

Appendix B

Community Consultation Materials

Appendix B1

Stakeholder Consultation

Our Ref LJ2717/L1528:TJM/ERM

Contact Emma Maratea

[Contact Name]

[Department]

[Agency]

[Address]

[Address]

4 June 2008

Dear [Name],

RE: BRISBANE WATER ESTUARY MANAGEMENT STUDY AND PLAN

We are writing to inform you that Cardno Lawson Treloar has been engaged by Gosford Council and the Department of Environment and Climate Change (DECC) to undertake the Brisbane Water Estuary Management Study and Plan.

The study area is indicated in the attached figure.

The aim of the Management Study and Plan is to provide a balanced and long term management framework for the ecological sustainable use of the estuary and its catchment. The Management Study will set the context for the Management Plan by providing details on:

- The consultation process,
- The outcome of the estuary processes study,
- Estuary values, uses and significance,
- Regulatory and management context,
- Management issues and objectives, and
- Management Options (to include an explicit options assessment).

After the Management Study has been prepared, the preferred options will be developed into a series of management actions to be adopted as part of the Management Plan. The Management Plan will also detail an implementation strategy and monitoring and evaluation plan.

The Estuary Management Study and Plan represents the final stage in the Estuary Management Process for Brisbane Water, as outlined in the Estuary Management Manual (NSW Government, 1992). The Data Compilation and Estuary Processes Studies have already been completed, the latter study having been undertaken by Cardno Lawson Treloar in association with a range of sub-consultants.

We would be grateful for your input into the development of the Management Study and Plan, particularly with respect to identification of any management issues relating to Brisbane Water. Identification of management issues is a critical stage in the development of the Management Plan. The final list of management issues will be used to delineate the management objectives for

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Cardno Offices

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Gold Coast
Gosford
Baulkham Hills
Wollongong
Busselton

Papua New Guinea
Indonesia
Vietnam
China
Kenya
United Arab Emirates
United Kingdom
United States



Brisbane Water. The list of management issues will also provide the framework upon which a comprehensive list of management options, which will then be translated into management actions for adoption in the Management Plan.

In addition, we would also appreciate your assistance in identifying (and providing, where possible) any additional studies have been undertaken since the completion of the Estuary Processes Study.

Please do not hesitate to contact either myself or Tanja Mackenzie, at tanja.mackenzie@cardno.com.au, should you require any further information.

Yours faithfully

Emma Maratea
for **Cardno Lawson Treloar**



Figure 1: Study Area



NSW National Parks
and Wildlife Service

Our reference : DOC08/27507
In response to : DOC08/26647
Your reference : LJ2717/L1528h:TJM/ERM

Ms Emma Maratea
Cardno Lawson Treloar
Level 2, 910 Pacific Highway
Gordon
NSW, 2072

Brisbane Water Estuary Management Study and Plan

Dear Emma,

Thank you for your letter advising of the proposed study and estuary management plan for Brisbane Water.

The National Parks and Wildlife Service (NPWS) as part of the Department of Environment and Climate Change (DECC) manages a number of areas that are directly adjacent to Brisbane Water estuary, including Bouddi and Brisbane Water National Parks and Cockle Bay, Rileys Island, Pelican Island and Saratoga Island Nature Reserves.

Plans of Management (PoM) exist for these reserves in which the major issues, management outcomes and strategies are identified.

In the Cockle Bay, Rileys Island, Pelican Island and Saratoga Island Nature Reserves PoM (draft) there are a few management issues which directly involve Brisbane Water estuary processes, which should be included in the management study and plan. These issues include the:

- Survey of the landward mangrove encroachment of the saltmarsh communities,
- Examination of feasibility and methods to manage mangrove encroachment,
- Rehabilitation of Saltmarsh - Endangered Ecological Communities (EEC's),
- Protection of habitat for migratory birds, and
- Inclusion of the surrounding Intertidal Zones (ITZ) within the nature reserve boundaries.

These strategies have been allocated a high to medium management priority within the PoM.

Thank you for the opportunity to comment and if you require further information please contact Ranger Vicki Elliott, ph: 43204202 or Ranger Liz Phelps, ph: 43204223.

Yours sincerely

Richard Colbourne
A/Area Manager Gosford
Central Coast Hunter Range Region
Date: 19/6/08

The Department of Environment and Conservation NSW is now known as
the Department of Environment and Climate Change NSW

PO Box 1477, Gosford NSW 2250
Suites 36-38, 207 Albany St North, Gosford NSW
Tel: (02) 4320 4200 Fax: (02) 4320 4299
ABN 30 841 387 271
www.environment.nsw.gov.au

Department of **Environment and Conservation** NSW

Cardno Lawson Treloar
Level 2, 910 Pacific Highway
GORDON NSW 2072

Cnr New England Highway & Banks Street
(PO Box 6) East Maitland NSW 2323
Contact Officer: Martin Dawson
Phone: (02) 49 379 346
Fax: 49 348 417
E-mail: martin.dawson@lands.nsw.gov.au
www.lands.nsw.gov.au

Date:
Your Ref: LJ2717/L1528e:TJM/ERM
Our Ref: MD07/4965

Attention: Emma Maratea

Dear Madam,

BRISBANE WATER ESTUARY MANAGEMENT STUDY AND PLAN

I refer to your letter seeking the Department of Lands input into the development of the subject plans and thank you for the opportunity to comment.

The Department of Lands is a major land holder within the estuary and catchment. Hence the outcomes of these reports could directly effect Lands' operations across a broad range of activities. To get a full appreciation of the Department's position it would be appropriate to schedule a meeting in due course between Lands, Council and yourselves.

The bed of Brisbane Water is almost entirely crown land and any use or activity in this area generally requires some form of consideration or authorisation by the Department. As such, relevant issues requiring discussion include:

- 1) The waterway is currently unzoned, however the Department agrees that this should be rectified under Council's current LEP review. It is crucial to incorporate Lands' needs in this process.
- 2) Consolidation of the various planning instruments for waterway development and use, based on factors such as; regulation by other agencies/legislation, ecological values, water depth, adjoining land zonings, climate change impacts, zoning of waterways, DCP's, maintenance dredging requirements and maintenance of facilities such as marinas and jetties. Ideally, a "red, green and amber light" type system of planning zones would ensue.

The development of a comprehensive policy or DCP for waterfront structures, having regard for the impacts of structures, their benefits and uses, based on the latest estuary processes study. Issues for consideration might include: suitability or otherwise for facilities fronting public land and reserves; restrictions/guidelines on the design, proliferation and length of structures, and dealing with unauthorised and abandoned structures.

- 3) The importance of commercial activities and occupations on the waterway, and their contribution to revenue and hence environmental and social values must be recognised and facilitated by any planning mechanisms, where in the public interest.

- 4) The impact of any proposed changes on existing operations (leases and licences) authorised by the Department. Notably, Lands has issued almost 1000 licences for jetties in Brisbane Water and many hundreds of other tenures relevant to the study. Some of these are for significant commercial/social uses such as the area's marinas.
- 5) Requirements for both small craft storage and deep-draft vessel mooring and management need to be considered and facilitated.
- 6) The role of foreshore crown reserves and that of adjoining waterway structures such as public jetties. The latter would preferably be "owned" and managed by Council.
- 7) The planning process for the Gosford city centre and foreshores will be important to this process.
- 8) Consideration of reclamation restrictions and needs, on commercial, social and environmental grounds. Any such proposals should be dealt with on their merits.
- 9) Drainage requirements and management of catchment values; including potential development of artificial wetlands as nutrient traps or the placement of gross pollutant traps on drainage courses.

I look forward to discussing the Crown's role in the area further. Meantime, if you have any further inquiries regarding this matter please contact either Martin Dawson at our Maitland Office on 49379346 or myself on 0413 745 496.

Yours sincerely

Anthony Signor
Program Manager, Land Management
Crown Lands Division
Central Coast / Hunter Region



NSW GOVERNMENT
Department of Planning

Contact: Ben Holmes
Phone: 02 4348 5003
Fax: 02 4323 6573
Email: ben.holmes@planning.nsw.gov.au

Our ref: CC08/94

Your ref:

File: C08/00005

To	ERM
Date	18-07-08
File	
Circulation	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>

Ms Emma Maratea
Cardno Lawson Treloar Pty Ltd
Level 2
910 Pacific Highway
GORDON NSW 2072

Dear Ms Maratea

Brisbane Water Estuary Management Study & Plan

I refer to your letter dated 4 June 2008 whereby you seek the Department's advice regarding estuary management issues that should be addressed as part of the preparation of the Brisbane Water Estuary Management Plan.

I wish to advise that the Estuary Management Plan should give consideration to the following issues:

- sustainable growth of oyster aquaculture development and other related matters as detailed in *State Environmental Planning Policy 62 – Sustainable Aquaculture*;
- expansion of marina/ boating facilities and increased boating/ fishing activities on Brisbane Water;
- stormwater impacts associated with increased urban development within the Brisbane Water catchment, particularly in areas such as the Peninsula, Gosford and Erina which will experience growth per the *Central Coast Regional Strategy*;
- preservation and protection of coastal wetlands; and
- impacts associated with climate change/ sea level rise.

Should you have any queries or require further information, please contact me on 4348 5003 or by email ben.holmes@planning.nsw.gov.au.

Yours sincerely

16/7/08

Ben Holmes
Environmental Planner
Hunter & Central Coast



NSW GOVERNMENT
Department of Planning

Contact: Cathy Colville
Telephone: 02 9873 8588
Catherine.colville@planning.nsw.gov.au
File: S90/03597/009
Our Ref: HRL50607
Your Ref: LJ2717/L1528k:TJM/ERM

To	ERM
Date	29-7-08
File	
Circulation	/ / / /

The Director
Cardno Lawson Treloar
Level 2, 910 Pacific Highway
GORDON NSW 2072

Attention: Emma Maratea
Tanja Mackenzie

Dear Sir/Madam

Re: Brisbane Water Estuary Management Study & Plan

Thank you for notifying the Department of Planning's Heritage Branch that Gosford Council has engaged your firm to undertake the Brisbane Water Estuary Management Study and Plan and for requesting information for the preparation of the Study.

It is understood that the aim of the Management Study and Plan is to provide a balanced and long term management framework for the ecological sustainable use of the estuary and its catchment. It would appear from our records that no natural heritage items of State heritage significance (listed on the State Heritage Register) exist within the Study area. However, the Heritage Council maintains the State Heritage Inventory which lists some items protected under the Heritage Act, 1977 and other statutory instruments. This register can be accessed through the Heritage Branch home page on the internet (<http://www.heritage.nsw.gov.au>). It should be noted that the legal standing of items listed on the State Heritage Register can also be provided by applying for a section 167 Certificate through the Heritage Branch home page.

In addition, lists maintained under the Australian Government's Environment Protection and Biodiversity Conservation Act 1999, the National Trust and the local council should be consulted in order to identify any existing items of heritage significance in the Study area. Please be aware, however, that these lists are constantly evolving and that items with potential heritage significance may not yet be listed.

Where the Management Study and Plan may result in any impacts on heritage items (if any are found to be within the Study area), a statement of significance and an assessment of the impact of the proposal on the heritage significance of these items should be undertaken. Any policies/measures to conserve their heritage significance should be identified. This assessment should be undertaken in accordance with the guidelines in the NSW Heritage Manual. The field survey and assessment should be undertaken by a qualified practitioner/consultant with historic sites experience.



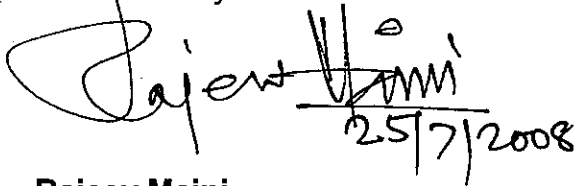
Working with the community to know, value and care for our heritage

Heritage Branch, 3 Marist Place, Parramatta NSW 2150 | Locked Bag 5020, Parramatta NSW 2124 | DX 8225 PARRAMATTA
Phone 61 2 9873 8500 Fax 61 2 9873 8599 Email heritageoffice@heritage.nsw.gov.au Website www.heritage.nsw.gov.au

Where the Management Study and Plan may have any impacts on Aboriginal heritage, adequate community consultation should take place regarding the assessment of significance, likely impacts and management/mitigation measures. For guidelines regarding the assessment of Aboriginal sites, please contact the National Parks and Wildlife Division of the Department of Environment and Conservation on (02) 9585 6444.

I trust these comments are of assistance. If you require any additional information please contact Cathy Colville on (02) 9873 8588.

Yours faithfully



25/7/2008

Rajeev Maini
Acting Manager
Conservation Team
Heritage Branch
Department of Planning

Appendix B2

Initial Press Release and Newsletter



MEDIA RELEASE

25 March 2009

COUNCIL TO UNDERTAKE A MANAGEMENT PLAN AND STUDY FOR BRISBANE WATER ESTUARY

Gosford City Council has announced today a major project to undertake a Management Study and Management Plan of the Brisbane Water Estuary. Council has engaged the services of Cardno Lawson Treloar to undertake the study and plan which will begin in March 2009. This follows on from the successful completion of the Brisbane Water Estuary Process Study in February 2008 and adoption of the report in early 2009.

The estuary management process is part of the NSW State Government's Rivers and Estuaries Policy. This study is being prepared under the guidance of the Coastal and Estuary Management Committee (CEMC) which is convened by Gosford City Council.

The study area encompasses the entire estuary and its drainage catchment with linkages to Broken Bay and the Tasman Sea. The major estuarine tributaries are:

- Ettalong Creek;
- Woy Woy Creek;
- Coorumbine Creek;
- Upper and Lower Narara Creek;
- Upper and Lower Erina Creek; and
- Kincumber Creek.

The project is jointly funded under the Estuary Management Program between Department of Environment and Climate Change and Gosford City Council.

Gosford City Council's Mayor Chris Holstein said: "The study and plan will provide strategic guidance for future management and decision making regarding the Brisbane Water Estuary. I would encourage all of the community who value the area to participate in the upcoming workshop on 4 April 2009 at the Erina Centre"

In developing the study and plan, Council will ensure that the following objectives are also achieved:

- Improve the awareness and understanding of the estuarine system by the local community;
- Increase commitment by stakeholders to implement the plan; and
- Foster a spirit of cooperation between stakeholders managing the Brisbane Water Estuary.

The Management Plan is expected to be completed by early 2010.

ENDS

For further information contact:

Ann Stewart

Senior Environment Planning Officer

Gosford City Council

(Telephone: 02 4325 8885 or email: ann.stewart@gosford.nsw.gov.au).

RSVP for workshop to: brisbanewater@cardno.com.au

Brisbane Water Estuary Management Study and Plan

Community Newsletter

March 2009



Background

Gosford City Council and the Department of Environment and Climate Change have begun work on the Brisbane Water Estuary Management Study and Plan. This Management Study and Plan is being conducted under the NSW Government Estuary Management Process, which is part of the State Government's Rivers and Estuaries Policy.

As part of this process, Gosford City Council has engaged **Cardno Lawson Treloar** Pty Ltd to prepare the Estuary Management Study and Plan. The purpose of this study is to identify and recommend appropriate actions to manage the environmental social and commercial aspects of Brisbane Water Estuary.

The Study Area

The study area encompasses the entire estuary and its drainage catchment, with linkages to Broken Bay and the Tasman Sea (see **Figure 1**). The study area includes the tidal waterway, foreshore and adjacent land of Brisbane Water.



Figure 1: Study Area

The major estuarine tributaries included in the study area are:

- Ettalong Creek,
- Woy Woy Creek,
- Coorumbine Creek,
- Upper and Lower Narara Creek,
- Upper and Lower Erina Creek, and
- Kincumber Creek.

The Estuary Processes Study

Cardno Lawson Treloar recently completed the Brisbane Water Estuary Processes Study, which investigated the complex interactions occurring in the estuary, involving:

- Catchment Processes (land use, stormwater runoff, flooding);
- Hydrodynamic Processes (water movement, waves);
- Geomorphological Processes (erosion, siltation, shoal movements);
- Water Quality Processes;
- Ecological Processes;
- Cultural Heritage Values; and
- Recreational Usage.

Using this information, Cardno Lawson Treloar will be proceeding with the next stage of the Estuary Management Process (the Management Study and Plan) to identify appropriate management actions.

The Estuary Management Study and Plan

The Brisbane Water Estuary Management Study and Plan represents the final stage in the Estuary Management Process. It seeks to establish a strategic framework for the future management of Brisbane Water.

The Management Study will identify relevant management issues and objectives for Brisbane Water. A range of management options will then be identified to address these issues. Based on consultation with the community, stakeholders and Gosford Council, recommendations will be made as to the preferred management options. These preferred options will be translated into management actions for implementation and will form the basis of the Management Plan.



The Estuary Management Study and Plan (cont.)

For example, Council is aware that navigation on the estuary waterways has become increasingly difficult at some locations and is working towards developing a Plan for managing potential dredging works within the Brisbane Water estuary as part of the Management Study and Plan.

In 2007 *Coastal Lake Assessment and Management* (CLAM) decision support computer models were developed to investigate two dredging scenarios in the Gosford and Entrance regions of Brisbane Water. These models will help inform decisions about the management of navigation and dredging issues.

As part of the Management Study and Plan, CLAM models will be developed at an additional six sites presented in **Figure 2**.



Figure 2: Possible Dredging Scenarios

During the consultation process, input will be sought from local residents, boat users and other relevant stakeholders as to what are the key dredging and navigation issues in Brisbane Water.

Community Input to the Study and Plan

In preparing the Management Study and Plan for Brisbane Water, the Estuary Management Committee will be seeking your input so that we can make sure that the future management of Brisbane Water is in line with the community's expectations and values.

Your input at an upcoming community workshop is requested. The purpose of this workshop is to allow for the exchange of ideas for the Management Study and Plan. Cardno Lawson Treloar will provide background information on the study and an update on work completed up until that time.

The workshop will be held on Saturday 4 April 2009 at the Erina Centre between 10:00am and 1:00pm.

The primary discussion topic for the workshop will be the management issues and objectives for the Brisbane Water Estuary.

Management issues are likely to include:

- The impacts of increased development in the Gosford area,
- Poor stormwater quality,
- Limited flushing in the upper reaches of the estuary,
- Inundation of low lying areas during storms,
- Siltation of waterways,
- Shoreline erosion,
- Poor water quality,
- Loss of saltmarsh and seagrass,
- Introduced plant and animal pest species,
- Conflict between different recreational activities,
- Lack of public access to the Brisbane Water shoreline, and
- The potential loss of heritage items.

To register your interest in attending the workshop, please RSVP to brisbanewater@cardno.com.au by 1 April 2009.

Appendix B3

Issues and Objectives Workshop

Community Consultation Workshop, 4th April 2009

Brisbane Water Estuary Management Study

Agenda

Location: Erina Centre

Time: 10:00 AM – 1:00 PM

<i>Time</i>	<i>Agenda Item</i>	<i>Presented By</i>
10:00 – 10:10 AM	Arrival and registration	-
10:10 – 10:25 AM	Welcome address	Mayor Holstein, Gosford City Council
10:25 – 11:00 AM	Presentation	Louise Collier, Cardno Lawson Treloar
11:00 – 11:15 AM	Break for tea and coffee	-
11:15 AM – 12:55 PM	Workshop session in groups	Each group table will have a team member to assist
12:55 – 1:00 PM	Workshop closing address	Louise Collier, Cardno Lawson Treloar

Brisbane Water Estuary Processes Study

The Brisbane Water Estuary Processes Study was adopted by Council in February 2009. The report may be viewed at http://www.gosford.nsw.gov.au/customer/document_gallery/brisbane-water-estuary/base_view.

Future Consultation

We would also like to invite you to attend one of three forthcoming workshops at which we will be seeking your feedback on management options for implementation as part of the Plan.

Please find below details of these upcoming workshops. Please register your interest in attending at brisbanewater@cardno.com.au, or by notifying one of the Cardno team members today.

Date: Tuesday, 19th May

Time: 1pm to 4pm

Location: Wagstaffe Hall - Cnr Mulhall Street and Wagstaff Avenue, Wagstaffe.

Date: Wednesday, 20th May

Time: 6.30pm to 9pm

Location: Gosford City Council Chambers - 49 Mann St Gosford.

Date: Thursday, 21st May

Time: 10am to 1pm

Location: South Woy Woy Progress Hall - 76 Woy Woy Road, Woy Woy.

Brisbane Water Estuary Management Study and Plan



Community Workshop: Erina Centre, 4 April 2009

Workshop Agenda

- 10:00-10:10 - Arrival and Registrations
- 10:10-10:25 - Mayor's Welcome
- 10:25-11:00 - Presentation
- 11:00-11:15 - Break for coffee and tea
- 11:15-12:55 - Workshop Session
- 12:55-13:00 - Closing Address

Mayor's Welcome

Councillor Chris Holstein



Today's Workshop Team:

Louise Collier – Project Manager, Cardno
Tanja Mackenzie – Environmental Scientist, Cardno
Leo Drynan – Environmental Scientist, Cardno

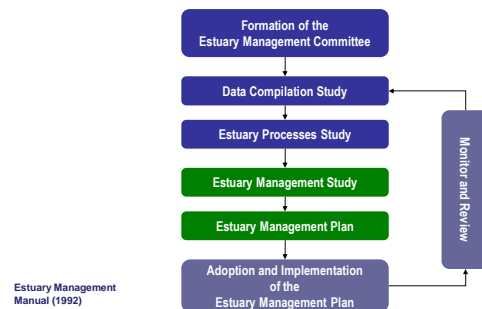
Garry Chesnut, Director, Environment and Planning, GCC
Eddie Love, Manager – Integrated Planning, GCC
Ann Stewart, Advisor Environmental Planning, GCC

Presentation Outline

- What is the 'Estuary Management Process'?
- How does this fit with the 1995 Plan of Management?
- Fast Facts - Brisbane Water Estuary
- What did the Estuary Processes Study find?
- What will this Estuary Management Study address?
- What are some known Management Issues?
- What might be appropriate Management Objectives?
- Workshop Session – Values and Issues
- What happens Next?



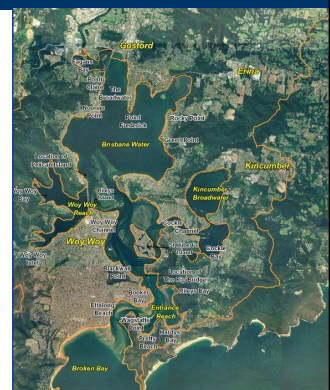
Estuary Management Process



Background: Current Framework

- Brisbane Water Plan of Management (1995)
 - Adopted by Council 25 July 1995.
 - Prepared in response to increasing development pressures on Brisbane Water and its foreshores.
 - Aimed to provide a sound framework within which to develop further planning for the area and to ensure that valuable estuarine resources are properly managed.
 - Brisbane Water Estuary Management Study and Plan will supersede the Plan of Management.

Brisbane Water Estuary – Fast Facts



Brisbane Water Estuary – Fast Facts

- Classification – “wave dominated” estuary.
- Catchment area – 165km².
- Water area – 27.2km².
- Condition – extensively modified.
- The estuary plays an important role with regards to the environment, recreational and commercial uses, and residential living.



What was the Purpose of the Estuary Processes Study?

- To identify the physical, ecological and biochemical processes of the estuary
- To define the baseline condition of the estuary to inform future management decisions;
- To review existing and future land uses

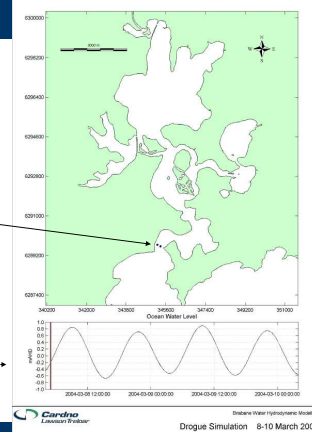


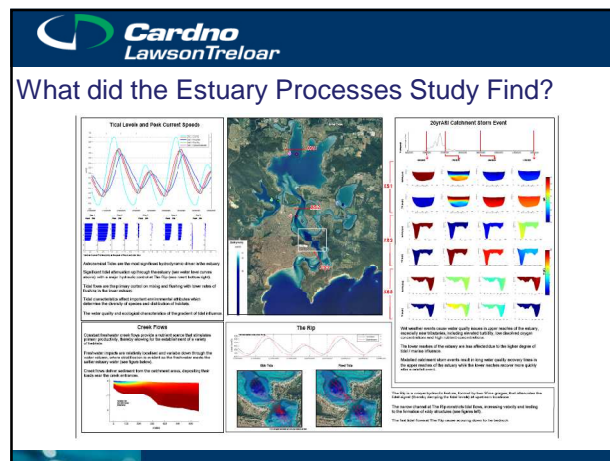
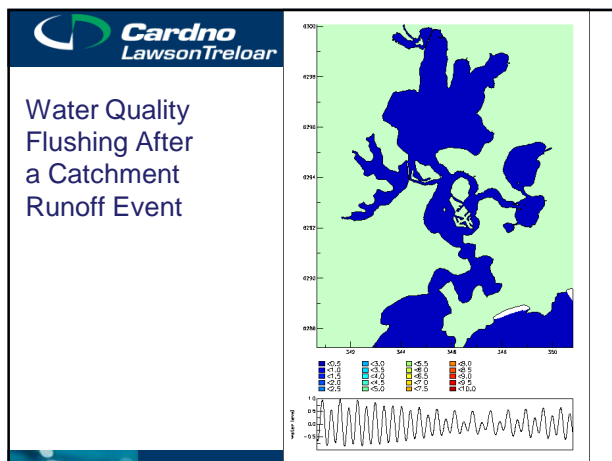
What did the Estuary Processes Study Consider?

- Hydrodynamics (water movement);
- Water Quality;
- Morphology (sediments and their movement);
- Ecology (flora and fauna);
- Heritage (Aboriginal and Non Aboriginal); and
- Recreation (Foreshore and Water based).

Hydrodynamic
s
Particle
Tracking
Assumed
Starting Point

Tidal Cycle





**Cardno
LawsonTreloar**

Where can I see the Estuary Processes Study?

- Findings will feed into the Estuary Management Study and Plan.
- Now available on Council's website:
http://www.gosford.nsw.gov.au/customer/document_gallery/brisbane-water-estuary/base_view

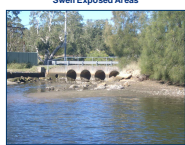
**Cardno
LawsonTreloar**

What will the Estuary Management Study Involve?

- Identify Estuary uses, values and significance.
- Establish the Regulatory and management context.
- Identify management issues and objectives.
- Identify management options.
- Prioritise management options
- Recommend options for the Estuary Management Plan.

What are some known Management Issues?

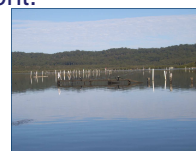
- **Catchment Issues**
 - Erosion and sedimentation;
 - Loss of riparian vegetation;
 - Stormwater quality (nutrients, sediments and heavy metals);
- **Hydraulic Issues:**
 - Limited flushing in upper reaches;
 - Foreshore erosion (wave attack and storm bite);
 - Inundation of low lying areas due to flooding and storm surge;
 - Sediment re-suspension (e.g. near St Hubert's Island);
 - Sea level rise.
- **Geomorphological Issues:**
 - Impacts of shoals on navigability (e.g. Ettalong);
 - Siltation of waterways;
 - Degraded sediment quality;
 - Acid Sulfate Soils;
 - Impacts of shoreline structures on foreshore processes;
 - Shoreline erosion (short term and long term).



Stormwater Outlet

Known Management Issues Cont.

- **Water Quality Issues:**
 - Poor water quality;
 - Impacts of suspended solids on primary productivity;
 - Stratification after rainfall events.
- **Ecological Issues:**
 - Degradation of foreshore vegetation;
 - Introduced pest species;
 - Mosquitos;
 - Reclamation of tidal wetlands;
 - Restriction of tidal inundation of wetlands;
 - Loss of seagrass habitats;
 - Loss of saltmarsh;
 - Potential for algal blooms;
 - Poor knowledge of some species;
 - Disease outbreaks (e.g. oysters).
- **Cultural Heritage Issues:**
 - Unidentified indigenous and maritime heritage sites;
 - Loss of heritage items due to human activities and climate change.



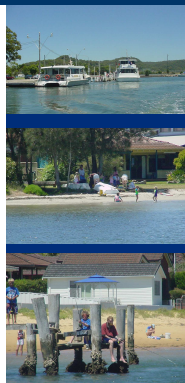
Oyster Leases



Disturbed (left) and Undisturbed (right) Saltmarsh Habitat

Known Management Issues cont.

- **Recreation**
 - Conflicts between user groups;
 - Conflicts between recreation and ecology;
 - Lack of public access to the foreshore;
 - Inadequate recreational facilities;
 - Traffic congestion (land and water);
 - Safety on the waterway and at boat ramps;
 - Undesignated boat launching locations;
 - Scour due to boat wake;
 - Informal dinghy storage;
 - Loss of public amenity;
 - Navigational hazards;
 - Car and trailer parking;
 - Off-leash dogs;
 - Inadequate lighting of public areas;
 - Residential zoning of foreshore land.

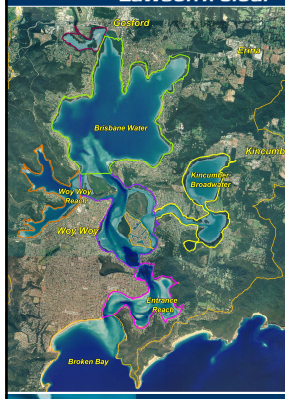


What are the Overarching Management Objectives?

- To provide a strategic framework for the management of the Brisbane Water Estuary now, and into the future.
- To improve community awareness and understanding of the estuarine system through their involvement in the development and implementation of the Plan.
- To be consistent with the NSW Rivers and Estuaries Policy and with the principles of Ecologically Sustainable Development.

What will the Workshop Part of Today Involve?

- We would appreciate your input on:
 - How do you value Brisbane Water?
 - In what way do you feel Brisbane Water contributes to the general character of Gosford and the Central Coast?
 - What particular features or aspects of Brisbane Water are important to you?
 - What issues do you see occurring on or around the foreshores of Brisbane Water?
 - How would you like to see Brisbane Water managed into the future?

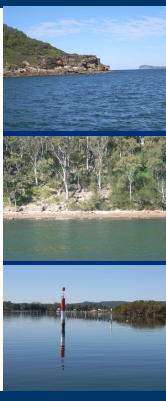


Workshop Zones

- Zone 1: Fagan's Bay
- Zone 2: Brisbane Water
- Zone 3: Woy Woy Reach
- Zone 4: Central Reach
- Zone 5: Kincumber / Cockle Bay
- Zone 6: Entrance Reach

What will be the Workshop Structure?

- Four Workstations:
 - Zones 1 and 2
 - Zones 3 and 4
 - Zone 5
 - Zone 6
- Feedback Forms
 - Please complete and place in the box provided
- Maps to annotate with issues
- Stay as long as you need (until 1pm).



What's Happens Next?

- Workshops: Developing Options for Management
 - 1:00 – 4:00 pm, 19 May 2009, Wagstaff Hall
 - 6:30 – 9:30pm, 20 May 2009, Gosford Council Chambers
 - 10am-1pm, 21 May 2009, South Woy Woy Progress Hall
 - Only need to attend one as they will all be the same
- RSVP again to brisbanewater@cardno.com.au

Thank You

Morning tea is now served.

Please move to the workstation(s) you are
interested in for small group discussions.

Community Feedback – Brisbane Water Estuary Management Study

Local residents' knowledge is very valuable; please take the time to fill in this feedback form. Please return by **17 APRIL 2009**, either by placing your form in the "Community Feedback Form" box, or by emailing or faxing your response (see details at end of form).

Please provide us with the following details. We may wish to contact you to discuss some of the information with you. Please be assured your details will remain confidential.

Name: _____ Daytime Phone: _____

Address: _____ Email: _____

Postcode: _____ Organisation (if relevant): _____

SECTION ONE

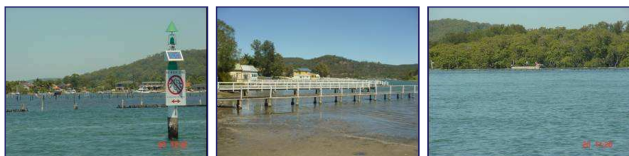
As a local resident you have probably been a visitor to the Brisbane Water foreshore and used the facilities located there. You are also likely to have some ideas about what features of the waterways, foreshores and surrounding areas are important to you. Please rate how important each of the attributes listed below are to you by circling high, medium or low in the "Importance" column. Please feel free to provide additional comments where required.

Estuary Attribute or Feature	Importance (Please Circle)	Comments
<i>Recreation, access and amenity – How important are the following features to you?</i>		
Foreshore public facilities (e.g. public toilets, pathways, picnic/BBQ areas, etc.)	High Medium Low	
Public access (to parks, walking tracks etc.)	High Medium Low	
Water quality suitable for recreational purposes, such as fishing, swimming or boating.	High Medium Low	
Passive recreational use opportunities within open spaces near the water (e.g. walking or picnicking).	High Medium Low	
Active recreational use opportunities for open spaces near the water (e.g. cycling or fishing).	High Medium Low	
Safe use of the waterways by residents and visitors (e.g. observing boating speed limits and through maintenance of navigation channels).	High Medium Low	
Harmony between recreational users, commercial users and conservation of ecological values.	High Medium Low	
<i>Private and public property – How important are the following features to you?</i>		
Boating facilities such as boat ramps, moorings and dinghy storage areas.	High Medium Low	
Pleasant views of Brisbane Water and foreshores.	High Medium Low	
Protecting public and private property in relation to wave inundation, flooding, erosion and/or sea level rise (e.g. via seawalls or flood control works).	High Medium Low	
Access to the foreshores and waterways from your property.	High Medium Low	
<i>The natural environment – How important are the following features to you?</i>		
Water quality suitable for environmental conservation and aquatic health.	High Medium Low	
Native animals (e.g. birds, fish etc.)	High Medium Low	

Appendix B4

Options Development Workshops

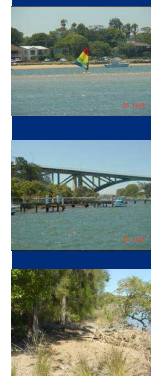
Brisbane Water Estuary Management Study and Plan



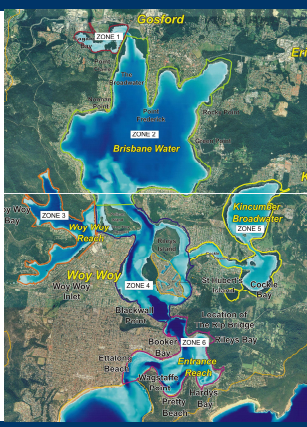
Community Workshops: 19-21 May 2009

Presentation Outline

- Estuary Management Study Status
- Results from Community Workshop
- General Management Objectives
- Management Goals
- Generic Management Options



Brisbane Water Estuary and Bioregion Zones



Estuary Management Study

- Estuary uses, values and significance.
- Regulatory and management context.
- Identify management issues/objectives.
- **Identify management options.**
- Prioritise management options
- Recommend management options.

Community Workshop – 4 April 2009

- 6,500 invitation letters were sent out
- 117 attended workshop at The Hive
- Issues examined / identified
- Community Feedback Forms distributed



Community Feedback Form

- 21 questions plus an open-ended section
- Two weeks for forms to be returned
- 77 forms were returned overall
 - 69 forms returned to Cardno
 - 8 forms returned to Council
- Included in the returned forms were 5 non-standard responses (i.e. longer submissions)

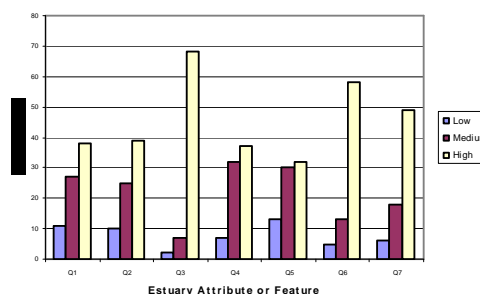
Community Feedback Form

Recreation, Access and Amenity

Q1	Foreshore public facilities (e.g. public toilets, pathways, picnic/BBQ areas, etc.)
Q2	Public access (to parks, walking tracks etc.)
Q3	Water quality suitable for recreational purposes, such as fishing, swimming or boating.
Q4	Passive recreational use opportunities within open spaces near the water (e.g. walking or picnicking).
Q5	Active recreational use opportunities for open spaces near the water (e.g. cycling or fishing).
Q6	Safe use of the waterways by residents and visitors (e.g. observing boating speed limits and through maintenance of navigation channels).
Q7	Harmony between recreational users, commercial users and conservation of ecological values.

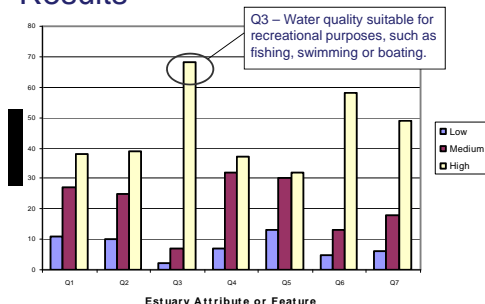
Community Feedback Results

Recreation, Access & Amenity



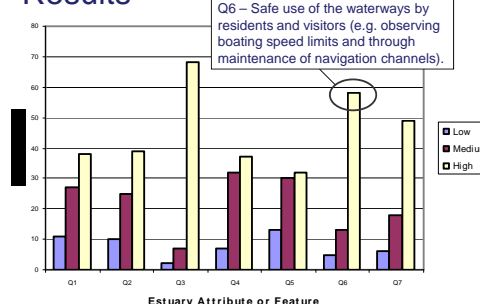
Community Feedback Results

Recreation, Access & Amenity



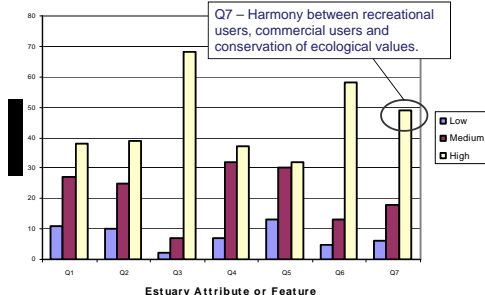
Community Feedback Results

Recreation, Access & Amenity



Community Feedback Results

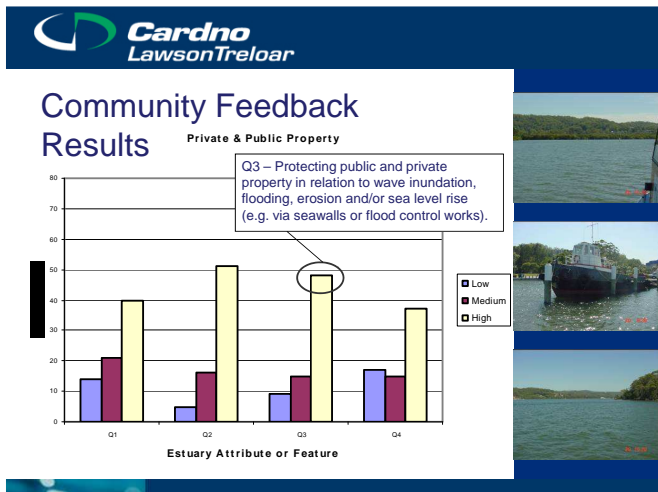
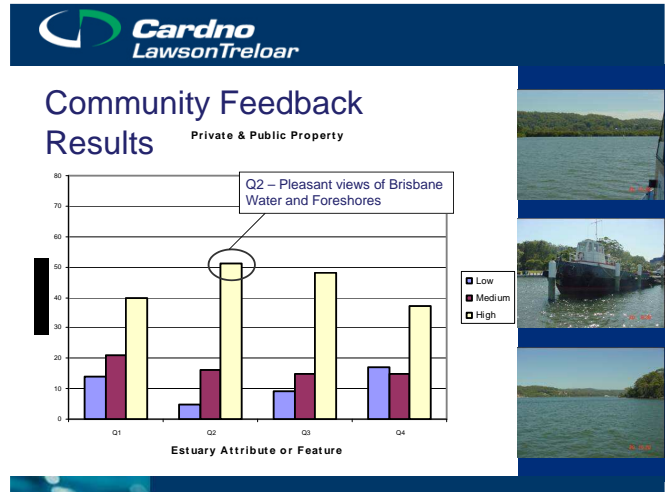
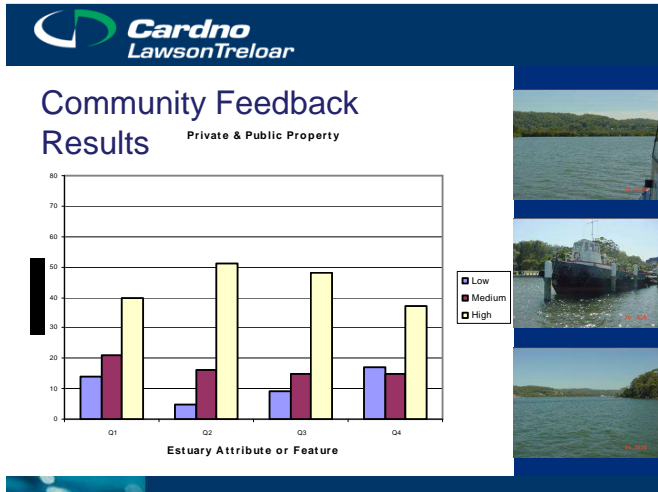
Recreation, Access & Amenity



Community Feedback Form

Public and Private Property

Q1	Boating facilities such as boat ramps, moorings and dinghy storage areas.
Q2	Pleasant views of Brisbane Water and foreshores.
Q3	Protecting public and private property in relation to wave inundation, flooding, erosion and/or sea level rise (e.g. via seawalls or flood control works).
Q4	Access to the foreshores and waterways from your property.

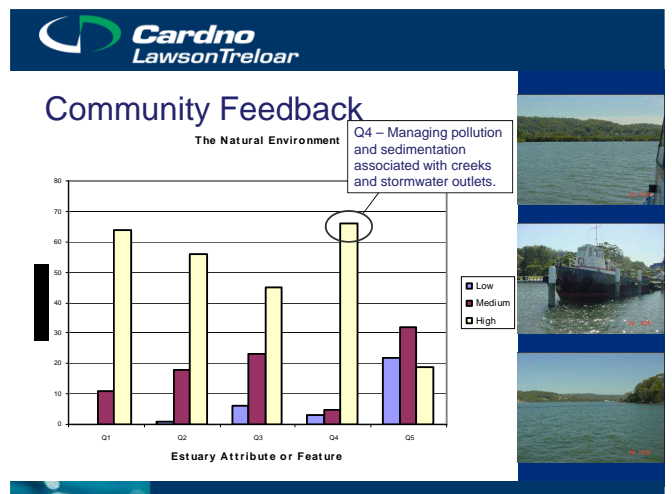
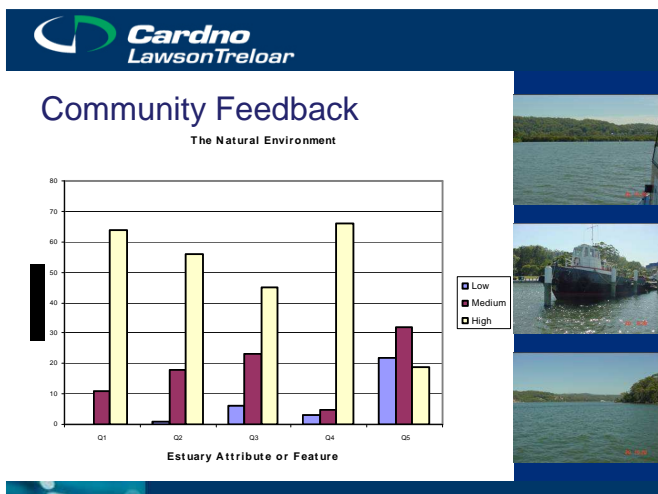


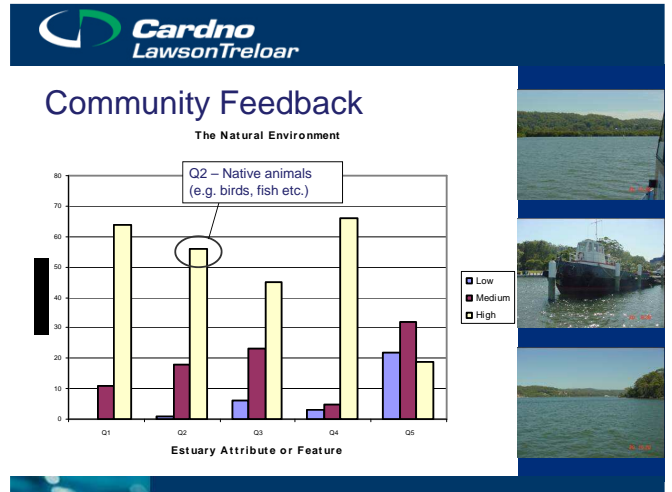
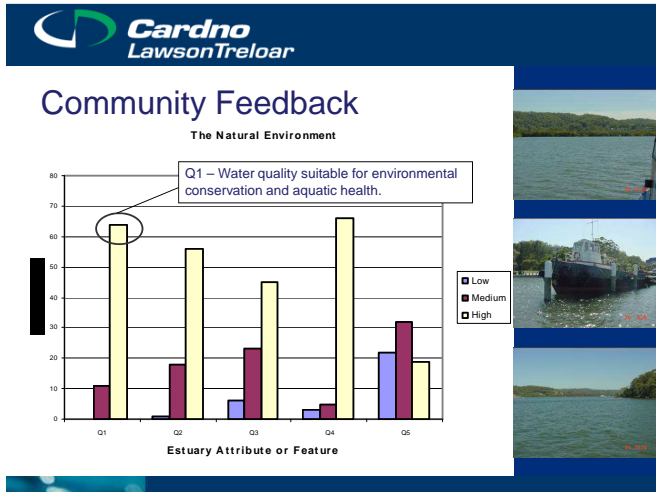
Cardno LawsonTreloar

Community Feedback Form

The Natural Environment

Q1	Water quality suitable for environmental conservation and aquatic health.
Q2	Native animals (e.g. birds, fish etc.)
Q3	Natural vegetation (e.g. saltmarshes) as habitat for animals.
Q4	Managing pollution and sedimentation associated with creeks and stormwater outlets.
Q5	European and Aboriginal heritage sites near or in the waterways.





Cardno LawsonTreloar

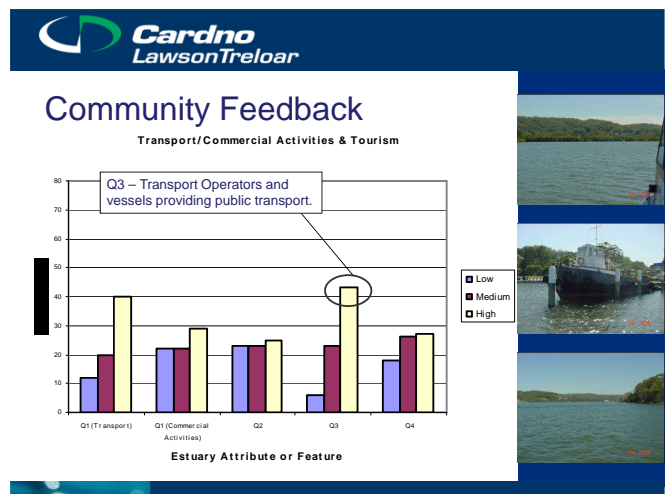
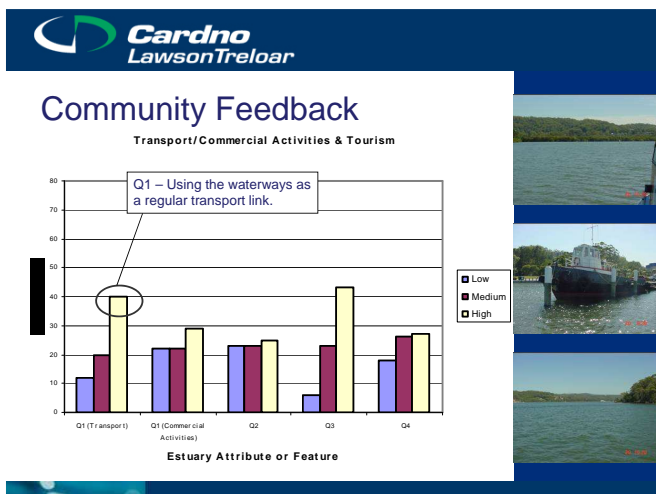
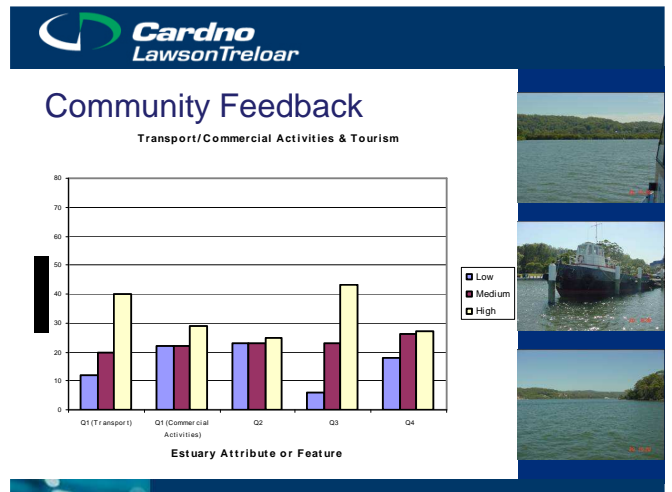
Community Feedback Form

Transport

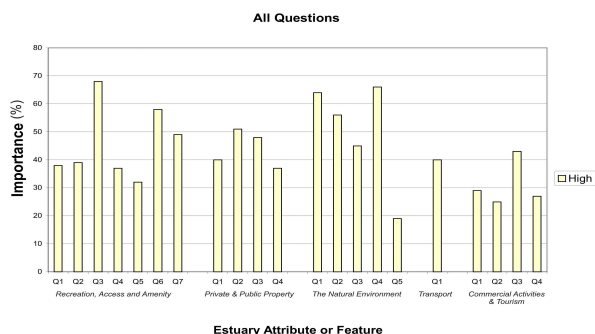
Q1 Using the waterways as a regular transport link.

Commercial Activities and Tourism

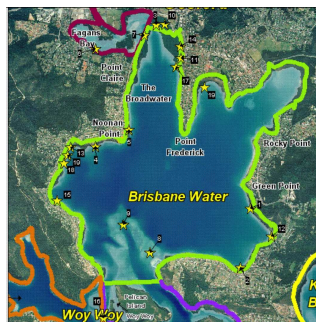
Q1	Oyster leases as a local commercial activity.
Q2	Tour operators and vessels promoting tourism.
Q3	Transport operators and vessels providing public transport.
Q4	Foreshore businesses (e.g. marinas, restaurants, cafes, watercraft hire, slipway services, etc.)



Community Feedback



Community Feedback – Issues



Zone 1

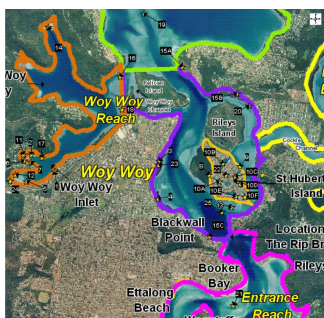
- 2 issues identified
- Key issues are sedimentation, poor water quality and lack of flushing.

Zone 2

- 17 issues identified
- Key issues relate to foreshore erosion, conflicting waterway uses & safety, seagrass wrack, water pollution, sedimentation.

Other comments about the broader area were also noted.

Community Feedback – Issues



Zone 3

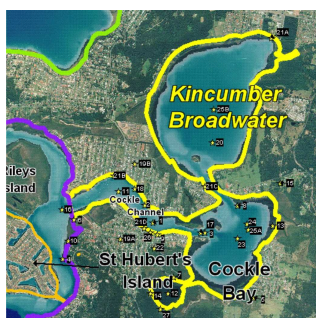
- 13 issues identified
- Issues include sedimentation, poor flushing, boats exceeding speed limits.

Zone 4

- 15 issues identified
- Issues include sedimentation, foreshore erosion, soil compaction inhibiting plant growth, conflicts between different waterway uses.

Other comments about the broader area were also noted.

Community Feedback – Issues

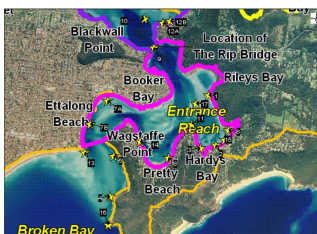


Zone 5

- 24 issues identified
- Issues relate to weed infestation, loss of important habitat/flora and fauna, declines in number/size of some species, siltation, foreshore flooding, littering.

Other comments about the broader area were also noted.

Community Feedback – Issues



Zone 6

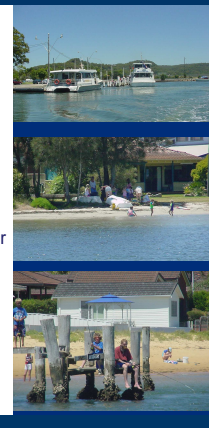
- 13 issues identified
- Issues relate to navigation difficulties, sedimentation, littering, poor water quality, seagrass wrack, fewer/smaller fish and shellfish.

Other comments about the broader area were also noted.

Management

Objectives

- To provide a strategic framework for the management of the Brisbane Water Estuary, now and into the future.
- To improve community awareness and understanding of the estuarine system through their involvement in the development and implementation of the plan.
- To be consistent with the NSW Rivers and Estuaries Policy and the principles of Ecologically Sustainable Development.



Preliminary Management Goals

More specific management goals are outlined below:

AREA OF MANAGEMENT	GOAL
Water and Sediment Quality	To achieve a standard of water and sediment quality that protects and promotes a healthy aquatic ecosystem, while allowing aesthetic enjoyment and appropriate recreational use.
Sedimentary Processes	To minimise estuary sedimentation and erosion of the foreshore caused by the effects of human activities, or where natural sedimentary processes are impinging on certain human uses. To maintain access and amenity, as well as the navigability of the waterway, while recognising the natural sedimentary processes that occur in the estuary.
Foreshore Flooding	To minimise the impact of catchment flooding and foreshore inundation on existing and future development of the estuary foreshores, while maintaining ecosystem viability, and in accordance with Council's Floodplain Risk Management Plans.

Preliminary Management Goals

AREA OF MANAGEMENT	GOAL
Habitat and Species Conservation	To protect and retain existing habitat for estuarine species, rehabilitate degraded habitat and provide for ecological connectivity throughout the estuary.
Cultural Heritage	To acknowledge, conserve and commemorate (as appropriate) the Aboriginal and European heritage of the estuary and its foreshores.
Visual Amenity and Landscape Character	To maintain or enhance the visual experience of the landscape from vantage points in the both waterway and catchment.
Human Usage	To encourage and provide facilities for the appropriate recreational usage of the estuary waterways and foreshores while maintaining ecosystem viability.
Foreshore Development	To promote Ecologically Sustainable Development recognising the finite capacity of estuarine ecosystems. To recognise and report on inappropriate development.

Preliminary Management Goals

AREA OF MANAGEMENT	GOAL
Foreshore Development	To promote the strategic planning for the development of the Brisbane Water foreshore, taking into the account: -The potential impacts of climate change; -Access and amenity; and -The preservation of important foreshore habitats. To recognise and report on inappropriate foreshore development and take action to remedy where possible.
Commercial Development	To promote the Ecologically Sustainable Development of commercial activities and tourism within the estuary, recognising the finite capacity of estuarine ecosystems.

Preliminary Management Goals

AREA OF MANAGEMENT	GOAL
Governance	To establish a governance framework in order to facilitate ongoing implementation of the Plan.
Information, Communications and Education	To regularly provide information to the public about the estuary, including details of: - Current estuarine health (including aquatic ecosystem and human health indicators); - Current planning and development activities; - The impact that current and future land and waterway usage has on estuarine values; and - The contributions that the community can make toward reducing adverse impacts on, and enhancing the condition of, the estuary.

Possible Management Options

Types of management option:

- Works programs (e.g. one-off or ongoing works, structural or non-structural works)
- Planning mechanisms (e.g. development planning/restrictions)
- Education and awareness campaigns
- Monitoring programs
- Further studies or investigations

Possible Management Options

General Management Options from the NSW Government's Estuary Management Manual (1992) are given below:

ISSUE	MANAGEMENT OPTIONS
1 Build-up of sediments	A Reduction at the source B Gross pollutant traps C Filter sediment traps D Settlement ponds E Artificial wetlands
2 Excessive growth of aquatic plants	A Reduction of nutrients at source B Harvesting C Beach cleaning

Management Options

ISSUE	MANAGEMENT OPTIONS
3 Shoaling of estuary entrances	A Entrance Training works B Periodic Dredging C Sand by-passing D Do nothing
4 Preserving the tidal prism <small>Tidal prism refers to the total volume of water moving past a fixed point on an estuary during each flood tide or ebb tide.</small>	Development controls (eg on reclamation and foreshore works) B Periodic Dredging

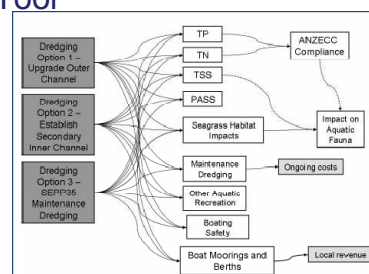
Management Options

ISSUE	MANAGEMENT OPTIONS
5 Loss of wildlife habitat	A Alternative sites for development B Creation of new habitat area
6 Foreshore erosion	A Do nothing B Relocation of assets C Foreshore stabilisation D Beach nourishment
7 Restricted foreshore access	A Land purchase B Development setback C Foreshore design

Management Options Analysis

Option	Capital Cost	Recurrent Cost	Net Present Value (7%, 50 years)	Recreation	Water Quality	Ecology	Heritage	Community Response	Council/State Agency Response	Compatible with Policies & Plans	TOTAL SCORE	RANK	Cost Benefit	RANK
Option 1	\$300,000	\$2,000	\$327,601	0	0	0	2	-3	1	1	2	2	163,800.5	3
Option 2	\$10,000	\$0	\$10,000	0	1	0	1	0	2	1	5	1	2000	1
Option 3	\$250,000	\$2,000	\$277,601	1	1	0	-2	1	1	1	3	3	92,533.6	2

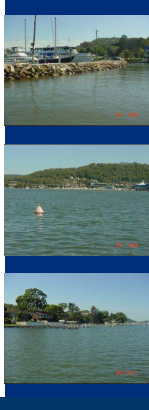
Management Options Analysis – CLAM Tool



Conceptual framework:
Entrance CLAM

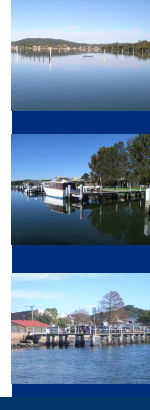
Estuary Management Plan

- Management actions for adoption
- Implementation strategy
- Program of monitoring & evaluation.



What Next?

- Compile and assess all the management options.
- Refine the list of management options with Council and DECC - June.
- Public exhibition of the Management Study – expected to be in August.
- Preparation of the Management Plan.



Questions?



Preliminary Management Goals

Goal	Notes
<p>Water and Sediment Quality</p> <p>Goal: <i>To achieve a standard of water and sediment quality that protects and promotes a healthy aquatic ecosystem, while allowing aesthetic enjoyment and appropriate recreational use.</i></p>	<p>The following notes accompany this goal:</p> <ul style="list-style-type: none"> • This goal aims to meet the appropriate ANZECC (2000) guideline values for water quality objectives for dry weather (ambient) conditions at least 90% of the time. The relevant guideline values will need to be identified for the Brisbane Water Estuary. • The ultimate goal is unlikely to be achieved in the short-term and therefore incremental objectives are required. • With respect to pollutant loads from the catchment, the ultimate goal is the development of a strategic framework within which development is planned so that waterbody values can be identified. Data to support this include a study of relevant catchment processes and limits on the total load a waterbody can receive. Chapter 6 of Australian Runoff Quality (Engineers Australia, 2003) provides a methodology for such an assessment. • In the short term the goal is to improve wet weather water quality for parts of the estuary impacted by catchment inflows via the improvement of stormwater runoff quality to values typical of a less heavily urbanised catchment. This goal should be implemented in accordance with the principles of Water Sensitive Urban Design.
<p>Sedimentary Processes</p> <p>Goal: <i>To minimise estuary sedimentation and erosion of the foreshore caused by the effects of human activities, or where natural sedimentary processes are impinging on human uses. To maintain access and amenity, as well as the navigability of the waterway, while recognising the natural sedimentary processes that occur in the estuary.</i></p>	<p>The following notes accompany this goal:</p> <ul style="list-style-type: none"> • This goal requires recognition of the natural sedimentary processes occurring in the estuary. It is noted that these sedimentary processes are likely to undergo change over time in relation to climatic processes such as El Niño/La Nina (i.e. dry vs. wet periods) and Climate Change. • Furthermore, this goal requires recognition of the need to maintain the tidal prism within the estuary for the purposes of flushing and scouring. • In some specific locations, including Ettalong, St Hubert's Island and Hardy's Bay, natural sedimentary processes are impacting on human usages and it may be necessary to undertake works to address this issue. • Activities in the catchment (such as construction) also contribute to sedimentation in the estuary. • The implementation of this goal requires the identification of agreed 'natural' rates of sedimentation for various embayments.

Goal	Notes
<p>Foreshore Flooding</p> <p>Goal: <i>To minimise the impact of catchment flooding and foreshore inundation on existing and future development of the estuary foreshores, while maintaining ecosystem viability, and in accordance with Council's Floodplain Risk Management Plans.</i></p>	<p>The following notes accompany this goal:</p> <ul style="list-style-type: none"> • It is acknowledged that the Floodplain Risk Management Plans are the relevant plans to aid in the achievement of the management of foreshore flooding. • Therefore, the primary goal with respect to flooding is to ensure that any flood mitigation works proposed through the Floodplain Management Planning Process take under consideration estuarine processes such as estuarine water levels, wave attack, sedimentary geomorphology, ecological processes, and existing human uses. • The potential impacts of climate change on these estuarine processes, particularly catchment inflows and estuarine water levels, are key considerations in this respect.
<p>Habitat and Species Conservation</p> <p>Goal: <i>To protect and retain existing habitat for estuarine species, rehabilitate degraded habitat and provide for ecological connectivity throughout the estuary.</i></p>	<p>The following notes accompany this goal:</p> <ul style="list-style-type: none"> • In the achievement of this goal there is a need to recognise the existing constraints (e.g. land use). • The primary goal is to retain existing habitat, with a view to re-establishment of aquatic and foreshore habitat where possible. • A secondary goal is to provide suitable, "healthy" habitat for recreationally and commercially important species such as fish, prawns and shellfish.
<p>Cultural Heritage</p> <p>Goal: <i>To acknowledge, conserve and commemorate (as appropriate) the Aboriginal and European heritage of the estuary and its foreshores.</i></p>	<p>The following notes accompany this goal:</p> <ul style="list-style-type: none"> • There is a need for the identification of heritage sites in a spatial (GIS) format to assist with implementing this goal. However, information relating to Indigenous heritage should be held in a 'limited access' layer within Council's GIS due to its sensitive nature and managed in accordance with appropriate cultural consideration. • Commemoration should be undertaken as appropriate and with consultation, particularly for Aboriginal heritage items and places.
<p>Visual Amenity and Landscape Character</p> <p>Goal: <i>To maintain or enhance the visual experience of the landscape from vantage points in the both waterway and catchment.</i></p>	<p>The following notes accompany this goal:</p> <ul style="list-style-type: none"> • This goal is expected to be difficult to measure and there is a data gap to limit the meaningful application of this goal.

Goal	Notes
<p>Human Usage</p> <p>Goal: <i>To encourage and provide facilities for the appropriate recreational usage of the estuary waterways and foreshores while maintaining ecosystem viability.</i></p>	<p>The following notes accompany this goal:</p> <ul style="list-style-type: none"> • There is a need to balance the competing land- and water-based recreational uses. • This will include identification of environmentally sensitive areas for which less intensive uses may be more appropriate. • This goal has linkages with the Water Quality goal as parts of the estuary may not be suitable for primary contact recreational usage after rainfall events.
<p>Foreshore Development</p> <p>Goal: <i>To promote the strategic planning for the development of the Brisbane Water foreshore, taking into the account:</i></p> <ul style="list-style-type: none"> • <i>The potential impacts of climate change;</i> • <i>Access and amenity; and</i> • <i>The preservation of important foreshore habitats.</i> <p><i>To recognise and report on inappropriate foreshore development.</i></p>	<p>The following notes accompany this goal:</p> <ul style="list-style-type: none"> • For the purposes of this goal, foreshore development is defined as that occurring in the intertidal zone and within 10m of the mean high water mark. • Historically, many residents owning foreshore properties have sought the opportunity to modify their property boundaries to enclose adjacent accreting shoreline. This has often led to restrictions on public access to the foreshore. In addition, where the observed accretion has been the result of a short term process and subsequently reverses, property owners have then tended to implement foreshore protection works along the modified property boundary. In many cases these structures are inappropriate (see below). • It is recognised that in some locations in the estuary, the natural sedimentary processes have been modified as a result of ad-hoc construction of foreshore structures such as jetties, ramps and seawalls, thereby contributing to localised erosion and/or sedimentation. • In the achievement of this goal, there is a need for the recognition of processes such as climate change.
<p>Commercial Development</p> <p>Goal: <i>To promote the Ecologically Sustainable Development of commercial activities and tourism within the estuary, recognising the finite capacity of estuarine ecosystems.</i></p>	<p>The following notes accompany this goal:</p> <ul style="list-style-type: none"> • For the purposes of this goal, development is defined as land and waterway development for residential, commercial and industrial uses, as well as tourist development. • Commercial development should be undertaken in accordance with Council's <i>Corporate Vision for the City of Gosford</i>. • This goal will seek to provide for appropriate development, as well as identifying and preventing inappropriate development. • The process of 'redevelopment' will generally result in a more sustainable outcome than that which can be achieved with existing development. • In the achievement of this goal, there is a need for the recognition of processes such as climate change.

Brisbane Water Estuary – Management Study and Plan

Prepared for Gosford City Council & Department of Environment and Climate Change

Goal	Notes
Governance Goal: <i>To establish a governance framework in order to facilitate ongoing implementation of the Plan.</i>	The following notes accompany this goal: <ul style="list-style-type: none">• This goal will seek to ensure that the various Government agencies, authorities and other organisations involved in the different aspects of estuary management work together to allocate appropriate resources for implementation of the Plan.• It is recognised that ongoing liaison between these different groups will be an essential component of this goal.
Information, Communications and Education Goal: <i>To regularly provide information to the public about the estuary, including details of:</i> <ul style="list-style-type: none">• <i>Current estuarine health (including aquatic ecosystem and human health indicators);</i>• <i>Current planning and development activities;</i>• <i>The impact that current and future land and waterway usage has on estuarine values; and</i>• <i>The contributions that the community can make toward reducing adverse impacts on, and enhancing the condition of, the estuary.</i>	The following notes accompany this goal: <ul style="list-style-type: none">• It is recognised that there is a need for an emphasis on education to achieve all the goals.• Linkages between the Estuary Management Plan and State of the Environment reporting by Council are to be established.• There is a need to develop and maintain awareness within the community, public authorities and industry forums to communicate the objectives and goals for the management of the Brisbane Water Estuary.

[illegible]

Appendix B5

Second Press Release and Newsletter

Community shapes future for Brisbane Water

Date:

01-06-2009 12:00 AM

Media Release:

The community has had its say in shaping the future of Brisbane Water, with over 80 community members attending the Brisbane Water Estuary Management workshops last week.

An information evening was held at the Erina Centre to present the findings of the Brisbane Water Estuary Process Study, followed by three community consultation workshops held at Wagstaffe, Gosford and Woy Woy South.

Councillor Peter Freewater said the community consultation events were aimed at capturing the thoughts, values and knowledge of the community regarding the sustainable management of the Brisbane Water Estuary.

"The level of interest shown in these workshops highlights that the people of Gosford identify strongly with Brisbane Water and want the estuary to persist in excellent condition into the future, for the benefit and enjoyment of their children and grandchildren", Cllr Freewater said.

"The community response has been tremendous and reflects the passion the local community feel towards the estuary."

Several issues were raised as priority focus areas during the events. These included sedimentation, water quality, stormwater pollution, foreshore erosion, loss of important habitat for flora and fauna and changes in fish stocks.

A diversity of management options were considered including dredging, foreshore restoration works, construction of sea walls, signage, improved pollution management and monitoring programs, seagrass friendly moorings, improved access for recreation and maintenance of infrastructure.

The priority issues and management strategies raised during the workshops will contribute to the development of a Brisbane Water Estuary Management Plan. This plan is currently being prepared by consultants Cardno Lawson Treloar.

A draft Management Study is expected to be released for public exhibition during August 2009 and will be followed up with a draft Management Plan later in the year.

For community members who missed out on the opportunity to contribute, the Brisbane Water Estuary Management Study Feedback Form is available from the Gosford City Council web site (www.gosford.nsw.gov.au)

The deadline for contributions is Friday 5 June 2009.

For more information, please contact Ann Stewart on 4325 8885 or email ann.stewart@gosford.nsw.gov.au.

Brisbane Water Estuary Management Study and Plan

Community Update

July 2009



Background

Gosford City Council and the Department of Environment and Climate Change (DECC) are currently preparing an Estuary Management Study and Plan for Brisbane Water. This Management Study and Plan is supported by the NSW Government Estuary Management Program, in line with the State Government's Rivers and Estuaries Policy 1992.

The purpose of this study is to identify and recommend appropriate actions to manage the environmental, social and commercial aspects of Brisbane Water Estuary.

As part of this process, Gosford City Council has engaged **Cardno Lawson Treloar** Pty Ltd to prepare the Estuary Management Study and Plan.

The Estuary Management Study and Plan

The Brisbane Water Estuary Management Study and Plan will establish a strategic framework for the future management of Brisbane Water. The Study will summarise relevant management issues and objectives for Brisbane Water. A range of management options will be evaluated to address these issues. Based on consultation with the community, stakeholders and Gosford Council, recommendations will be made as to the preferred management options. These preferred options will be translated into management actions for implementation and will form the basis of the Management Plan.

This community newsletter provides a brief update of the progress of the Study and Plan.

Issues Workshop (4 April 2009)

A workshop was held at The Hive, Erina Fair, on 4 April 2009 at which the community was provided with an opportunity to identify any issues or problems they had observed on and around the Brisbane Water Estuary.

The workshop was a resounding success, with around 120 members of the community in attendance. Residents worked with members of the project team to map management issues for the estuary.

A total of over 190 issues were identified, with key issues including:

- Poor water quality and sedimentation associated with stormwater outlets and creeks;
- Sedimentation and foreshore erosion;
- Safe passage through navigation channels;
- Safety issues in relation to boat traffic (e.g. speeding); and
- Low rates of tidal flushing in some locations.

Copies of the final list of management issues, as well as the issues maps for the six management zones, are currently available for download from Council's website.

<http://www.gosford.nsw.gov.au/customer/document/gallery/bwemp>

Brisbane Water Estuary Processes Study Information Evening (18 May 2009)

A community information evening was conducted on 18 May 2009 at The Hive, Erina Fair, to communicate the scientific findings of the Estuary Processes Study, which was adopted by Council in February 2009.

A range of presentations were given by members of the study team, covering such aspects as:

- The Human Dimensions of Brisbane Water Estuary.
- What You Need to Know About Tides Waves and Sediments.
- How to Protect the Biodiversity of Brisbane Water?
- Identifying Fish Nursery Grounds in Brisbane Water.
- The Importance of Estuarine Saltmarsh Dynamics for Estuarine Foodwebs.

Copies of the presentations given can also be found on Council's website

Gosford City Council and Cardno would like to thank Dr Bill Gladstone from Newcastle University and Dr Iain Suthers from the University of New South Wales for their contributions on the night.

Brisbane Water Estuary Management Study and Plan

Community Newsletter

July 2009



Options Development Workshops (19-21 May 2009)

Having identified over 190 management issues occurring around the estuary, the next step was to consider how these issues might best be addressed.

Input was sought from the community at a series of three Options Development Workshops, held from 19-21 May 2009 at Wagstaffe, Gosford and Woy Woy.

The purpose of these workshops was firstly to identify specific actions that might be undertaken to mitigate these issues, and secondly to ensure that the estuary is managed in such a way as to seek to maintain or enhance its current condition.

The types of actions considered included:

- Works programs,
- Planning mechanisms,
- Educational and awareness campaigns,
- Monitoring programs, and
- Further studies.

In total, 50 people attended the workshops and worked with Council and Cardno to develop ideas that could be considered for implementation in the Management Plan. Additional submissions were also received via email and fax.



Examples of the types of actions suggested at the workshop include:

- Rehabilitate the saltmarshes at Yattalunga Bay.
- Provide lockable dinghy storage racks.
- Promote Brisbane Water as an eco-tourism destination.
- Undertake a program of dredging to improve navigation.
- Provide an additional culvert under Brisbane Water Drive causeway to promote tidal flushing.

Options Assessment

The full list of management options suggested by the community and other stakeholders will now be compiled, assessed and ranked using a multi-criteria matrix analysis.

The multi-criteria matrix analysis seeks to outline a prioritised list of options that provide the greatest benefit across all features and/or uses of the estuary. The top ranking options will then form the Management Plan and a strategy will be developed for implementation.

What's Next?

The Draft Brisbane Water Estuary Management Study is anticipated to be placed on public exhibition for comment in September.

After all submissions have been compiled and addressed, the Management Study will be finalised and work will begin on the Brisbane Water Estuary Management Plan.

Further information, including notes and presentations from the various workshops, can be found on Council's website at:

http://www.gosford.nsw.gov.au/customer/document_gallery/bwemp

Feedback can be directed to the project team via email: brisbanewater@cardno.com.au.