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Minutes of the 32nd Meeting of the  
**Lower Hawkesbury Estuary Management Committee**  
Thursday 17th August 2017  
Brooklyn Community Centre  
2-4 Dangar Rd, Brooklyn

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<b>Title</b>	<b>Family Name</b>	<b>Given Name</b>	<b>Representation</b>	<b>Present</b>	<b>Apologies</b>	<b>Absent</b>	<b>Alternate Rep.</b>
Mrs	<b>AITKEN</b>	Robin	National Parks & Wildlife			X	
Mr	<b>ANDREWS</b>	John	Mooney-Cheero Progress Association	X			
Cr	<b>ANISSE</b>	Antony	Councillor – Hornsby Shire Council		X		
Mr	<b>BROWN</b>	Warren	Gosford City Council		X		Vanessa McCann
Mr	<b>BROWN</b>	Stephen	Roads and Maritime Authority		X		David Lyons
Mr	<b>BURNS</b>	David	Community Representative	X			
Ms	<b>BURTON</b>	Tegan	National Parks & Wildlife		X		
Mr	<b>FENWICK</b>	Andrew	Fenwicks Marina		X		
Mr	<b>FISH</b>	Mike	Community Representative			X	
Ms	<b>FRATER</b>	Ray	NSW Bridge to Bridge Committee	X			
Mr	<b>GANASSIN</b>	Carla	Industry & Investment, Primary Industries Fishing & Aquaculture			X	
Ms	<b>HOWARD</b>	Mary	Community Representative	X			
Mr	<b>HUGHES</b>	David	Affiliate members - Community Representative	X			
Mr	<b>KARCZ</b>	Bronek	Community Representative		X		
Dr	<b>LIM</b>	Leong	Community Representative	X			
Mr	<b>HAM</b>	Peter	Central Coast Council		X		
Ms	<b>MARVELL</b>	Cheryl	Sydney Water Corporation		X		Ian Fairbairn
Mr	<b>MACDONALD</b>	Tim	Office of Environment & Heritage		X		
Mrs	<b>MCDIARMID</b>	Jill	Community Representative	X			
Ms	<b>MCMURDO</b>	Wendy	Community Representative		X		
Mr	<b>MILES</b>	David	Boat Owners Association		X		
Ms	<b>MOOY</b>	Rebecca	Greater Sydney Local Land Services	X			
Mr	<b>MOXHAM</b>	Rob	Commercial Representative – Oysters Farmers			X	
Mr	<b>PATTISON</b>	Mick	Hawkesbury City Council		X		Andrew Kearns
Mr	<b>PIGNEYGUY</b>	Justin	Hawkesbury Cruises		X		
Mr	<b>REES</b>	Stan	Land and Property Management Authority		X		
Mr	<b>ROWE</b>	Simon	Oceanwatch Australia		X		
Dr	<b>RUBIO</b>	Ana	Hornsby Shire Council	X			
Mrs	<b>RYLAND</b>	Julie	Hornsby Shire Council	X			

<b>Title</b>	<b>Family Name</b>	<b>Given Name</b>	<b>Representation</b>	<b>Present</b>	<b>Apologies</b>	<b>Absent</b>	<b>Alternate Rep.</b>
Ms	<b>SEGOVIA</b>	Ingrid	Community Representative	X			
Ms	<b>SCARSBRICK</b>	Joanne	Community Representative		X		Ty Backhouse
Ms	<b>SHORTER</b>	Cybele	Community Representative Dangar Island	X			
Mr	<b>TAYLOR</b>	Chris	Community Representative	X			
Ms	<b>STUART</b>	Suzanne	Hawkesbury City Council		X		Andrew Kearns
Cllr	<b>TILBURY</b>	Nathan	Councillor – Hornsby Shire Council	X			
Mr	<b>VAN ZELEWSKI</b>	Axel	Community Representative	X			

Observer: Jamie Potts from NSW Office of Environment & Heritage and Karen Astles from NSW DPI Fisheries

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## 1. WELCOME

Meeting opened at 18:16. Meeting was chaired by Cllr **Tilbury**. Since we had a number of observers and alternative representatives at this meeting, Cllr Tilbury asked those attending to introduce themselves and raise, if relevant, any pecuniary interests. In addition to the members of the committee, the following people were present at the meeting: Vanessa McCann, ecologist from Central Coast Council; Karen Astles, researcher from NSW DPI Fisheries; Ian Fairbairn, Project Director – Hawkesbury-Nepean Nutrient Framework at Sydney Water; Jamie Potts, Senior Environmental Scientist from NSW Office Environment and Heritage Estuary and Catchment Science Group; Ty Backbone, community representative of Brooklyn Progress Association; Andrew Kearns, Manager Strategic Planning from Hawkesbury City Council; David Lyons, Boat Safety Operator at Roads and Maritime Service and Peter Coad, Manager Natural Resources from Hornsby Shire Council.

## 2. APOLOGIES

Robin Aitken, Cllr Anisee, Warren brown, Steve brown, Tegan Burton, Andrew Fenwick, Broniek Karcz, Peter Ham, Cheryl Marvell, Tim Macdonald, Wendy McMurdo, David Miles, Mick Pattison, Justin Pigneguy, Stan Rees, Simon Rowe, Joanne Scarsbrick, and Suzanne Stuart.

## 3. DECLARATION OF PECUNIARY INTERESTS

No pecuniary interest were declared

## 4. PRESENTATION:

Instead of a formal presentation a Q&A session was organised in regards to future research topics for the Hawkesbury River/Estuary that could assist in future steps towards the development of a Coastal Management Program for the Hawkesbury. The following groups were invited to take part of the conversation: Sydney Water, NSW Office of Environment and Heritage (OEH) and NSW DPI Fisheries. Brief updates were given by a number of organisations currently undertaking or being involved in research projects in the Hawkesbury River and Estuary. This was followed by comments and Q&A from committee members.

Ana **Rubio** from Hornsby Shire Council gave a brief presentation on the latest data that has been collected through Council's water quality program and the real-time monitoring stations deployed along the estuary as per last meeting's action #201704. Data presented:

- Temperature, salinity, turbidity and chlorophyll-a anomaly values. Anomalies were calculated as the monthly average value subtracted from the historical mean value for that parameters at that location. Two locations were used: Gonyah (downstream site) and Laughtondale (upstream site). This information needs to be further analysed, in particular by overlaying rainfall. Interesting observations:
  - Water temperatures at the downstream site have been on average 0.4°C higher than the historical average since July 2015
  - Significant drops in salinity levels at the downstream site were recorded during Dec'10-Feb'11; Feb-Mar'12; Feb-Mar'13; Mar-Apr'15 and Jan'16. Most of these periods correspond to major rainfall events/floods.
  - Chlorophyll-a and Turbidity at the downstream site fluctuated around the historical mean with the exception of lower (0.7µg/L) than usual levels of chlorophyll-a between 2010-2013
  - All variables at the upstream location fluctuated around the historical mean. A number of specific higher and lower values we recorded with no specific correlation to other environmental variables or rainfall, However further investigations are required.

- Chlorophyll-a levels at the upstream site were higher (~2µg/L) than usual between mid-2011 and 2013
- Nutrient, as Total Nitrogen and Total Phosphorus, Chlorophyll-a and bacteria levels were presented for Council's water quality monitoring program for the 17 estuarine sites that have been monitored during the last 20 years (N.B. five sites are currently inactive).
  - Overall the sites within the main stream of the Hawkesbury Estuary have consistent levels of nutrients, chlorophyll-a and bacteria within the range of values expected for any NSW estuary
  - Significantly high levels of Total Nitrogen and Total Phosphorus, Chlorophyll-a and bacteria were seen at sites within Berowra Creek (Calabash to Crosslands, inclusive). The site that will follow slightly elevated values of these parameters is Laughtondale, our furthest upstream estuarine site.
  - Temporal (averaged by year) variations were observed for nutrients in Berowra Creek. Nutrients declined from 2001 to 2004. Levels have remained low until today. However the range of the measurements has increased slightly since 2010.
  - Bacteria levels are significantly high at Crosslands exceeding the low risk category of the National Health Medical Recreational Council Guidelines. Spikes in the levels of bacteria are found at Berowra Waters, Calabash and upstream of Marramarra Creek. Bacteria levels at the rest of the estuarine sites are consistently low.
- Further analysis is required with focus on significant spikes in the data i.e. influence of rainfall events; catchment processes, development...

Latest research projects that Council has been involved in the last 5 years were also listed:

- Brooklyn and Dangar Island STP Water Quality Monitoring
- Environmental drivers of algal blooms – UTS
- Sediment Monitoring (heavy metals) every 5 years (last program in 2014)
- Erosion study Wisemans to Spencer both shorelines
- Environmental drivers of oyster disease – Sydney University/ NSW DPI Fisheries
- Socio-Economic studies of the commercial fishing & aquaculture industry – UTS
- One Tree Reach Wetland- hydrological investigation
- Land Capability Assessment– CSIRO (2009/10)
- Swimming conditions – recreational monitoring (HSC)
- Climate change impacts on estuarine habitats (DPI Fisheries)
- Estuary Mapping and Geographic Characterisation
- Estuarine Bird surveys
- Oyster Information Portal – University of Wollongong
- Tailor stocks in the Hawkesbury – UNSW

Ian **Fairbairn** from Sydney Water described a number of projects along the Hawkesbury River/Estuary:

- Large data set for the Hawkesbury-Nepean catchment. In particular as part of the monitoring of effluent from STPs they do (summary of sites included in the documentation sent to committee members as part of last meeting action #201703). Information from this monitoring is summarised in annual reports available from Sydney Water's website. These reports are also sent to the EPA as part of the STP operating licence. Sampling frequency varies from 6 days to monthly depending on the site.
- Sydney Water is also monitoring for nutrients, emerging chemical substances i.e. estrogen levels, pharmaceutical products. These reports are also available from Sydney Water's website
- Water demand is a problem as during the last drought they almost ran out of water. Water is being taken from the Shoalhaven in critical periods
- Environmental flows from upstream dams

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- Sydney Water has developed an extensive hydrodynamic model of the Hawkesbury River/estuary in order to identify estuarine processes in the Hawkesbury, specifically looking into:
    - quantification of nutrient loads from STP discharges into the Hawkesbury
    - changes in land use with increasing urban areas
    - Estimates of chlorophyll-a level to manage algal blooms

Data from Hornsby Shire Council real-time monitoring stations is being used on the validation of this model.

Sydney Water is working closely with OEH on the validation and parametrisation of the model.

Karen **Astles** from DPI Fisheries highlighted the limited resources that the department has. Key projects focus on:

- Fish passage over weirs in the upper part of estuaries
- Commercial fishing catch and effort data
- Fisheries data is now centralised at Port Stephens after the closure of the Cronulla Fisheries Centre

Jamie **Potts** from OEH also listed projects they are currently undertaking in the Hawkesbury:

- Work in partnership with Sydney Water in improving the computer model they have for the Hawkesbury River/Estuary (ecological response, catchment model, estuary response) in order to maximise loads from STPs without impacting on estuarine processes
- Most of the research questions at this stage are at a whole catchment scale- but they are interested in going to the sub-catchment level
- 3-day field campaign in the Hawkesbury took place a few months ago during dry conditions. Further sampling will take place after wet conditions. Large number of partnerships with universities (SIMS/ ANU/ Canberra University/ Macquarie University) looking at:
  - Water Quality
  - Nutrients in sediments
  - Stable isotopes
  - Chlorophyll-a
  - Macrophytes (mangroves, saltmarsh and seagrasses)
  - Freshwater reaches – pollution sources
  - Heavy metals in d=sediments
  - Microbial DNA of estuarine bacteria

Committee topics' and concerns discussed at the Q&A:

- Levels of contaminants from the RAAF in the Upper Hawkesbury and its potential impact on fish and drinking water
- Fish stocks in areas along NSW where commercial fishing has been banned – DPI is working on this
- Peat Island development – John **Andrews** will keep the committee informed about the next 3 month consultation process
- Capacity of Brooklyn STP if Peat Island development goes ahead
- What is Greater Sydney Commissioner's strategic plan for the Hawkesbury
- Need to look at the Hawkesbury as a whole in regards to stormwater management, STPs, urban development, WSUD, controls to put in place... need for further compliance resources
- Lack of research hub that will coordinate all these topics using a holistic approach
- How to lobby decisions made at Land and Environment Court that are not acceptable and they set precedence
- Remediation work at Spencer from illegal dumping

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Research topics or problems in the estuary that are worth considering in future development of a Coastal Management Program for the Hawkesbury:

- Condition of the Hawkesbury River for the health and wellbeing of fish resources in order to be able to answer community's concerns about this resource
- Relationship of turbidity levels after rainfall and fish/prawn stock
- What should be the baseline level for nutrient/chlorophyll-a/bacteria levels in the Hawkesbury River/Estuary
- Use fish as proxies for water quality and for habitat protection enhancement in the Hawkesbury
- Fish stock assessment by the recreational fishing community – potential impact on overall fish stocks
- Spatial distribution of algal blooms (community species) along the arms and main channel of the Hawkesbury River and Estuary
- Assessment of the efficiency of current zones dictated by the LEP along the Hawkesbury
- Assessment of the efficiency of controls as part of Hornsby Council's DCPs
- Assessments of Sea Level Rise predictions for coastal assets i.e. Dangar Island Coastal Reserve

Some members sent by email a list of research questions, this has been collated in a document for use in future development of the scoping study towards a Coastal Management Program for the Hawkesbury.

## 5. CORRESPONDENCE and MATTERS ARISING FROM PREVIOUS MEETING

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**ACTION 201703:** There was uncertainty about the organisations and programs that are currently monitoring the waters of the Hawkesbury River. Ana **Rubio** will collate information on monitoring programs currently testing water quality in the Hawkesbury River (this includes the area managed by the Hawkesbury City Council) **Complete:** A summary document of sampling effort was sent to members (HSC TRIM D07279609)

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**ACTION 201704:** Ana **Rubio** will present water quality data collected at the monitoring stations in the estuary during this financial year. The information will be presented as anomalies as it is the best way of seeing if recent years have been different from the historical averaged data. **Complete:** A presentation was given by Ana Rubio as part of this meeting – see notes included in the previous section

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**ACTION 201705:** The committee suggested that Sydney Water could be approached for a presentation on their latest water quality testing and modelling of environmental flows for the Hawkesbury. Ana **Rubio** will approach Sydney Water to engage them to present at an upcoming meeting. **Complete:** Sydney Water sent a new representative, Ian Fairbairn, to be present at next meeting at which research priorities will be discussed. Ian has agreed to attend future meetings on behalf of Sydney Water (HSC TRIM D07285407)

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**ACTION 201706:** Ana **Rubio** to disseminate among committee members the Hawkesbury City Council's Coastal Zone Management Plan (CZMP) highlighting those strategies that are directly related to the Lower Hawkesbury. **Complete:** link to the Upper Hawkesbury CZMP was sent to members (HSC TRIM D07279609)

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**ACTION 201707:** Ana **Rubio** to contact Ross McPherson to present at upcoming LHEMP Committee meetings about Ross' overview on the changes that have occurred in the Lower Hawkesbury – in particular in relation to water quality. **On-going:** Ross was notified about the potential presentation to the committee. Ross is scheduled for next year to present to the committee. Alternatively might be more valuable to have Ross at the stakeholder discussions that will take place as part of the future Scoping Study towards a Coastal Management Plan

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**ACTION 201708:** Ana **Rubio** to send copy of the proposed development document for Peat Island to committee members. **Complete:** Information sent to members (HSC TRIM D07279584)

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**ACTION 201709:** Ana **Rubio** to approach the Environment Commissioner of the Greater Sydney Commission to attend an upcoming LHEMP Committee meeting. **On-going:** The Environment Commissioner of the Greater Sydney Commission has been contacted and tentatively accepted our invitation to present at the next meeting (HSC TRIM D07285448). On 7<sup>th</sup> of September we received apologies from Mr Rod Simpson who will be overseas during November, therefore unable to present to the council on Thursday, 16th November (HSC TRIM D07295443)

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## 6. ACCEPTANCE OF MINUTES OF PREVIOUS MEETING

Ray **Frater** highlighted that an action discussed at the meeting on 25th May 2017 was missing from the minutes; hence a new action has been added to the minutes of the 17<sup>th</sup> August 2017 meeting.

Ray **Frater** is the president of the Bridge to Bridge Ski Classic Race Committee. As part of this event he hires the Parsley Bay carpark. Ray wanted to know if what Council can do in regards to the large number of boats and trailers parked in this space on a continuous basis as it limits the space available for the event.

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**ACTION 201710:** Julie **Ryland** to follow up with the various branches of Hornsby Shire Council to collate information on assistance that council can provide on the issue of boats and trailers parked in all year around at Parsley Bay. **Complete:** Julie liaise with the Traffic Team and the Parks and Recreation Team in Council. Ranges followed up proactively with cars and trailers left at Parsley Bay (HSC TRIM D07288316)

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Minutes of the Lower Hawkesbury Estuary Management Committee meeting, Thursday 25th May 2017 were accepted with the addition of Action #201710 in the .

Accepted: Ray **Frater**                      Carried: Ingrid **Segovia**.

## 7. PROGRESS REPORT ON THE LOWER HAWKESBURY ESTUARY MANAGEMENT PROGRAM

We ran out of time to give an update on progress reports. Relevant stakeholders were notified in advanced. No urgent matters were raised. An update will be given at the next meeting.

## 8. GENERAL BUSINESS

### Other Business

- Leong **Lim** brought up his concerns in relation to current permissions with consent that environmental protection zones under Hornsby's LEP have for short-term rental accommodations like AIRbnb and Stayz along the foreshore of the Hawkesbury estuary. In



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particular Leong's concerns relate to the over-extended use of houses' sewage systems and the increased loads that are beyond the design limits of the currently approved systems. At the meeting Leong mentioned he already discussed the issue with Council's manager for planning who updated him with how Hornsby's LEP currently considers short-term rental accommodation and mentioned a recently released report on the 'Adequacy of the regulation of Short term Holiday letting in NSW' by the Legislative Assembly of NSW which provides a series of recommendations regarding permissibility and best practice management of short-term rental accommodation

- <https://www.parliament.nsw.gov.au/committees/inquiries/Pages/inquiry-details.aspx?pk=1956>

### **Future Meetings**

Next meeting to be held 16 November 2017

**CLOSE**            Meeting closed at 8:30pm