

This presentation aims to provide a brief summary of the development and findings of the Scoping Study for the Hawkesbury-Nepean River Coastal Management Program or CMP.

The presentation will outline:

- 1. a brief background of the collaborative approach being undertaken to better manage catchment and estuary health
- 2. And the steps required in developing a Coastal Management Program (CMP)
- 3. We will then focus on the findings of the Hawkesbury-Nepean River System CMP Stage 1 Scoping Study including:
  - i. the initial consultation undertaken to engage public authorities, government agencies and councils
  - ii. an overview of the key stressors or pressures on the Hawkesbury-Nepean River system
  - iii. identified knowledge gaps and work required to ensure a CMP is well informed
  - iv. suggested governance structure
- 4. Confirm the benefit in developing a whole-of-system CMP
- 5. Outline the next steps in development of the CMP

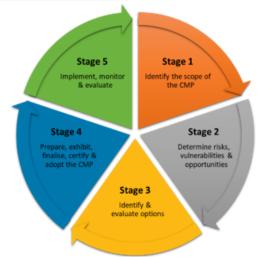


A great deal of planning and research has been undertaken in the Hawkesbury River System throughout the years. Up to now the river has often been managed in a segmented approach to address locally specific issues or through estuary management and other plans across smaller sections of river that align with local council areas. The first plans were developed in the mid 1990s for the Berowra and Brisbane Water catchments. Other plans followed for Pittwater and Brooklyn area. In 2006 the Lower Hawk Estuary Management Plan started its development through the partnership of the two councils that managed this area: Hornsby Shire Council and Central Coast Council, formerly named Gosford City Council. This partnership and the combined plan led to the coordinated management of a section of the lower estuary. The efficiencies achieved, learnings from this approach and appreciation that issues needed to be managed on a larger scale have led to the establishment of a 6-council partnership across the tidal areas of the Hawkesbury-Nepean river system. In September 2018 an MoU was signed by the 6 Partner councils to formalise this approach, which included: Central Coast Council, Hornsby Shire Council, Northern Beaches Council, Ku-ring-gai Council, the Hills Council and the Hawk City Council. The Partner Councils then applied and were successful in gaining funding under the NSW Governments Coast & Estuary Program. That grant has enabled councils to develop a scoping study for the Hawk-Nepean river system that fulfils stage 1 in developing a coastal management program.

### The CMP Process



- WHY?: To set the long-term strategy for the coordinated management of the coastal zone
- WHO?: It is an opportunity for councils, public authorities and local communities to identify and balance competing interests, issues, risks and priorities in the coastal zone
- HOW?: A CMP is prepared through a five staged risk management process described in the NSW Coastal Management Manual
- OUTCOMES: Management actions that are feasible and effective ways to manage the coastal environment. These actions are then incorporated into councils' land-use planning instruments IP&R Framework



In accordance with the NSW Coastal Management Framework, management of the estuary system and its tributaries will be guided by a Coastal Management Program (CMP). The CMP seeks to achieve the objectives of the *Coastal Management Act* through a program that will identify management issues, pressures, and risks - and the actions required to address these issues in a strategic and integrated way.

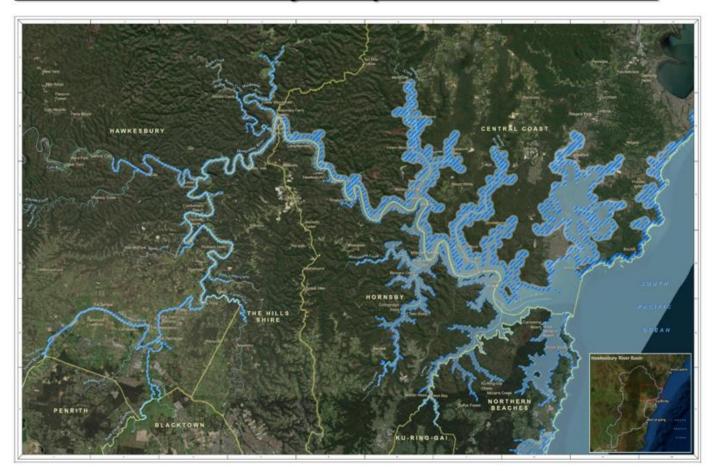
The purpose of the CMP is to set the long-term strategy for the coordinated management of the system and its catchment.

The CMP framework offers an opportunity for councils, public authorities and local communities to identify and balance competing interests, issues, risks and priorities in the coastal zone

This Scoping Study represents the first of five stages in the CMP process and has been completed as per the requirements of the NSW Coastal Management Manual. Stage 1 has reviewed past management of the river system, developed a shared understanding of the current situation and identifies the strategic path of the remaining CMP stages

- Stage 2 focuses on A detailed assessment of risks, vulnerabilities and opportunities;
- Stage 3: Identifies and evaluates management actions;
- Stage 4: Preparation, exhibition and adoption of the CMP; and
- Stage 5: Implementation, monitoring and evaluation

## The Hawkesbury-Nepean River CMP



The HNR CMP will encompass the Hawkesbury-Nepean River, Pittwater, Brisbane Water and Broken Bay and will span the Greater Sydney and Hunter - Central Coast regions. The project will consider key catchment processes within the wider drainage catchment, and will involve collaboration between all councils and other public authorities that have management responsibilities across the Hawk-Nepean river system. It will also seek to enable meaningful input from community.

# The Hawkesbury-Nepean River CMP

<u>Vision:</u> "To preserve and enhance the environmental, social and economic values of the Hawkesbury Nepean River estuary system and its catchment for future generations, and ensure its status as one of Australia's premier river systems"

The vision of the CMP is "To preserve and enhance the environmental, social and economic values of the Hawkesbury River estuary system and its catchment for future generations, and ensure its status as one of Australia's premier river systems".

This vision statement has been developed to help stakeholders identify themselves with the future of the Hawkesbury-Nepean River system, encourage a sense of community ownership of the actions in the CMP, and foster commitment to its preparation and implementation. The vision was developed by six partner councils in discussion with NSW Government agencies and wider catchment councils.

#### Values of he Hawkesbury-Nepean River System

The Hawkesbury-Nepean River System possess significant environmental values and are major contributors to the social and cultural wellbeing of the community:

The economic value of the ecosystem services provided by the river system is approximately \$1bn p.a. (high level estimate only)
The direct economic value of industries across the estuary such as commercial fishing and aquaculture (oysters) is currently around: \$5m p.a
The value of associated industries that utilise the river system such as agriculture is around \$500m p.a. (across just the partner council LGAs)
The economic value of tourism and domestic day trips across the estuary is estimated is \$45m p.a.
The estimated replacement value of fixed foreshore assets in the estuary is around \$270 million

The HNRS exhibits significant environmental value and is a major contributor to the social and cultural wellbeing of the community for Greater Sydney and the Central Coast regions. These values underpin significant economic activity and contribute to the economy in many important ways. A few stats of interest:

The economic contribution of ecosystem services within the HN river system alone are estimated at approximately \$1bn p.a. This estimate is based on services of mangroves, saltmarsh and seagrasses (known as blue carbon aquatic ecosystems) and the estuary productivity itself.

In addition, the river system supports a significant number of endangered ecological communities and more than 130 vulnerable and threatened species.

The direct economic value of commercial fishing and aquaculture (oyster farming) is estimated at \$5m p.a. and the value of industries that rely on the catchment such as agriculture, is around \$500m p.a. across just the partner council areas.

The economic value of tourism and domestic day trips across the estuary is estimated is \$45m p.a, with a large proportion of this is related to recreational boating activities.

The estimated replacement value of fixed foreshore assets in the estuary is around \$270 million.

#### The Hawkesbury CMP Stage 1: Scoping Study

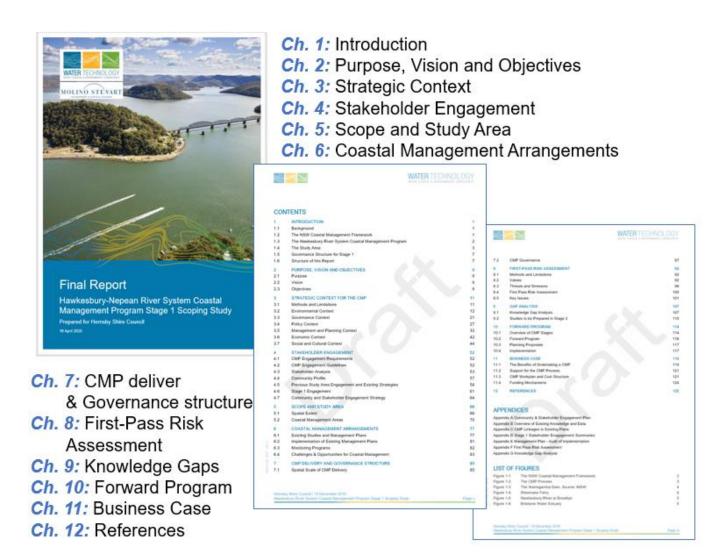
- Set the strategic context for the CMP as a whole
- Identify the scope of the CMP, & key issues
- Review current management practices & arrangements
- Identify roles & responsibilities
- Develop a Stakeholder & Community Engagement Strategy
- Plan for the remaining stages







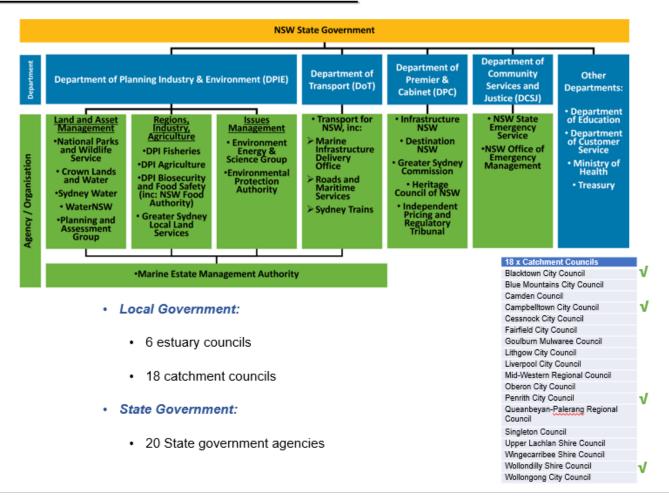
This slide shows the steps involved in developing the Scoping Study which included 3 stakeholder engagement workshops with key government agencies and input from the communication and engagement teams of each partner council. Workshops were facilitated by the consultants engaged to progress Stage 1, Water Technology and Molino Stewart. It is worth acknowledging the contributions by all partner councils and consultants in ensuring the project kept on time and budget. It has been a solid 8 months of work and the partner councils and NSW government agency representatives are extremely satisfied with the final report.



So what is included in the Stage 1? The Scoping Study?

- Firstly we documented environmental, social, economic, planning and governance context and agreed on the spatial extent of the study area
- The project then reviewed past approaches to management of the river and its catchments
- developed a shared understanding of current challenges and opportunities and
- assessed information gaps to be filled to support sound decision-making.
- The scoping study then outlined an agreed strategic path, proposed a governance structure and documented approaches to engagement and resourcing required over the remaining CMP stages

#### Consultation with Stakeholders



In progressing the Scoping Study the six partner councils have worked closely with more than 20 different state government departments as identified in the diagram. The 18 wider catchment councils across the Hawkesbury-Nepean drainage area were also encouraged to participate with significant involvement and contribution received by Blacktown, Campbelltown, Penrith and Wollondilly Councils.

It is worth acknowledging that governance across the estuary is complex with multi-layered management of catchment, foreshores and waterways across multiple tiers of government. The collaborative approach during this process has created improved partnerships and engagement across governments. We also acknowledge their time and valuable contribution to the CMP and funding from the NSW Coast & Estuary Grant Program.

#### Planning Context



It is important to note that the Hawk-Nepean River CMP will build on existing knowledge, planning programs and strategies including:

The National Water Quality Management Strategy

NSW Marine Estate Management Strategy, SEPPs, NSW Risk-Based Framework, NSW Climate Change Policy Framework, NSW Maritime Infrastructure Plan, and many others

Regionally, the CMP will support the Greater Sydney Region Plan; Greater Sydney LLS Strategic Plan, Sydney Metropolitan Water Plan and relevant Water Sharing Plans

The document will also assist in delivering Council's Integrated Planning & reporting framework, Community Strategic Plans, Local Strategic Planning Statements, LEPs, DCPs, and progress from existing estuary and catchment planning

#### Key stressors of the system

- Review of ~200 reports, existing Management Plans and Monitoring Programs
- 6 Different management plans across the study area (over 500 management actions)
  - Upper Hawkesbury CZMP: 39 Actions
  - Lower Hawkesbury EMP: 147 Actions
  - · Brisbane Water Estuary CZMP:183 Actions
  - · Pittwater EMP: 41 Actions
  - Gosford Beaches CZMP: 111 Actions
  - · Pearl Beach Lagoon CZMP: 9 Actions
- What are the challenges & opportunities for implementation?
- A total of 66 stressors across the study area identified through Stakeholder workshop and literature review (CZMP's, MEMA TARA)
- What are the existing arrangements to address the threat? Residual risk?
- How will risk change over future planning horizons (20, 50, 100yrs)?
- Identification of high-priority risks and threats

Threats		Stressor Categories					
	Coastal and Estuarine Hazards	Long Term Hazards Event Based Hazards Climate Change Impacts					
	Urbanisation and Land Use Impacts	Water Pollution and Sediment Contamination Habitat Clearing / Disturbance Hydrologic Modifications					
1	Waterway Use and Resource Conflict	Commercial Fishing & Boating Recreation & Tourism Access & Availability					
¥	Public Health & Safety	Public Health & Safety					
血	Planning & Governance	Governance Information Gaps					

A thorough literature review of close to 200 reports, management plans and monitoring programs was undertaken exploring the challenges & opportunities in implementing existing management activities. A first-pass risk assessment was undertaken to identify stressors across the study area, to understand how existing arrangements address threats and residual risks and how they are likely to change over 20, 50 or 100 year timeframes.

They range from smaller localised issues, up to larger scale, system-wide threats that will require a coordinated and collaborative management approach. Here we include the 5 key threats and associated stressors of:

- significant urban development in the upper reaches of the HNR catchment resulting in increased catchment runoff and urban stormwater discharge impacting on water quality and associated recreational and commercial activities (including public health and safety)
- Disturbance of riparian and aquatic habitat, the presence of invasive species and diseases, the potential
  increase in harmful algal blooms and the inability to protect endangered, vulnerable and threatened species
  and communities
- coastal and estuarine hazards such as sea level rise and event based flooding and inundation
- Waterway use and resource conflict as the number of boats and recreational use of the river system continues to increase
- Planning and governance potentially leading to a lack of coordination across the HNR catchments and ineffective approaches to managing identified risks.

Many threats identified in the first-pass risk assessment are expected to increase over the coming decades due to population growth within the catchment and the impacts of climate change

#### Knowledge gap analysis

- List of studies identified to fill in knowledge in order to ensure a good management of the river system
- Cost sharing arrangements to be decided among Partner Councils

(\*) Funding ratios from DPIE Estuary program have changed from \$1:\$1 and is\$2:\$1 State: Local govt contribution. Funding is also available for project coordination in projects involving more than 5 Councils.

Component	Indicative Timing	HSC Contribution
The Hawkesbury River System Physical Processes - Abridgment Report	4-6 mo	V
The Hawkesbury River System Ecological Processes - Abridgment Report	4-6 mo.	4
Brisbane Water CM SEPP Mapping Update	2-4 mo.	
Bathymetric Survey of Brisbane Water Estuary	1 mo.	
Bathymetric Survey of Pittwater Estuary	1 mo.	
Brisbane Water and Hawksbury River Estuary Tidal Inundation Study and Risk Assessment	4-6 mo.	4
Broken Bay Coastal Hazard Study Update	3-6 mo.	
Hawkesbury River Bank Erosion Update	3-6 mo.	√
Pittwater Coastal Hazard Assessment	3-6 mo.	
Pittwater Cliff/Slope Instability Assessment	2-4 mo.	
Hawkesbury River System Socioeconomic Study	3-4 mo.	√
Stage 2 Values, Threats and Opportunities Report & CVA Mapping	4-6 mo.	4
Community and Stakeholder Engagement activities associated with Stage 2 (as outlined in Appendix A)	All through	1
Cost of Project Coordinator. Estimated at 0.4 EFT for duration of Stage 2.	Stage2	V
Approx. Stage 2 Subtotal	15-24 months	

The literature review and discussions with stakeholders and councils highlighted the need for the following studies in order to fill a number of knowledge gaps that are critical to the management of the HNRS. The Scoping Study report goes in great detail explaining the rationale behind these studies. A number of studies suggested will collate information from existing estuary studies and monitoring programs in order to get a whole-of-system understanding of the HNRS. HSC will be only involved in those studies that are relevant to our shire as indicated by the third column in the table. These studies will be undertaken as part of Stage 2 of the CMP and it is estimated that will take the partner councils between 15-24 months to complete them. The partner councils are finalising equitable funding models prior to seeking financial assistance of the NSW Government. Recently, we were informed that the NSW Coast and Estuary Grant Program has been adjusted to better support councils undertaking this process by increasing the proportion funded by the NSW Government. This is great news and will support the momentum we have on this exciting project.

#### The Way Forward

 A business case and a forward program have been developed for Stages 3 to 4 of the CMP. Stage 5 is the implementation stage of the CMP

Component	Indicative Timing
Stage 3 involves the identification and evaluation of management options. This stage should include:	
Confirmation of the strategic direction	
Identification of potential management options	9-15 months
Evaluation of potential actions	
Documenting the rationale for management actions	
Community and Stakeholder Engagement activities associated with Stage 3	Throughout the above
Stage 4 involves the development of the draft CMP document, via the following process:	
Preparation of the Draft CMP	
Exhibition of the draft CMP	9-12 months
Reviewing and adopting the draft CMP	
Submitting the draft CMP to the Minister for certification	
Community and Stakeholder Engagement activities associated with Stage 4	Throughout the above

CMP Stage	Indicative Timeframe	Jun-2020	Aug-2020	Oct-2020	Dec-2020	Feb-2021	Apr-2021	Jun-2021	Aug-2021	Oct-2021	Dec-2021	Feb-2022	Apr-2022	Jun-2022	Aug-2022	Oct-2022	Dec-2022	Feb-2023	Apr-2023	Jun-2023	Aug-2023	Oct-2023	Dec-2023	Feb-2024	Apr-2024
Stage 2	15-24 months																								
Stage 3	9-15 months																								
Stage 4	9-12 months																								

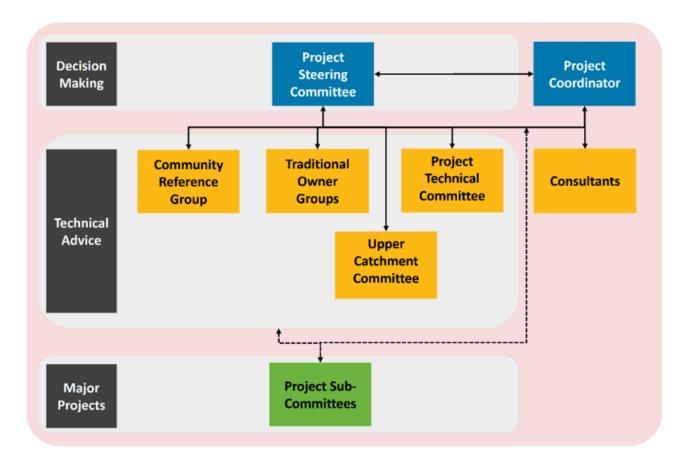
Best Case Project Timeline Timeline/Scheduling Uncertainty

The Scoping Study presents a Business Case and forward program to support councils in approaching the proceeding stages of the planning process.

This provides clarity on the steps required in each stage, costs, timing and responsibility.

For Hornsby the cost of completing the CMP through stages 2-4 is approximately \$80-100K, This is out of a total project cost of around \$1.3M.

#### Governance



A governance structure has been proposed to support development of the CMP through a multi-tiered approach, with:

- A decision-making tier: comprising a project steering committee that guides project management
- A technical advice tier: to enable input from upper catchment councils, relevant agencies, community groups and traditional owners; and
- A major project tier: Comprises of combinations of the above, to be utilised as necessary.

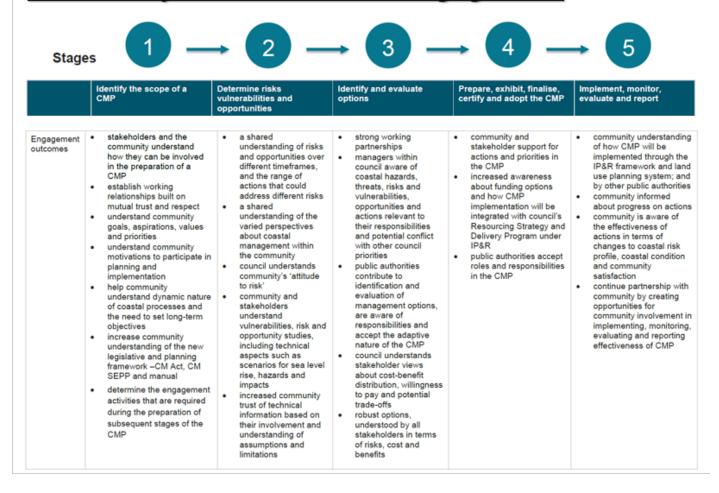
A project coordinator position is proposed to support the progression of Stage 2, improve project management, maintain communication among partner councils and stakeholders and to assist with the coordination of engagement and promotion of the project. The NSW Government has recently announced that, to encourage council collaboration, and where five or more councils work together, 20 percent of the total project cost can now be requested for project management under the Coast & Estuary Grant Program.

#### Governance

Governance Component	Responsibilities	Recommended Members
Project Steering Committee	Oversight of CMP Delivery     Decision making     Appointment of community reference group members	Central Coast Council     Hawkesbury City     Council     The Hills Council     DPIE     Hornsby Shire     Council     Ku-ring-gai Council     Northern Beaches     Council
Project Coordinator	Project Management of the CMP (Stage 2) on a day to day basis     Further details provided above	As selected by the Project Steering Committee.
Project Technical Committee	Provision of technical advice and decision-making support	Project Steering Committee     DPIE (NSW Food Authority)     DPIE (Planning)     DPIE (EES)     Sydney Water     DPIE (NPWS)     DPIE (Crown Lands)     DPIE (Fisheries)     DPIE (EPA)     DPIE (GSLLS)
Community Reference Group	Provision of community perspective, technical advice and decision-making support     Representation of community interests	As selected by the Project Steering Committee. A list of local community groups is provided in Section 4.3 for reference.
Traditional Owner Groups	Provision of technical advice and decision-making support     Representation of traditional owner interests	Darkinjung LALC     Metropolitan LALC     Other indigenous groups
Consultants	Delivery of technical studies to support CMP	To be determined by Steering Committee for each stage of the CMP
Upper Catchment Committee	Provision of technical advice, data, and decision-making support Promote linkages with catchment related management plans and strategies	Catchment Councils INSW (HNFRMD)     as listed in Table 3-8     WaterNSW     IPART
Project Sub- Committees	Delivery and oversight of site/topic-specific projects delivered during Stage 5 of the CMP	May comprise members of other technical committees and reference groups     As appointed by the Project Steering Committee

This table shows more specific info on the various components of the suggested governance structure including responsibilities and recommended member groups

#### Community and Stakeholder engagement



The stakeholder engagement strategy has been developed to encourage input from all stakeholders, including community. Partner Councils have identified key community groups to be targeted during engagement and in recognition of previous contributions to the environment and health of the HNRS and its catchment. For example, there are 35 resident/progress associations and 22 additional groups that do on-ground works including Bushcare and Floating Landcare groups, historical societies and bushland committees and Friends of the Bush. These groups will be involved through a range of methods during Stage 2-4 of the CMP. Partner Councils are looking to coordinate events up and down the Hawkesbury to promote the estuary/river system and the work related to the CMP and are looking at the best way to engage with the large list of community and stakeholder groups. Meanwhile online platforms and tools together with face-to-face interactions will play a major role in keeping everyone informed and engaged.

#### Benefits of a CMP











An opportunity to develop a strategic and integrated long-term plan



Address key issues facing the system - from smaller localised issues, up to larger scale, system-wide threats that will require a coordinated and collaborative management approach



Improved coordination and collaboration across local and state government agencies



Vehicle to secure funding from Coast and Estuary Grants Program, as well as from new partnerships and programs



Establish pathways for community and stakeholder engagement, and can establish strong working relationships with community networks



Vehicle for the implementation of a projects that will provide benefits to the local community and local environment

The collaborative approach recommended by the Scoping Study will bring several benefits to partner councils, government agencies, stakeholders and the health of the river system. Some benefits include:

- a consistent, sustainable and strategic approach to the management of the Hawkesbury-Nepean River system that enables everyone's priority objectives to be considered
- the opportunity to address issues independently of jurisdictional boundaries
- efficiency savings through economies of scale and the reduced duplication of studies, monitoring effort and community engagement
- establishment of a framework for interagency co-ordination in particular between local and state government agencies
- consideration of current and future risks across a range of planning horizons, allowing improved preparation for emerging threats
- the CMP process will provide significant pathways for community and stakeholder engagement, and be the vehicle for the implementation of projects that will provide benefit to the local community and local environment
- development of the system-wide CMP will provide a robust and defensible platform to secure political interest
  and funding from the NSW Government's Coastal and Estuary Grants Program, along with other potential
  investors

#### What next?

- Council endorsement and support to transition to Stage 2
- Promote achievements to date and continue communication with government agencies
- Apply for funding and start studies as part of Stage 2
- Coordinated roll out of the stakeholder and community engagement strategy
- · Continue exiting on-ground works and monitoring

Any questions - arubio@hornsby.nsw.gov.au













#### What next?

- A report is being prepared to inform each partner council that Stage 1 is now completed and seek support to transition to Stage 2
- Each council will look to promote the work so far and continue communication with government agencies Once endorsed by respective council staff will work together to:
  - Prepare grant applications and apply for funding to progress studies as part of Stage 2
  - Develop a plan to roll out relevant sections of the stakeholder and community engagement strategy
  - · Continue existing on-ground works and monitoring

I hope this presentation has given you a good summary of the Stage 1 CMP Scoping Study and what it has been achieved in 8 months. The partner councils are extremely happy with the position we are now in and are looking forward to continuing the partnership with stakeholders and the wider catchment councils in the management the beautiful Hawkesbury-Nepean River System.