with Section 10A(2)(d)(i) of the Local Government Act 1993, some information will remain confidential as it would, if disclosed, prejudice the commercial position of the person who supplied it. It is not in the public interest to disclose this information as it may reveal commercial-in-confidence provisions of a contract, diminish the competitive commercial value of any information to any person and/or prejudice any person’s legitimate business, commercial, professional or financial interests.

**Community Engagement**

Council’s Floodplain Engineers and Property Unit Officer had met with property owners to discuss access and levee repair works to be conducted on their properties. Deed of Agreements (DoA) have been sent to property owners who would be affected by the levee repair works. DoA’s will allow Council to conduct the current levee repair works and future maintenance work on levees located on private properties. To date, most of the DoA’s been received from the property owners, Council is negotiating with the remaining property owners to finalise the remaining DoA’s.

**Policy Implications**

Council’s Asset Management Plan for flood mitigation drainage structures documents the required inspection and maintenance of the Sholahaven River levee system.

**Financial Implications**

The result of Councils claims for funding under NDRA to repair the flood damages caused in 2015 ($1.13 million) was successful and the 2016 claim ($272,470) is currently unknown. The tender process has identified that the actual costs to complete the 2016 repairs are higher than the estimated repair costs. Council is in the process of updating and increasing the 2016 damages claim to reflect these increased costs.

Council included a capital works bid of $200,000 for the high priority levee repair works identified in the levee audit report following the Council resolution (MIN16.119b) (attachment 2). A report to Council will be prepared if more funds are required to complete the works.

**Risk Implications**

It is necessary to conduct the repairs so that the levees can continue protecting people and property from river flooding and to ensure existing damaged levee sections are not damaged further.
SN16.5 Shoalhaven River Levee Repair Works update

HPERM Ref: D16/346291

Group: Planning & Development Services Group
Section: Environmental Services

Attachments: 1. Location and ID of Shoalhaven River Levees
2. Lower Shoalhaven River Levee Audit Report (under separate cover)
3. August 2015 Flood Damage Location Map
4. June 2016 Flood Damage Location Map

Purpose / Summary
The purpose of this report is to inform the Committee on the status of the Shoalhaven River levee repair works and to advise that Council has been successful in obtaining funding under the 2015 National Disaster Relief Assistance Program.

Recommendation
That Council:
1. Write to the Minister for the National Disaster Relief Assistance Program funding thanking him for providing the funding to Council to repair the 2015 flood levee damages.
2. Note that based on the successful 2015 National Disaster Relief Assistance Program funding application, works will be prioritised to utilise the NDRA funding and Council contribution to undertake levee repairs.

Options
1. The Committee supports the recommendation.
   Implications: Ensures funding is received and levee works can proceed.

2. The Committee provide an alternative recommendation for future consideration by Council.
   Implications: Unknown

Background
Council manages the Lower Shoalhaven River flood mitigation levees (26.1 km) which were constructed in the 1970s and 1980s. There are two levee categories, category 1 levees which protect residential settlements and category 2 levees which predominately protect farmland and farming buildings from the impacts of flooding (Attachment 1: Location and ID of Shoalhaven City Council Flood Levees). In 2005, part of the Category 1 levee known as the Terara levee was upgraded to its current design standard.

In May 2015 Council had the levees audited by Royal HaskoningDHV (Attachment 2: Lower Shoalhaven River Levee Audit Report). The audit identified a number of defects in the levees. Subsequent to the levee audit, two East Coast lows in August 2015 (Attachment 3:
August 2015 Levee Flood Damage Location Map) and June 2016 (Attachment 4: June 2016 Levee Flood Damage Location Map) caused additional damage or defects.

Council has put in a claim for funding under the National Disaster Relief Assistance Program (NDRA) to repair the flood damages caused in 2015 amounting to $1.13 million. NSW Public Works were engaged immediately after the August 2015 flood to inspect and prepare estimates to repair the levee system to pre-flood condition. Council also submitted a NDRA claim to repair damages caused in June 2016. NDRA is a joint funding initiative from Commonwealth and State Governments to provide disaster relief and recovery payments and infrastructure restoration to help communities recover from the effects of natural disasters.

Category 1 levees are identified as critical infrastructure as they provide protection from riverine flood inundation to residential properties. The repair of these was therefore identified as a high priority. Due to limited funding availability Council resolved (MIN16.119a&b) to only advance the restoration of category 1 flood levees damaged during the August 2015 flood and repair the high priority defects identified during the levee audit, prior to knowing the NDRA 2015 outcome. Now that Council has been notified that its NDRA 2015 funding application was successful, it is recommended that works be prioritised to utilise the NDRA funding and Council contribution to undertake levee repairs.

It is necessary to conduct the repairs so that levees can continue protecting people and property from river flooding and to ensure existing damaged levee sections are not damaged further.

Deed of Agreements (DoA) are being sent to property owners who will be affected by the levee repair works. DoA will allow Council to conduct the current levee repair works and future maintenance work on levees located on private properties. The Levee audit identified levee crest damages caused by cattle trampling and vehicles. Council will repair these unacceptable defects in the first instance. It is made clear in the DoA that any further damages occurring due to incorrect use of the levees are the responsibility of the landholder to repair.

Ecological Consultants Australia have commenced the Review of Environmental Factors (REF). Following completion of the REF the works will go out to tender so that a suitably qualified contractor can be appointed to do the works. Works are expected to commence in the new year.

Community Engagement

Council’s Floodplain Engineers and Property Unit Officer have met with property owners to discuss access and levee repair works to be conducted on their properties. Ecological Consultants Australia has visited levees located on private properties and discussed relevant matters with the property owners.

DoA sent to affected property owners will include a cover letter explaining the project. A follow up site visit was conducted to meet owners to discuss the DoA further. Comments received from property owners have been taken into account and reflected in revised DoA. The property owners have generally been supportive of the works.

Policy Implications

Council’s Asset Management Plan for flood mitigation drainage structures documents the required inspection and maintenance of the Shoalhaven River levee system.
Financial Implications

Council has an annual maintenance budget of approximately $100,000 for flood mitigation drainage structures assets, which include, 50 flood mitigation drains (total length of 48.5km), 9 Levee banks (total length of 23.5km), 60 flood gates, 3 weirs and 14 bridges. This budget is not sufficient to maintain these assets to their designed standards and is not sufficient to respond to flood damages.

Council previously committed an additional $600,000 to conduct works. Currently $300,000 has been made available from the Flood Mitigation Maintenance and Flood Levee Repairs budgets for this financial year (2016/17). A report to Council will be prepared following engagement of the preferred tender to advise Council if more funds will be required to conduct the works.

The result of Council’s claims for funding under NDRA to repair the flood damages caused in 2015 ($1.13 million) was successful and 2016 ($272,470) is currently unknown.

Risk Implications

It is necessary to conduct the repairs so that the levees can continue protecting people and property from river flooding and to ensure existing damaged levee sections are not damaged further.
ADOPTED AT COUNCIL MEETING HELD ON TUESDAY 16 FEBRUARY 2016

119. Repair of flood levees File 1799E

Note: Clr Watson returned to the meeting.

Note: Clr Anstiss left the meeting.

MOTION: Moved: White / Second: Findley

That Council:

a) Advance the restoration of category 1 flood levees (valued by Public Works at $460,000), damaged during the August 2015 flood, ahead of confirmation of Natural Disaster Relief and Recovery Arrangements to ensure these assets are returned to pre-disaster condition as soon as possible;

b) Council include the capital works bid of $200,000 for the high priority levee repair works identified in the recent levee audit conducted by Royal HaksoningDHV to complete the first stage of this project in 2016/17;

c) An additional report be provided to Council so that support for the future works program to repair, upgrade and maintain the Shoalhaven River flood levee network can be sought; and

d) Reaffirm Councils position to not conduct stage 2 Terara levee upgrade (from Ferry Lane to Terara Nursery) due to financial limitations and limited cost benefit ratio as identified in the Terara Village floodplain risk management study and plan, and Council reconsider its position once the Lower Shoalhaven Floodplain Risk Management Study and Plan is reviewed.

CARRIED
SN17.6 Shoalhaven dredging monitoring update and Rescuing Our Waterways Program Funding update 2017

HPERM Ref: D17/165042

Group: Planning Environment & Development Group
Section: Environmental Services

Attachments: 1. NSW Government Dredging Strategy Map
2. Citywide Dredging Feasibility Study (under separate cover)
3. Council adopted dredging strategy

Purpose / Summary
To provide Shoalhaven Natural Resources & Floodplain Committee with an update on the post-dredging monitoring following Shoalhaven Council dredging projects at Currambene Creek (Huskisson), Sussex Inlet and Lake Conjola entrance under the Rescuing Our Waterways Program. To provide information on stage four of the Rescuing Our Waterways Program funding.

Recommendation
The Committee receive the dredging monitoring report for Lake Conjola and Sussex Inlet and the Rescuing our Waterways Program funding program update for information and consideration.

Options
1. As recommended.
   Implications: Nil

2. The Committee could make recommendations to Council for Rescuing Our Waterways Program funding application/s.
   Implications: Council would need to contribute 50% of the project costs and prepare and lodge a grant application by 23 June 2017. Previously Council engaged an experienced consultant to prepare the grant applications under the Rescuing Our Waterways Program.

3. Alternative recommendation.
   Implications: Unknown.

Background
Summary of Dredging Works at Currambene Creek, Sussex Inlet and Lake Conjola Entrance
Shoalhaven City Council undertook dredging at three locations across the City between March – September 2016. The following is a summary of the aims and dredging works undertake at each site.
Currambene Creek
The aim of the work was to make navigation improvements to the Creek entrance and access wharves. The scope of work of the project was identified to dredge the entrance channel from the Myola Spit to the Jervis Bay sanctuary zone, 20m wide to a depth of -2.5m AHD.

The August flood in 2015 washed out most of the sand from the system and all that remained to be removed was the rock shelf at the entrance near the Jervis Bay sanctuary zone. The rock itself was quite dense and required the use of heavy machinery with rock breaker attachments to break up the rock before it could be excavated from dredge area. Approximately 55m³ of rock was removed from site (see attached map for details)

Sussex Inlet
The aim of the work for the Sussex Inlet navigation channel works was to improve safety and navigation in the channel, particularly for marine rescue. To achieve this, the scope of work involved dredging the channel from the vicinity of Alamein Road through to The Haven Holiday Resort, to provide a 25m wide channel to a depth of -1.5m AHD.

Following the August 2015 flood, much of the sand was washed out of the channel resulting in no work being required in the upstream areas near Alamein Road. Therefore, the dredge footprint was reduced to only the area in from of The Haven Holiday Resort. During the dredging works the area experienced an East Coast Low (in June 2016) which resulted in a small area upstream of the Haven also requiring dredging and so this additional area was also dredged. All sand dredged from Sussex Inlet was placed along the foreshore/dune in front of the Haven Holiday Resort together with geotextile sand bags groynes (see map attached map for details).

Lake Conjola Entrance
The aim of the dredging at Lake Conjola was to improve navigation to reconnect the boat ramp at Cunjurong Point to the main lake body and to better facilitate separation of boat users from swimmers. Additionally, it aimed at improving circulation around the lake to facilitate future entrance management by creating a channel along the north and western perimeter of the lake entrance to replicate the regime entrance state of the lake (refer attached memorandum).

At the commencement of the dredging the entrance to the Lake was closed and dredge was able to make good progress on the works. In May 2016 a minor rainfall event in the catchment caused the lake to open naturally but subsequently caused the lake to become tidal and began to slow progress somewhat as fast moving water made some areas difficult to navigate and dredge. The June 2016 East Coast Low exacerbated this and a significant amount of sand moved within the lake. Since the sand became more mobile it became increasingly difficult to make good progress as typically the overnight tidal changes would cause the more mobile sand to infill the dredged lake channel. The work performed by the contractor involved: (see map for details)

- Dredging of approximately 20,000m³ of sand from the lake to form a channel from the Cunjurong Point boat ramp back to the main lake body.
- Placement of approximately 13,500m³ of dredged sand along the toe of the dune east of the Lake Conjola boat ramp to form a beach.
- Exporting approximately 6,500m³ of sand from the Lake to various sites within the Shoalhaven (approximately 4,000m³ to Mollymook).
Overall 1,250 lineal metres of channel was dredged 15m wide to a depth of -0.8m to -1.2m AHD.

Post-Dredging Monitoring

As part of the Rescuing Our Waterways Grant and licensing conditions from NSW Crown Lands, Council is required to undertake post dredging monitoring of the dredged areas at each location.

The monitoring consists of undertaking work-as-executed (WAE) surveys of the dredged channels to access changes over time. As stated in the background information, in June 2016 an East Coast Low occurred during the dredging operations. This had a significant impact on the dredging channels, particularly at Lake Conjola entrance. Where significant amounts of sand moved into the entrance.

The following tables are a summary of the survey results for each of the dredging monitoring taken in December 2016 (immediately following the completion of the dredging) and in February 2017 three months post dredging.

The figures given in the summary of the survey table are based on the original dredge profile design for the levels in metres based on Australian Height Datum (AHD) and the figures volumes of sand m3 (cubic meters) as well as the average cut depth in metres.

Currambene Creek

- No sand was dredge from this location only bedrock

<table>
<thead>
<tr>
<th>Overall dredge design area square metres</th>
<th>Net volume of rock cut from the creek entrance</th>
<th>Average cut depth (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4,449 square meters</td>
<td>449 m3</td>
<td>0.341 metres</td>
</tr>
</tbody>
</table>

Sussex Inlet

<table>
<thead>
<tr>
<th>Overall dredge design area square metres</th>
<th>Net volume of sand required to cut to meet design m3</th>
<th>Average cut depth (m) to meet design</th>
<th>Number of cubic of sand that has filled in dredge channel since Dec 2016</th>
<th>Height of dredge channel that has infilled since Dec 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>21,249 square meters</td>
<td>5,746 m3 Dec 2016</td>
<td>0.183 metres Dec 2016</td>
<td>1,259 m3</td>
<td>0.016 metres</td>
</tr>
<tr>
<td></td>
<td>4,487 m3 Feb 2017</td>
<td>0.199 metres Feb 2016</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Lake Conjola Entrance

<table>
<thead>
<tr>
<th>Overall dredge design area square metres</th>
<th>Net volume of sand required to cut to meet design m3</th>
<th>Average cut depth (m) to meet design</th>
<th>Number of cubic of sand that has filled in dredge channel since Dec 2016</th>
<th>Height of dredge channel that has infilled since Dec 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>12,699 square meters</td>
<td>5,631 m3 Dec 2016</td>
<td>0.470 metres Dec 2016</td>
<td>6,454 m3</td>
<td>0.481 meters</td>
</tr>
<tr>
<td></td>
<td>11,978 m3 Feb 2017</td>
<td>0.951 metres Feb 2017</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

At the time of writing this report, a further survey has been scheduled.
NSW Rescuing Our Waterways Program 2017 Update

As part of the NSW Government commitment to delivery of the Coastal Dredging Strategy to improve the accessibility and environmental health of the state waterways. The Rescuing our Waterways Program has released the fourth stage of funding to run over 4 years (2017/18 – 2020/21) with $6 million dollars available.

Coastal Councils can apply for funding but will need to contribute at least 50% of the dredging project cost and be responsible for the development and management of projects. Eligible projects enable navigational benefits and promote economic growth and productivity.

What will be funded?

Dredging projects that may be subsidised under the Rescuing our Waterways Program include:

- Navigation for a range of vessels (recreational, tourism and commercial)
- Access to public to public waterways infrastructure such as boat ramps and wharfs
- Dredging strategies and/or their supporting studies (e.g. sediment hydrodynamics) and
- Pre-dredge activities for projects which are eligible and likely to proceed to dredging for vessel navigation

Assessment Criteria

To be eligible the projects must meet the following criteria:

- The organisation has the capacity and capability to insure that the activity is effectively, efficiently and safely completed.
- The organisation agrees to enter into, and be bound by, the conditions in the funding agreement.
- The activity is consistent with the NSW Government Coastal Dredging Strategy, including:
  - Be located in the NSW Government’s priority locations (see attached map for priority locations)
  - Support local government and build their capacity to undertake dredging operations in local waterways
  - Assisting councils to prioritise and establish long term dredging delivery plans to maximise funding opportunities under the Rescuing Our Waterways Program
  - Assisting councils to identify linkages with dredging works and coastal hazard mitigation and beach amenity improvements and to identify co-funding opportunities under the Coastal Management Program.

Funding Priorities

Projects will be assessed based on the following priorities, with the highest priority given to the applications involving:

1. Preparation of dredging strategies.
2. Demonstrated navigation improvements on waterways for a range of boating enthusiasts and the continued viability of commercial boating operations and tourism where compatible with estuary management planning process.
3. Reinstates waterways access to public aquatic infrastructure such as boat ramps and wharfs.

4. Pre-dredge activities for projects which would be eligible for funding and are likely to proceed to dredging including investigations (such as sediment analysis, sediment hydrodynamics, aquatic flora and fauna surveys) and environmental impact assessments.

Deadline for application is 5pm on Friday 23 June 2017.

Council has previously adopted a dredging feasibility study (see attachment 1) and resolved to apply for grant funding under the Rescuing Our Waterways program at the three locations outlined above (see attachment 2). An application for studies to improve the Shoalhaven Heads River entrance way was also submitted but was unsuccessful.

As part of the process, which sought expressions of interest to undertake the 2016 dredging, the market was tested to determine if there was commercial interest in purchase of the sand, as the feasibility study identified this as a potential way of offsetting the costs of dredging. This was found to be unviable for commercial operators. The potential sale of dredged sand would have also required additional assessment and approvals, which would have significantly increased the project costs.

Community Consultation

Any future dredging proposal would require community consultation, environmental assessment and consultation with government agencies as well as obtaining the necessary approvals and permits.

Financial Implications

Any Rescuing Our Waterways grant application would require Council to contribute 50% of the dredging project costs. Currently there is no budget allocated for potential dredging projects.
Figure 1. NSW Coastal Dredging Strategy priority regional locations

Legend
- Coastal Harbours
- River Entrances

NSW Dredging Strategy
Priority Regional Locations
- Taree Heads / Taree River
- Culgoa Creek
- Tuross Valley / Moolooloob Creek
- Brunswick Heads / Brunswick River
- Bollina / Richmond River
- Roaring Head / Nepean River
- Yamba / Urewera / Clarence River
- Wooli / Wooloom向着
- Bateman's Bay
- Bellingen River
- Nambucca River
- South West Rocks / Markes River
- Port Macquarie / Hastings River
- Lighthouse / Cawston Moree River
- Grafton
- Port Willunga / Narrabeen River
- Tweed Heads / Wuluru Lake Estuary

Department of Industry
Lands

NSW Government
MAKING IT HAPPEN

SN17.6 - Attachment 1
ADOPTED AT COUNCIL MEETING HELD ON TUESDAY 8 APRIL 2014

230. Citywide dredging Feasibility Study

MOTION: Moved: White / Second: Guile

That with respect to the Citywide Dredging Strategy:

a) The Citywide Dredging Feasibility Study report be presented to the Natural Resources and Floodplain Management Committees and be made publicly available on Council’s website and a media release be prepared to inform the community;

b) Council adopt the large scale dredging priorities identified in the Citywide Dredging Feasibility Study being (from higher to lower priority) – Currambene Creek navigation dredging, Sussex Inlet channel navigation dredging, Conjola configuration dredging, Conjola sand mining, Sussex Inlet bar, Currambene Creek Additional Moorings, Shoalhaven Heads Environmental Opening;

c) The maintenance dredging for the boat ramps at Callala Bay and Sanctuary Point be funded in future years through Council’s existing ‘waterways infrastructure maintenance’ budget;

d) The dredging for lake entrance openings and dry notch at Shoalhaven Heads continue to be funded through Council’s ‘Implement Entrance Plan’ budget;

e) That Currambene Creek dredging for beach nourishment be considered as part of Council’s coastal management budget;

f) Council engage consultant Peter Spurway to prepare grant applications under the State Rescuing Our Waterways program for Currambene Creek navigation dredging, Sussex Inlet channel navigation and Conjola configuration dredging and for the Shoalhaven heads ($50,000) grant for studies to improve the Shoalhaven Heads River entrance way;

g) In response to Transport for NSW’s request for input into the development of Regional Boating Plans; Council nominate Currambene Creek and Sussex Inlet navigation works as high priorities because of the benefit to boating safety and waterways access, subject to the environmental assessment and approvals;

h) Council allocate $200,000 in the 2014/15 budget to match a potential successful grant funding under the Rescuing Our Waterways program and /or the Regional Boating Plan Funding Program;

i) Council allocate a further $200,000 in the 2014/15 budget to undertake site and project investigations, conduct preliminary community consultation and prepare Review of Environmental Factors (REFs) to ensure compliance with relevant legislation. Such process to inform and facilitate a future EOI process to test private companies willingness to enter into a partnership with Council for the following dredging projects: Sussex Inlet navigation channel, Conjola configuration dredging (inclusive of beach nourishment at Mollymook) and Shoalhaven Heads;
j) the General Manager provide regular reports on progress of citywide Dredging in accordance with the timeframe provided at the councillor Briefing on the Feasibility study.

AMENDMENT
Moved: Findley / Second: McCrudden

That with respect to the Citywide Dredging Strategy:

a) The Citywide Dredging Feasibility Study report be presented to the Natural Resources and Floodplain Management Committees and be made publicly available on Council’s website and a media release be prepared to inform the community;

b) Council adopt the large scale dredging priorities identified in the Citywide Dredging Feasibility Study being (from higher to lower priority) – Currambene Creek navigation dredging, Sussex Inlet channel navigation dredging, Conjola configuration dredging, Conjola sand mining, Sussex Inlet bar, Currambene Creek Additional Moorings, Shoalhaven Heads Environmental Opening;

c) The maintenance dredging for the boat ramps at Callala Bay and Sanctuary Point be funded in future years through Council’s existing ‘waterways infrastructure maintenance’ budget;

d) The dredging for lake entrance openings and dry notch at Shoalhaven Heads continue to be funded through Council’s ‘Implement Entrance Plan’ budget;

e) That Corrabor Creek dredging for beach nourishment be considered as part of Council’s coastal management budget;

f) Council engage consultant Peter Spurway to prepare grant applications under the State Rescuing Our Waterways program for Currambene Creek navigation dredging, Sussex Inlet channel navigation and Conjola configuration dredging and for the Shoalhaven Heads ($50,000) grant for studies to improve the Shoalhaven Heads River entrance way;

g) In response to Transport for NSW’s request for input into the development of Regional Boating Plans; Council nominate Currambene Creek and Sussex Inlet navigation works as high priorities because of the benefit to boating safety and waterways access, subject to the environmental assessment and approvals;

h) Council allocate $200,000 in the 2014/15 budget to match a potential successful grant funding under the Rescuing Our Waterways program and/or the Regional Boating Plan Funding Program;

i) Council allocate a further $200,000 in the 2014/15 budget to undertake site and project investigations, conduct preliminary community consultation and prepare Review of Environmental Factors (REFs) to ensure compliance with relevant legislation. Such process to inform and facilitate a future EOI process to test private companies willingness to enter into a partnership with Council for the following dredging projects: Sussex Inlet navigation channel, Conjola configuration dredging (inclusive of beach nourishment at Mollymook) and Shoalhaven Heads;

j) the General Manager provide regular reports on progress of citywide Dredging in accordance with the timeframe provided at the councillor Briefing on the Feasibility study;
k) Council acknowledges that the citywide Dredging Program in its full entirety will cost $3.5million

AMENDMENT LOST

FOR: Findley, McCrudden

AGAINST: Tribe, Robertson, Kearney, Anstiss, White, Wells, Baptist, Guile, Watson, Kitchener, Gash

MOTION CARRIED

There being no further business, the meeting concluded, the time being 4.25pm.

Cdr Gash
CHAIRPERSON
SN17.7  2016 East Coast Low Storm Damage Remediation review May 2017

HPERM Ref: D17/165314
Group: Planning Environment & Development Group
Section: Environmental Services

Purpose / Summary
Provision the Committee with an update on the outcomes of interim erosion remediation works completed and in progress, following the June 2016 East Coast Low.

Recommendation
The Committee recommends that Council receive the report for information and make the following recommendations, subject to funding being allocated in the 2017/18 Budget to progress the coastal erosion remediation projects:

1. Council proceed with detailed design, Review of Environmental Factors, Aboriginal Heritage assessment for coastal erosion management works at Currarong including a trial geotextile sand groyne and sand nourishment and protection of the Beecroft Avenue precinct subject to undertaking the necessary consultation and obtaining the necessary permits and approvals. That further community consultation be undertaken as part of this process.

2. Council seek advice from NSW Office of Environment & Heritage about the potential development of an emergency action plan or interim management plan for the South Mollymook coastal protection structure as an interim measure until a long-term management strategy is developed as a result of the cost benefit analysis and impact assessment.

Options

1. Adopt the recommendation of this report
   Implications: This will allow progress of long-term erosion management at Currarong and more effective coastal assets management.

2. The Committee could provide an alternate recommendation to Council
   Implications: unknown

Background
Following the June 2016 East Coast Low event (overview provided in Attachment 1), reports to Council were prepared to provide an overview of damages and a priority list of repair works. In response, Council allocated $500,000 to implement these works. $350,000 for coastal management priority works and $150,000 for restoration works in the immediate vicinity of adjoining Holiday Haven Tourist Parks (min 16.586).

This report provides an update on status of repairs to date.
**Ulladulla Harbour foreshore protection**

The June 2016 storm caused major erosion of a 30-metre section of the existing rear harbour revetment and the loss of the tidal beach affecting park infrastructure, public amenity and potentially the Princes Highway if no remediation was carried out.

Response:

- Post storm survey investigations completed and hazard management installed and undermined park furniture removed;

- Site meetings held with Roads & Maritime Services (RMS), Office of Environment & Heritage (OEH) and Crown Lands. Council did seek funding but was unsuccessful.

- Jirgens Civil was engaged to undertake remediation works including extension of protection and rock fill of the upper embankment and beach scraping as well as relocating sand from the southern beach fronting the boat ramp carpark.

- Remediation works completed December 2016: $60,000 cost

Figure 1: Impacts of June 2016 storm on Ulladulla Harbour foreshore
Figure 2: Completed remediation works at Ulladulla Harbour

Figure 3: Completed beach scraping at Ulladulla Harbour

_Currarong Beach_

The June 2016 storm caused significant beach sand loss. More than 20,000m³ of sand was lost under elevated tide and NE storm conditions along Warrain Crescent. There were also damages to park and road assets at the rock pool and Dolphin Reserves. Nine (9) beach access ways were closed along Warrain Crescent, except for Peel St sand ramp and the Currarong Creek inlet steps.
Response:

- Short term safety and clean up measures included temporary hazard fencing and remediation of park infrastructure around Abrahams Bosom reserve carpark. Sand recovery and rock pools remediation completed at a cost of $25,000;

- Beach access hazard closure and reshaping of beach access at Peel St and Currarong Creek completed;

- Land survey of erosion profiles as part of beach erosion monitoring program;

- Community consultation, public meeting, in September 2016 by Coastal Engineer from Royal Haskoning to discuss short and long term responses. The meeting discussed the storm impact review by Advisian and the previous SMEC Erosion Remediation options study recommending the trial geofabric groyne and sand nourishment.

- Review of Environmental Factors (REF) completed and relevant permits obtained for interim works; and

- Coastal engineering advice, Aboriginal Heritage assessment, consultation with OEH and local Aboriginal community as well as Currarong community informed short-term works (beach scraping and nourishment) and step access replacement (limited to two) along Warrain Crescent. Soil Conservation Service were contracted to do the works in early November at an approximate cost of $150,000; which required Aboriginal Land Council supervision given the sensitivity of the site.

- Following community consultation, Royal Haskoning DHV have been engaged and are progressing with detailed design for a trial geofabric groyne construction and placement of 10,000m3 sand nourishment on Currarong Beach, sourced from the western beach. Future construction of an additional beach access on the western end of the beach is subject to Aboriginal Heritage assessment and approval. Beecroft Avenue frontage will require rock armour protection to safeguard the public sewer, reserve and private property. Royal Haskoning DHV have also been engaged to complete the detailed design for these works.

Figure 4: Eight beach access stairs were destroyed at Currarong along Warrain Cres
Figure 5: New Currarong Beach access stairs

Figure 6: New Currarong Beach access stairs
Figure 7: New Curraong Beach access stairs

Figure 8: Sand nourishment - 6000m3 sand relocated from creek mouth and Peel St reef shoulder shoals then reshaped to safe profiles to avoid Aboriginal middens with Aboriginal Land Council supervision given the sensitivity of the site.
Next Steps/community consultation/design and approvals:

- The community meeting at Currrarong was attended by approximately 125 community members. The meeting clearly highlighted that a trial geotextile sand groyne is the recommended option by three coastal experts and State Government to manage long-term erosion at Currrarong.

- Royal Haskoning DHV has been engaged to undertake the detailed design of Warrain Crescent and Beecroft Avenue frontages, the REF and Aboriginal Heritage assessments $90,000. An onsite meeting with government agencies and community representative was held. Further community consultation will be held to confirm willingness to proceed to construction. Further consultation with the local aboriginal community, government agencies and the coastal panel will be required prior to obtaining the necessary approvals and permits before any works can proceed.

- Attachment 1 contains Royal Haskoning DHV Basis of Design report that will guide the procedure to construction. A cost benefit analysis may also be required in accordance to the 2016 OEH Coastal Management Manual.

**Lake Tabourie**

The 80m foreshore boardwalk was lifted during the combined ocean storm/flood event and damaged beyond repair.

Response:

- Short term responses included hazard signage, temporary fencing with the staged removal of the structure completed with post foundations removed prior to September school holidays to make site safe; and

- Land survey was completed in late September and confirmed existing land level provided reasonable access along the estuary foreshore within the current “open entrance” scenario and reasonable access levels within the intervention level for Tabourie entrance of 1.2m AHD.

Figure 9: Damaged Lake Tabourie boardwalk
Next Steps/community consultation:

- Council staff will continue discussions with the community to confirm a reasonable outcome for this popular foreshore walking precinct.

- Interim arrangements have been scheduled for a 100m section of the Holey Belt currently covering Lake Conjola boardwalk to be relocated to the frontage in July 2017. Investigations and REF preparation would be required to plan for the requested replacement when funding is provided. Interim costs of $10,000 will be provided from existing operational budgets.

- Replacement costs for the 80m boardwalk is expected to be in the order of $2000 per linear metre $180,000 and is currently not funded.

**Shoalhaven Heads**

The River Rd estuary foreshore experienced moderate erosion impact as the flood notch breached and allowed the significant ocean swell / king tide to enter and combine with local catchment flooding.

The Shoalhaven open beach access ways were damaged and beach erosion warning signs in place since the 2015 event were upgraded during September.

Response:

- Contactors were engaged to reshape the main beach access points for public safety with other beach access points remaining closed;

- Tree inspection along the River Road foreshore led to the removal of 45 dangerous trees;

- Building waste has emerged from bank failures containing asbestos, a monitoring program has commenced with removal of asbestos;

- Land survey and comparative survey has commenced to monitor erosion of the River Road frontage;

- Contractors were engaged to undertake additional ‘make safe’ works along the River Rd foreshore including beach scraping to cover exposed tree root plates that present a public risk, and spread tree mulch left on site from initial dangerous tree removal.
Next Steps/community consultation:

- Water Research Laboratory (WRL) has been engaged to develop a remediation design, with the pub frontage identified as a priority area due to risk; and
- Council staff and WRL attended a public meeting organised by the Shoalhaven Heads Community Forum on 7 December 2016 to discuss management options for River Road erosion. Council has sought comment from government agencies on the Draft River Road Erosion Remediation Concept Plan prepared by WRL.
- The whole frontage remediation is estimated at $1.75 million. Council has lodged a Rebuilding NSW grant application for Stage 1 of these works.
- Council’s Asset and Works team have are assessing the road stormwater network to assess the potential to combine outfall discharge points and reduce the impact of catchment erosion on the bank stability.
- Interim remediation works continue to keep the area safe for public use.

**Mollymook Beach**

The south end of the beach damage included exposure of the Golf Club protective gabion wall and inundation of the Ocean St road stormwater system and damage to the sandstone retaining wall.

The Blackwater creek sand nourishment area suffered minor damages.

The creek training wall at north end of the beach was also damaged.

Response:

- Repair to the northern creek retaining wall was completed in October 2016 where a section of rock gabions was replaced with geotextile sand bags (cost $25,000);
- Minor beach reshaping to beach access and repair of sand nourishment at Blackwater Creek was completed in October 2016;
The south Mollymook foreshore (gabion) protection structure protecting the sewer, stormwater, road, pathway, foreshore and Golf Club was partly exposed and damaged during the storm. The structure is also nearing the end of its useful life. Regular inspections of gabion structure to monitor public risk will continue (in particular from protruding gabion structure’s wire). Several sand nourishment covers of the gabions have been funded by Council to maintain sand protection for the wall’s integrity and public safety:

Figure 11: Eroded foreshore and gabion protection structure adjacent to Mollymook Golf Club

Next Steps/community consultation:

- Council has received 50% funding under the NSW coast and estuary program to undertake a cost benefit analysis (CBA) and impact assessment of the south Mollymook foreshore protection structure in accordance with the new draft Coastal Management Manual. This project is estimated to take twelve months.

- As this project will take some months to complete, it is recommended that Council seek advice from NSW Office of Environment & Heritage about the potential development of an emergency action plan or interim management plan for the South Mollymook coastal protection structure as an interim measure until a long-term management strategy is developed as a result of the CBA and impact assessment.

*Culburra Beach*

Southern beach access ways were damaged from The Haven north along the entire beach with some rock outcrops uncovered.
Response:

- Short-term response included preliminary staff inspection and engagement of contractors to inspect and reshape some beach access points where feasible.

Next steps:

- Inspection and repair work will continue.

Vincentia

Collingwood Beach stormwater outlets were inundated and erosion occurred at the bridge abutments of the shared pathway along Collingwood Beach.

Beach access points at Plantation Point were damaged.

Response:

- Repair of the shared pathway bridge abutments and additional rock protection was completed in October - $7500; and

- The most northern access to Nelsons Beach from Plantation Point reserve, closest to the point, was closed due to erosion and risk to users. Upgrade of the access point near the play equipment was completed prior to Christmas at a cost of $15,000. A survey of users at the site identified the access near the playground more frequently used compared to the most northern access.

- Closure of a cliff line access further east was recently required due to public safety. Assessment of potential repairs and replacement is underway.

Next step/community consultation:

- Inspection and repair work will continue in the 2017-18 financial year under the annual Coastal Risk Assessment in July; and
Figure 12: Erosion along the shared path at Vincentia

Figure 13: Elevated stairs recently closed
Greenwell Point Foreshore

Existing shoreline protection structures at Adelaide St were eroded. The shared footpath at Titania Park was eroded/undermined and the sandstone wharf site, which was damaged in 2015, was further undermined.

Responses:

- Hazard areas immediately isolated with hazard signage and barriers;
- Beach scraping of shared cycleway frontage completed; and
- Minor repairs of damaged rock protection and recreation beaches completed.

Next steps:

- Repairs of rock protection assets, including the storm damaged boat ramp-turning circle have been scheduled.
- A draft landscape design for the Heritage Stone Wharf Precinct prepared to submit to OEH Heritage for a Permit to proceed with remediation works when funds become available. As drawn, these works are estimated at $100,000. Any future works would require community consultation.

Figure 14: Erosion along the shared path at Greenwell Point

Bendalong Boat Harbour

The storm scoured several areas in the bay uncovering Aboriginal midden deposits and shell deposits. In two sections of this high use park, the embankment and trees were undermined.

The Office of Environment and Heritage (OEH) heritage staff have inspected the site and provided preliminary advice and detailed assessment has commenced to accompany a landscape master plan for the reserve.
Responses:

- Contractors were engaged to place safety fencing in high public risk areas and place rock bollards along the road verge; and
- Several beach scraping and rock bollard installations were required following repeated extreme rain events and beach erosion episodes.

Next steps:

- A draft Bendalong Boat Harbour Masterplan is currently being developed in consultation with the community. The aim for this Masterplan is to guide the long-term management of the park, boat ramp and foreshore whilst also addressing coastal and stormwater erosion.

Figure 15: Erosion along Bendalong Boat Harbour foreshore
Figure 16: Beach nourishment works and rock bollards

Figure 17: Intense rain damage at Bendalong post remediation works
Community Engagement

Remediation sites in locations where works still need to be carried out will require further community consultation as options are developed.

The east coast low event and its impacts were documented in a special edition of Council’s Frontline News, which is distributed to the community.

Financial Implications

Council’s Coastal and Estuary Assets Management Plan guides the management of beach access ways in the Shoalhaven. Council has about 220 beach access ways that for most were built in the 80s under the State Beach Improvement Program that followed the devastating storms of the 70s.

These access ways are regularly maintained to keep them safe and useable, however most are approaching the end of their useful life and most are in need of major repair or replacement. On average, a new access way costs $25,000 with an annual allocation of $50,000 for coastal access capital works.

Council is faced with a major budgetary challenge. With many park assets (tables and seats) being removed or relocated and beach accesses being damaged and closed as a result of the June East Coast low, we now need to consider some adaptive strategies to our coastal assets.

Reducing the number of coastal access ways in areas that are ‘over serviced’ would allow savings to be directed towards upgrading the retained assets. At beaches where this approach could be considered, discussion and consultation with affected communities will occur.

Council recognised the challenge in managing coastal assets, particularly in response to storm events and in February 2016 resolved:

That:

1. Council consider funding the Coastal Management and Infrastructure Reserve (MIN16.998) by transferring $500,000 each year from the Strategic Projects Reserve or another source, to fund priority coast and estuary management and infrastructure projects commencing in 2017/18 financial year.

2. In 2017/18 Council allocate $400,000 to complete and implement the Currarong coastal erosion strategy and determine the source of funds during the consideration of the draft 2017/18 budget.

Council is currently considering this budget allocation as part of its 2017/18 budget.
SN17.8 Environmental Strategy and Planning

HPERM Ref: D17/114940

Submitted by: Ian Stewart

Recommendation

That Council review and develop its current approach to align vision, values, principles, priorities, guidelines, strategies and plans for strategically managing the natural environment.

Details

Council has been given the clear message from the community, through the ‘Our Coast Our Lifestyle’ community engagement, that the natural environment is strongly valued. It is therefore important for Council keep faith with this view and demonstrate a disciplined approach to strategically managing the natural resources that are so strongly valued by the community in the Shoalhaven.

The challenge and associated objective for Council should be to ensure that management policies and practices and development decisions and approvals do not adversely impact and damage the natural environment. The objective should also be to develop a more proactive less reactive approach to the management of development pressures and demands.

With this objective in mind it is suggested that Council review and develop its current approach to align vision, values, principles, priorities, guidelines, strategies and plans for strategically managing the natural environment.

An important practical outcome will be greater clarity of intent that can inform and contribute to consistency across all of Council’s management and development processes. It will also be possible to express Council’s position and intent in relation to the natural environment with greater clarity, force and confidence.