

3. Environment Levy Budget and Expenditure Summary – Running Total

Figures 3.1 and 3.2 below provide a summary of overall Environment Levy expenditure since inception 1997/98. Annual expenditure has generally been above the annual average Environment Levy injection due to carry forwards and grant income. Overall expenditure reflects the Environment Levy criteria priority areas, being urban bushland and water quality.

Figure 3.1: Environment Levy Program Expenditure: 1997/98 – 2009/10

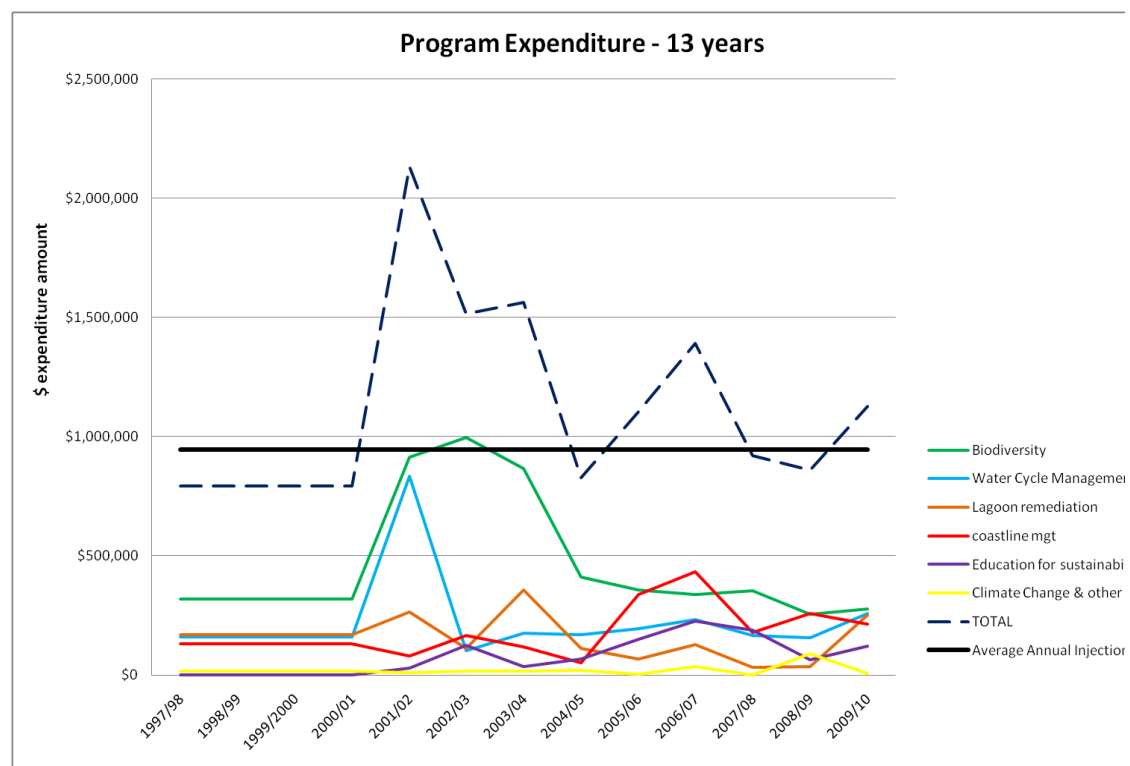
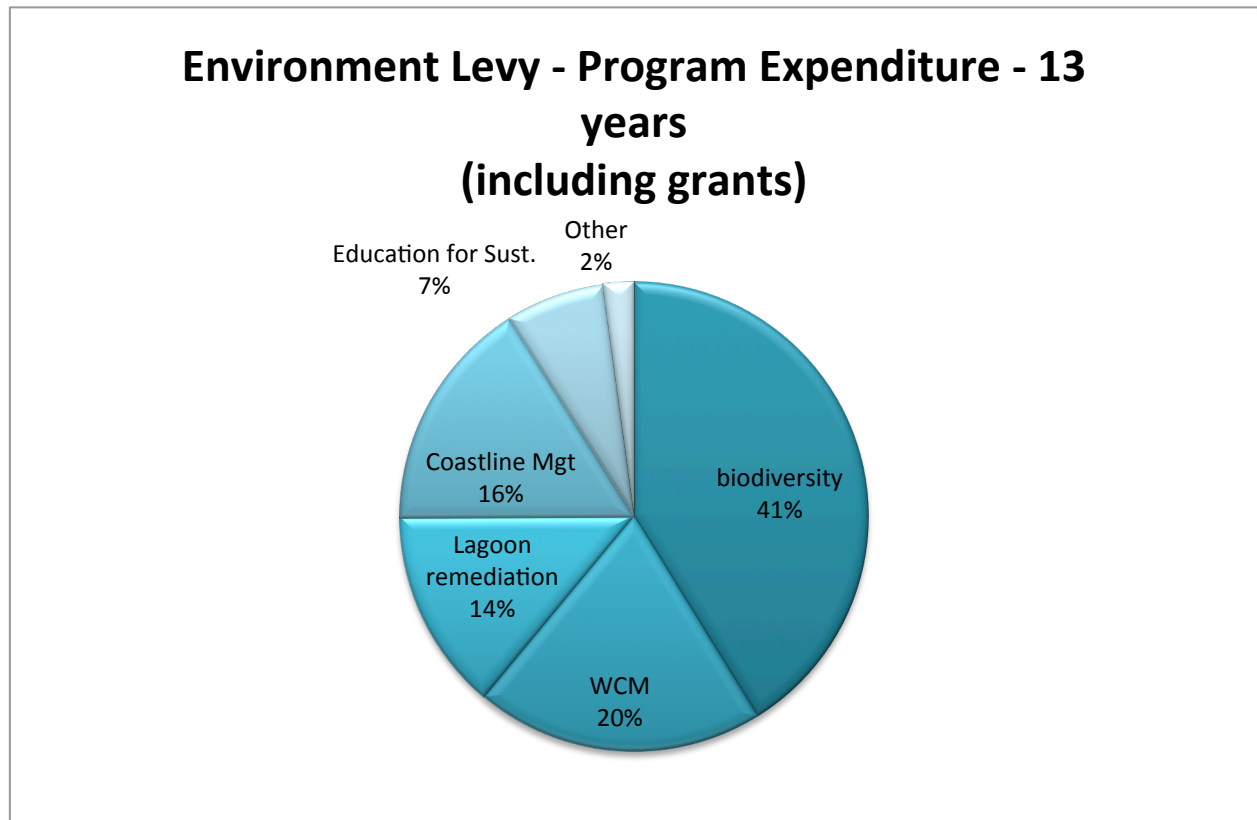


Figure 3.2: Environment Levy Program Expenditure: 1997/98 – 2009/10 Percentages



4. BIODIVERSITY PROGRAM

This section provides project specific reports relevant to the Biodiversity Program.



ANNUAL REPORT 2009/10

PROJECT TITLE:	Burnt Bridge Creek Corridor Restoration Program		
PROJECT TYPE:	<input type="checkbox"/>	NEW PROJECT	<input checked="" type="checkbox"/> ONGOING PROJECT
FINANCIALS:	Years project funded: 12 years		
TARGET DATES (commenced, estimated completion etc): ongoing project.			

BRIEF PROJECT DESCRIPTION:

Undertake Burnt Bridge Creek restoration works including;

- Continue primary restoration of Stage 3 works from Burnt Bridge Ck Deviation Overpass to Condamine Street
- Removal of Noxious weeds as directed by the Noxious Weeds Act 1993
- Continued support and development of four Bushcare groups working along the creek
- Increase the educational value of the creek and promoting Council's commitment to the restoration of the Burnt Bridge Creek Catchment.
- Expand and improve the condition of remnant bushland in order to provide a carbon sink to assist Council meeting its green house gas emission targets.

OBJECTIVES of the project:	Were they achieved explanation
1. To reinstate and protect native bushland vegetation communities by using current bushland restoration techniques	Yes, ongoing project has continued to reinstate and protect bushland. Several new areas have commenced restoration ensuring progress is made
2. To reduce the prevalence of noxious weed species and their ability to spread	Yes, continued ongoing bush regeneration by Council staff and contractors has targeted noxious weeds.
3. To improve flora and fauna habitat	Yes, ongoing bushland restoration has continued to improve the quality of bushland and habitat. There is increased sightings and evidence of fauna including Bandicoots and echidna sightings. Residents have also

	reported increases in birdlife.
4. To maintain aesthetics and provide quality open space for community use	Yes, ongoing bushland restoration is improving the aesthetics of the creek corridor
5. To undertake creek banks restoration works	Yes, ongoing revegetation works have continued to stabilize creekbanks.
INDICATORS:	
Indicator	Statistic
Bushland areas continue to be maintained in good condition	Increased extent of bushland restored
Bush regeneration work continues to expand along the creek corridor	Increased extent of bushland restored
The extent of stabilised creek banks increase annually	Increased extent of creek bank restored
Walking tracks are maintained in a good safe condition	Walking tracks maintained on a weekly basis
<p>Discussion:</p> <p>Council's Bush Regeneration Contractors have continued undertaking the primary restoration and maintenance of previously worked areas of bushland in the stage 3 section of Burnt Bridge Ck. Council's staff have also continued the maintenance of stages 1 and 2.</p> <p>The contracted works remain heavily focused on the maintenance of areas restored during the current bush regeneration contract, and the contract previous to this. It is also focusing significant time on primary weed control in preparation for revegetation. The bush regeneration contract finished during the reporting period, and a new revised tender has been awarded under the grant funded Burnt Bridge Ck Integrated Restoration project funding which was awarded to Council during the reporting period.</p>	
<p>TBL ASSESSMENT:</p> <p>This project is being undertaken with regards to the principles of triple bottom line reporting;</p> <p>Environment: This aim of this program is to improve the environmental quality of the Burnt Bridge Ck corridor. Environmental attributes being managed include native bushland, water quality, preventing the spread of weeds, managing creek bank and soil erosion, improving flora and fauna habitat etc</p> <p>Social: This project has important social values. It is restoring a degraded creek corridor into a scenic community asset with recreational, scientific, and educational values.</p> <p>Economic: This project has important economic values through the significant focus on weed control. Environmental and noxious weeds contribute a significant cost to society, impacting on human health, agricultural lands, urban areas, and the natural environment.</p>	
<p>KEY OUTCOMES:</p> <ul style="list-style-type: none"> The Burnt Bridge Ck Bush regeneration contract completed in September 2009 had been extended during the reporting period to enable work momentum to continue. This extension enabled the 	

amount of each reserve under restoration to continue to expand.

With Council being awarded \$2 million in grant funding the contract was concluded during the final quarter of the reporting period and a new expanded tender has been awarded to further expand and to fast track the restoration efforts on the creek.

The contract comprised of 4 sites – Hope St, Witches Glen, Balgowlah Rd West, and Pitt St sections of creek. During the financial year the works at the Hope St section increased to incorporate an additional 500m² under restoration. The works at Witches Glen section increased in area by 300m² now under restoration. Substantial primary weed control commenced in the previous financial year at the Pitt St section, and maintaining and revegetating this section was the main focus within the reporting period.

- Coral tree removals continued during the reporting period. The final stage of tree removals from the Witches Glen section was completed. This area has also undergone extensive weed control in preparation for revegetation in the 2010-11 financial year.
- Revegetation was undertaken at multiple locations along the creek corridor. During the reporting period 568 native plants were planted to assist stabilizing creek banks and improve the riparian vegetation condition.

POLICY REFERENCES (e.g. plans of management, recovery plans, strategies etc include references):

- Manly Management Plan 2010
- Manly Sustainability Strategy 2006
- Education for Sustainability Strategy (MSS ref. A1.2.6).
- Coastal, Estuary and Floodplain Management Plans (MSS 2.4.1)
- Manly Lagoon Integrated Catchment Management Strategy 2004 (also MSS C1.1.4)
- Duffys Forest Endangered Ecological Community Management Plan
- Flora and Fauna of Manly Council's Bushland Reserves report
- The Burnt Bridge Creek Restoration Management Plan Action Plan (1998)
- Plan of Management for Seaforth Oval, Tania Park, and Keirle Park

DOES BID DEVIATE FROM ORIGINAL BID? EXPLAIN:

No

OVERALL EVALUATION AND CONCLUSION consider medium/long term prospects or impacts. Will this bid be continued? Opportunities and Challenges.

This project has been ongoing for 13 years and has produced excellent results. The last 12 months has seen a continuation and expansion of the restoration works. The major successes over the reporting period has seen major weed control initiatives implemented, the removal of a large stand of Coral trees, and creek bank revegetation. The three year bush regeneration contract that concluded during the previous reporting period was extended for another 12 months, and has yielded excellent results.

With the grant funding that has been awarded to Council, this is going to allow substantially more work being undertaken over the next 2 years, that will enable Environment Levy funding to be freed up for this period for other projects.

PROJECT TITLE:	Bushland Restoration Program		
PROJECT TYPE:	<input type="checkbox"/>	NEW PROJECT	<input checked="" type="checkbox"/> ONGOING PROJECT
FINANCIALS:	Years project funded: 11 years (approx)		
TARGET DATES (commenced, estimated completion etc): Ongoing project			

BRIEF PROJECT DESCRIPTION:

This project was designed to protect and restore Council's bushland reserves. The primary focus of the project is to;

- undertake bush regeneration works
- protect and restore habitat values for flora and fauna species
- minimise soil erosion in bushland reserves
- protect bushland from the impact of stormwater runoff
- undertake bushfire fuel reduction works and burning for ecological restoration
- collect and propagate seed from local native species for revegetation works
- maintain walking tracks through bushland reserves
- rabbit control

OBJECTIVES of the project:	Result: were they achieved? explanation:
<ul style="list-style-type: none"> • To reinstate and protect native bushland vegetation communities by using current bushland restoration techniques 	Yes, ongoing project has continued to reinstate and protect bushland. Several new areas have commenced restoration ensuring progress is made
<ul style="list-style-type: none"> • To reduce the prevalence of noxious weed species and their ability to spread 	Yes, continued ongoing bush regeneration by Council staff and contractors has targeted noxious weeds.
<ul style="list-style-type: none"> • To improve flora and fauna habitat 	Yes, ongoing bushland restoration has continued to improve the quality of bushland and habitat. There is increased sightings and evidence of fauna including Bandicoots and echidna sightings. Residents have also reported increases in birdlife.
<ul style="list-style-type: none"> • To manage bushland areas to protect against the threat of bushfire 	Yes, ongoing bushfire fuel reduction was undertaken during the reporting period.
<ul style="list-style-type: none"> • To maintain aesthetics and provide quality open space for community use 	Yes, ongoing bushland restoration is improving the aesthetics of the Council's reserves

INDICATORS for evaluation:	Statistic:
Bushland areas continue to be maintained in good condition	Increased extent of bushland restored
Bush regeneration continues to expand in each bushland reserve	Increased extent of bushland regeneration in the majority of sites under restoration. Contracted sites have either been increased in area, or works completed
Fuel loading is managed in bushland areas	Sites identified as having a bushfire risk have undergone fuel reduction works.
Walking tracks are maintained in a good safe condition	Walking tracks maintained on a weekly basis
<p>Discussion:</p> <p>Council's Bush Regeneration staff and Bush Regeneration Contractors have continued improving the quality of bushland within Manly. Both staff and contractors have implemented a structured bush regeneration program with timing of visits sufficient to ensure weeds are targeted prior to seeding, and areas previously worked have been maintained. Council staff have also been undertaking routine inspections of walking tracks ensuring they are kept in a tidy and safe condition.</p> <p>Bush Regeneration Contractors have undertaken substantial works in Contracted sites. Which include the Manly Scenic Walkway, Seaforth Oval, and Noxious Weeds Contracts. This is detailed further in Key Outcomes below.</p> <p>In addition to bush regeneration works, other works to improve the safety and sustainability of bushland areas have been undertaken. These include revegetating Council reserves, and the provision of plants to residents, remediation of dangerous trees, protecting Endangered Ecological Community, and addressing feral animal issues. Further details are provided in Key Outcomes below.</p>	
<p>TBL ASSESSMENT:</p> <p>This project is being undertaken with regards to the principles of triple bottom line reporting;</p> <p>Environment: The aim of this program is to improve the environmental quality bushland within the Manly LGA. Environmental attributes being managed include native bushland, water quality, preventing the spread of weeds, managing gullies/watercourses and associated soil erosion issues, improving flora and fauna habitat etc</p> <p>Social: This project has important social values. It is protecting and restoring bushland areas that are a community asset with recreational, scientific, and educational values.</p> <p>Economic: This project has important economic values through the significant focus on weed control. Environmental and noxious weeds contribute a significant cost to society, impacting on human health, agricultural lands, urban areas, and the natural environment.</p>	
<p>KEY OUTCOMES:</p> <ul style="list-style-type: none"> Bush regeneration contracts completed in September 2009 were extended for a further 12 months to enable work momentum to continue. This extension enabled the amount of each reserve under restoration 	

to continue to expand.

The Manly Scenic Walkway contract comprised of 3 sites – Esplanade Park, Heaton Ave (Historic Tram Track), and Tania Park. During the financial year the works at Esplanade Park continued, and have been highly successful. The entire site is now at a manageable maintenance level, and has now been taken off contract and given to Council teams to manage. Works continued to maintain and expand the restoration efforts at Ellery Punt Reserve with 3500m² undergoing restoration and 4000m² at Tania Park.

The Seaforth Oval bushland restoration contract was also revised during the reporting period. Works commenced in a new section of bushland adding an extra 3,500m² to the area already under management. This is expected to be further increased in the 2010-11 financial year.

The Noxious Weeds Management Contract was also substantially revised during the previous reporting period. Sites commenced under this contract review included Bantry Reserve, Woodland St Road Reserve, and Linkmead Avenue. These works continued throughout the reporting period, continuing to improve the quality of bushland through a reduction of noxious and environmental weeds.

During the reporting period new bush regeneration tender specifications have been produced and advertised on Tenderlink. It is anticipated that new contracts will be established early in the next financial year, to ensure bush regeneration works continue to evolve.

- Council contracted with Toolijooa Nursery to propagate plants grown from local provenance for a three year period. During the first year of the contract 7,863 plants were planted in the Manly LGA through Council revegetation works and native plants provided to local residents.
- Council's Rabbit control continued in 2009/10. Biological control through the release of Calici virus was undertaken throughout the Seaforth Precinct area. Rabbit numbers appear to have reduced since the release of the virus. Cage traps have also been purchased to facilitate a trapping program as a follow up measure.
- Duffy's Forest Endangered Ecological Community restoration works have continued throughout the reporting period. The regeneration results since the translocation occurred have been excellent, with a diverse range of native grasses, shrubs, and trees growing well. In addition to this southern section has been fenced off with a 1m high cyclone mesh fence as required by DECCW.
- During 2009/10 Council's contracted Arborist has undertaken substantial maintenance of trees within bushland reserves to ensure public safety. During the reporting period the reserves that tree maintenance has been undertaken includes the Manly Scenic Walkway, Heathcliff Reserve, Fisher and Geddes Reserve, Burnt Bridge Ck, Kangaroo Reserve, Munoora Road Reserve, Bantry Reserve, and Wellings Reserve.

POLICY REFERENCES (e.g. plans of management, recovery plans, strategies etc include references):

- Manly Management Plan 2010
- Manly Sustainability Strategy 2006
- Education for Sustainability Strategy (MSS ref. A1.2.6).
- Coastal, Estuary and Floodplain Management Plans (MSS 2.4.1)
- Manly Lagoon Integrated Catchment Management Strategy 2004 (also MSS C1.1.4)
- Duffys Forest Endangered Ecological Community Management Plan
- Flora and Fauna of Manly Council's Bushland Reserves report
- The Burnt Bridge Creek Restoration Management Plan Action Plan (1998)
- Plan of Management for Seaforth Oval, Tania Park, and Keirle Park
- Coastline Management Plan for Little Manly Reserve, North Harbour Reserve, and 40 Baskets Reserve.
- Estuary Management Plans

DOES BID DEVIATE FROM ORIGINAL BID? EXPLAIN:

No

OVERALL EVALUATION AND CONCLUSION consider success of the project, medium/long term prospects or impacts. Will this bid be continued? Opportunities and Challenges.

The last 12 months has seen a continuation and expansion of the bushland restoration works. The major successes over the year has seen three year bush regeneration contracts at MSW, Seaforth Oval, and Noxious weeds project expanded and substantially revised during the reporting period. These contracts have yielded excellent results. New tenders were also prepared to ensure new areas are targeted and works continue to evolve.

Duffys Forest Endangered Ecological Community has begun to show excellent restoration results. The species diversity now present within the soil translocation area continues to improve and is becoming the most species rich section. Fencing and revegetating the buffer during National Tree Day planting event has also aided the protection and improvement to the vegetation community.

Council's rabbit control program has continued to expand into new areas targeting rabbits within residential areas. This has been previously impossible to achieve, however the supply of biological control agent, Calici virus, by the Cumberland Livestock and Pest Authority has enable residential streets in Seaforth to be treated.

Tree management in bushland reserves has been undertaken in numerous Council reserves to ensure public safety continues to be managed as high priority.

Environment Levy



ANNUAL REPORT 2009/10

PROJECT TITLE:	Threatened Species Program	
PROJECT TYPE:	<input type="checkbox"/> NEW PROJECT	<input checked="" type="checkbox"/> ONGOING PROJECT
FINANCIALS:	Years project funded: 2006/07, 2007/08, 2008/09, 2009/10	
TARGET DATES (commenced, estimated completion etc): Approx. \$50,000 is earmarked for the Long-nosed Bandicoot education, monitoring and research project, these funds will continue to be set aside to accompany an ARC linkages grant application in about November 2010 with the UNSW.		

BRIEF PROJECT DESCRIPTION:

The threatened species program funding is largely to resource the implementation of the Little Penguin and (draft) Long-nosed Bandicoot recovery programs. This year Council continued to participate, along with other stakeholders, in the implementation of these programs.

Implementation of these programs is guided strategically by the adopted Little Penguin Recovery Plan and the

yet to be adopted Draft Long-nosed Bandicoot Recovery Plan but is also flexible to meet seasonal requirements.

Projects and activities undertaken as part of this program have included; Recovery Team meetings, ongoing monitoring for 09/10, ranger patrols of key Little Penguin breeding areas, management of the Manly Wharf and Manly Pavilion / Federation Point Little Penguin breeding sites, training of Penguin Warden Volunteers, community education undertaken by the Wardens, review and conditioning of development applications within the Little Penguin and Long-nosed Bandicoot habitat areas, installation of nest boxes and micro-chipping of penguins to name a few.

EL Expenditure during 09/10 specifically included:

- Design & installation of the Little Penguin interpretive sign at West Esplanade
- Maintenance of Little Penguin Barriers at West Esplanade (near Manly Wharf)
- Implementation of agreed Recovery Team actions.

The majority of funds have been set aside for a community engagement, education, monitoring and research project for the residential areas of 'Eastern Hill'. The project will educate residents about Long-nosed Bandicoots and how they can help protect them through appropriate property management and behaviour. It will also involve residents in the monitoring of Long-nosed Bandicoots in the residential areas providing much needed research data and also raising residents' awareness of this endangered population. The research data will be reported on in a scientific research paper and will be complimentary to existing data collected by the state Government in other areas of North Head. The project will also include a review of the DCP provisions with respect to threatened species (in particular Long-nosed Bandicoots) and a review of the current Bandicoot conditions and management measures applied by Council to DAs. This project will now form part of an ARC Linkage grant with the UNSW.

OBJECTIVES of the project:	Result: were they achieved? explanation:
To inform and educate the community of the controls and conditions relating to protection of penguins and their habitat, to encourage compliance and enforce regulations related to threatened species, emphasise the message and recruitment of the various penguin volunteer programs, and improve penguin habitat.	Yes: education and regulation has been enhanced at the Manly Wharf site through the provision of the interpretive sign.
To meet a number of Council's responsibilities for; education, monitoring and research as required by the Draft Long-nosed Bandicoot Recovery Plan. Note: once this plan is adopted, it will be a legal requirement for the actions contained and assigned to Council to be implemented by Council.	Project yet to be commenced.
To develop, implement and report on a community; engagement, education, research and monitoring project with the overall outcome of assisting in the conservation of the Long-nosed Bandicoot population at North Head through the engagement, education and involvement of the community and rigorous scientific research and monitoring.	Project yet to be commenced.
INDICATORS for evaluation:	Statistic:

Number of Little Penguins recorded - LGA	In summary the 2009/10 monitoring report (DECCW) concludes that 2009/10 was a successful season particularly when compared to the natural variation of previous seasons and despite the dog/fox attacks killing at least 10 (known) penguins at the start of the season.
Little Penguin interpretive signage installed & feedback received	Completed. Before and after photographic evidence recorded. Positive feedback received from Penguin warden volunteers and general community.
Completion of a research paper identifying the relative importance of the residential areas to the recovery of the Long-nosed Bandicoot population	Project yet to be commenced.
Community up-take of and involvement in the Long-nosed Bandicoot project.	Project yet to be commenced.
Discussion: Expenditure on the Federation Point barriers is awaiting resolve of the walkway issue. This may occur in 2010/11. Expenditure on the Long-nosed Bandicoot project is pending an ARC Linkages grant with the UNSW.	
<p>TBL ASSESSMENT:</p> <p>Social benefits of the project include education of the community and visitors about the endangered populations of Little Penguins at Manly and Long-nosed Bandicoots at North Head, which generates community and a sense of place.</p> <p>Environmental benefits of the program include protection of the breeding Little Penguins at Manly Wharf and Federation Point/ Manly Pavilion breeding sites as well as in other residential areas, and also the Long-nosed Bandicoots within the Council's jurisdiction. These individuals form part of the endangered populations.</p> <p>Financial implications of the project include costs associated with implementation of the recovery programs. However, this is to compliment the cost-free service that the volunteer penguins wardens provide to the community and biodiversity in Manly. Positive financial implications may follow a review of Council's current requirements for threatened species assessments to accompany development applications and also a review of bandicoot conditions of consent – these are likely to more realistically reflect the requirements of Council and may save money for residents looking to lodge a DA.</p>	
<p>KEY OUTCOMES:</p> <ul style="list-style-type: none"> • Penguin wardens equipped to educate the community about the Little Penguins and to help protect those penguins nesting at these breeding sites. • Council meeting its legal obligations under Threatened Species Legislation. • (Future outcome) Raised community awareness of the endangered population of Long-nosed Bandicoots at North Head, particularly for residents of 'Eastern Hill'. • (Future outcome) Research paper identifying how important the residential areas of 'Eastern Hill' are to the recovery of the population. • (Future outcome) Reviewed planning requirements for DAs in the threatened species areas. 	
<p>POLICY REFERENCES (e.g. plans of management, recovery plans, strategies etc include references):</p> <ul style="list-style-type: none"> • <u>Manly Management Plan 2007 – 2010: Protection of threatened species habitat and populations. (PA 5.1.1)</u> • <u>Manly Sustainability Strategy (2006): C 1.5.11 Implementation of Strategies outlined in the Endangered</u> 	

Population of Penguins at Manly Recovery Plan (NPWS)

- Manly Sustainability Strategy (2006): C1.5.7 - The provision of consultants/specialised technical advice pertaining to biodiversity, threatened species, and geotechnical issues for assessment of development (Ongoing priority); and C1.7.12 - Work with DEC to ensure protection of Manly's threatened species.
- Long-nosed Bandicoot Recovery Program: Council has responsibilities for research, monitoring, education and engagement under the draft Recovery Plan for the Endangered Population of Long-nosed bandicoots at North Head (October 2008).
- Little Penguin Recovery Plan (2000)

DOES BID DEVIATE FROM ORIGINAL BID? EXPLAIN:

No – although combines bids for threatened species, Long-nosed Bandicoots and Little Penguins.

OVERALL EVALUATION AND CONCLUSION consider success of the project, medium/long term prospects or impacts. Will this bid be continued? Opportunities and Challenges.

DECCW monitoring indicates that the Little Penguin Recovery Program is providing positive outcomes for the Little Penguin population. This is further supported through community feedback. It is recommended that this program continue with the annual allocations to be considered on an annual basis.

With respect to the Long-nosed Bandicoot program – implementation has not yet commenced and the Draft Recovery Plan has not yet been finalised.

Environment Levy



ANNUAL REPORT 2009/10

PROJECT TITLE:	Tania Park Erosion & Sediment Control – Stage 1		
PROJECT TYPE:	<input type="checkbox"/>	NEW PROJECT	<input checked="" type="checkbox"/> ONGOING PROJECT
FINANCIALS:	Years project funded: 07/08 (Carried forward to 08/09 and to 09/10)		
TARGET DATES (commenced, estimated completion etc): September 2010			

BRIEF PROJECT DESCRIPTION:

The project forms Stage 1 of planned erosion control improvement works for the Tania Park and Dobroyd Head area. The proposed works are in accordance with the adopted Tania Park Landscape Masterplan and are to address pedestrian erosion of the embankment (note vehicle erosion of the unformed car park below the embankment forms part of Stage 2 works).

Stage 1 will incorporate the following:

1. formalising three sets of pedestrian stairs, on the embankment between the car park area to the south east of the playing fields and the playing fields themselves. Planting of the embankment using locally endemic low growing species to improve biodiversity values, prevent further erosion and to improve amenity of the area and visual connection with the adjoining National Park. Views to be maintained.

2. Installation of six park bench seats (maintain existing due to attached plaques) at the top of the embankment, overlooking the National Park, with views to the Harbour.

3. Installation of an all access ramp also along the south eastern side of the playing fields to enable access to the park and views for prams, people with a disability and the elderly.

The access components of these works are supported by a grant from the NSW Government's Metropolitan Greenspace program.

OBJECTIVES of the project:	Result: were they achieved? explanation:
Preventing surface erosion and sediment run-off from Tania Park into adjacent National Park bushland and North Harbour Aquatic Reserve	Project not yet completed.
Improve access from the car parking area to the playing surface of Tania Park	Project not yet completed.
Extending existing vegetation along the oval boundary (adjacent embankment)	Project not yet completed.
Implementation of a short term priority action within Council's Tania Park Plan of Management and associated Landscape Masterplan	Project not yet completed.
INDICATORS for evaluation:	Statistic:
Completion of project	Not yet completed.
Visual evidence of reduction in embankment erosion	Before photographic evidence of erosion recorded. Photographic record following project completion will be documented and compared to 'before' photos.
Precinct feedback on improved access, aesthetics and amenity of Tania Park open space areas	No yet completed.

Discussion: Project to be completed in September 2010.

TBL ASSESSMENT:

The social benefits of this project will include improved access from the car park to the fields, particularly for people with a disability and the elderly. It will also improve connection with the adjacent National Park, which is a valuable social asset for recreation.

The environmental benefits of this project include erosion and sediment control to minimise disturbance and pollution downstream in the National Park and also in North Harbour.

A portion of the funds required to complete this project have been provided through the 07/08 Environment Levy. Council has also secured matching funds through the NSW Government's Metropolitan Greenspace Program. The financial cost of this project (which addresses at-source control of pollution) will be minimal

compared to the clean-up and maintenance costs of the alternative approach of addressing downstream impacts (eg: sediment capture and clean-up downstream) and also compared to the environmental costs if this project were not undertaken.

KEY OUTCOMES:

Not yet completed. Anticipated outcomes include:

- Reduced silt and sediment run-off into the National Park
- Improved biodiversity values at Tania Park
- Improved connection between Tania Park and the National Park
- Improved access to Tania Park fields.

POLICY REFERENCES (e.g. plans of management, recovery plans, strategies etc include references):

- Manly Management Plan 2007-2010: Sustainable planned, as opposed to 'ad hoc' development of Council controlled open space. Improved management of open space areas including the coast, estuaries and community land. (PA 5.1.2)
- Manly Sustainability Strategy (2006): The MSS contains the objective (C1) Recognise the intrinsic value of Manly's geodiversity, biodiversity, and natural ecosystems, and protect and restore them. To achieve this objective the MSS identifies that: "Council, working with the community, commits to the following policies and ongoing programs: Preparation and implementation of Plans of Management for community lands and reserves."
- Tania Park Plan of Management (2004) & Tania Park Landscape Masterplan (2004)

DOES BID DEVIATE FROM ORIGINAL BID? EXPLAIN:

No

OVERALL EVALUATION AND CONCLUSION consider success of the project, medium/long term prospects or impacts. Will this bid be continued? Opportunities and Challenges.

N/A – project has not been completed.

5. Water Cycle Management Program

This section provides project specific reports relevant to the Water Cycle Management Program.

Environment Levy



ANNUAL REPORT 2009/10

PROJECT TITLE:	Manly LGA Flood Study, Floodplain Risk Management Study and Plan (components 1 & 2)		
PROJECT TYPE:	<input checked="" type="checkbox"/> NEW PROJECT	<input type="checkbox"/> ONGOING PROJECT	
FINANCIALS:	Years project funded: 2009/10		
TARGET DATES (commenced, estimated completion etc): Ongoing			

BRIEF PROJECT DESCRIPTION:

Manly Council has been advised by the Department of Environment, Climate Change, and Water (DECCW) to develop an updated flood policy for the Manly LGA, in accordance with the State Government's *Flood Prone Land Policy* and DECC's 2005 *Floodplain Development Manual*.

Manly Council currently has no Flood Study, Floodplain Risk Management Study, or Floodplain Risk Management Plan, for the majority of the Manly LGA including areas known to be subject to localised flooding such as Manly CBD and the Manly flats regions.

The Manly Lagoon catchment (partially within the LGA) is a high flood risk area. An existing Flood Study, Floodplain Risk Management Study, and Floodplain Risk Management Plan have been prepared for this area in the early to mid 1990s and are considered to be outdated. As a result, Manly Council and Warringah Council have already commenced a new 4-year project to undertake and adopt a new Flood Study, Floodplain Risk Management Study, and Floodplain Risk Management Plan for this Lagoon catchment.

Manly LGA Flood Study

This budget bid seeks to commence the process for the remainder of the Manly LGA, and undertake the data collection stage of the floodplain risk management process outlined in the Floodplain Development Manual.

The process, as outlined in the manual, includes the following stages:

1. **Establish a Floodplain Management Committee.**
2. **Data Collection**
3. Undertake Flood Study (taking into consideration the impacts of Climate Change)
4. Undertake Floodplain Risk Management Study (taking into consideration the impacts of Climate Change)
5. Prepare a Floodplain Risk Management Plan.

This bid is concerned with Stage 2 Data Collection, which is a critical component of the overall project development, and includes undertaking a Digital Terrain Model of appropriate scale and collecting geotechnical data using Airborne/ Aerial Laser Scanning with the specifications required for a Flood Study meeting the requirements (2005 *Floodplain Development Manual*) of the Department of Environment and Climate Change (DECC). This will be accompanied by updating Council's GIS system, to incorporate all the latest drainage upgrade works to reflect the current scenario.

Existing Manly LGA Flood Information

Council has undertaken a preliminary climate change study through Cardno. The study '*Climate Change Actions for Manly LGA*' was based on climate change projections identified in DECC's *Floodplain Risk Management guidelines—Practical Consideration of Climate Change* including sea level rise (up to 0.91m) and rainfall intensities (up to 30%).

This study identified and mapped preliminary predictions of specific climate change impacts upon the LGA with respect to sea level rise, catchment flooding, and ocean inundation. While the Cardno report is based on coarse modelling data, it undoubtedly demonstrates the need to address climate change impacts in a revised Flood Study and Flood Risk Management study and plan. **Action M36 of the Cardno's Climate Change Action Report** directly relates to this proposal.

According to the DECC's 2005 *Floodplain Development Manual* and 2007 *Floodplain Risk Management guidelines—Practical Consideration of Climate Change*, Flood Studies and Flood Risk Management Studies are required to manage climate change implications and associated vulnerabilities as part of strategic management of flood risk.

The impacts of climate change and the associated ramifications upon the vulnerability of floodplain risk management mitigation options and development decisions can be significant. The climate change factors affecting flood behaviour and their degree of influence vary with location and therefore it is essential that the new Flood Study and Flood Risk Management study for the Manly LGA should consider these impacts and their ramifications.

Completion of such documentation and planning is now critical for Council to:

- Meet DECCW Flood Plain Risk Management requirements
- Ensure Council has an up-to-date floodplain risk management policy
- Adequately consider flood risk in Climate Change Adaptation Planning
- Consider flood risk in Council's new LEP and subsequent DCP and amendments

This bid is supported by **CPS Project Sheet 178**, signed by Senior Management in October 2008.

OBJECTIVES of the project:

Airborne Laser Scanning (ALS) / LIDAR Manly Council has been advised by the DECCW to undertake Airborne Laser Scanning according to the Department's specifications on the Manly LGA for the development of a Digital Terrain Model (DTM) and collection of geotechnical data. ALS / LIDAR is one of the prerequisites for the preparation of a Flood Study.	
INDICATORS for evaluation:	
<ul style="list-style-type: none"> • Develop a Digital Terrain Model using Airborne/ Aerial Laser Scanning 	More cost effective options currently being pursued by Council staff.
Subsequent Stage objectives (future components): <ul style="list-style-type: none"> • Development of Flood Study, Floodplain Risk Management Study and Floodplain Risk Management Plan for Manly LGA. • Development of new Probable Maximum Flood Level and Climate Change Impact levels. • Development of directions and guidelines relating to development and infrastructure planning of flood affected land as well as required emergency management across manly LGA. 	It is recommended by WCM Team Leader that the existing Env Levy allocation for this purpose is now carried forward to the next financial year(s) to support subsequent stages of the project (eg as Council's 1 : 2 matching funding for a NSW Government Floodplain Management Program Grant Application). Such opportunities are now being investigated.
TBL ASSESSMENT: None provided.	
KEY OUTCOMES: It is recommended that funds are carried forward to complete the project.	
POLICY REFERENCES (e.g. plans of management, recovery plans, strategies etc include references): DECC Floodplain Manual 2005 DECC 2007 Floodplain Risk Management guidelines—Practical Consideration of Climate Change Manly Council Management Plan (2009-2010). Manly Sustainability Strategy (2006): C.1.1 Protecting our Water Cycle and Catchments program C.1.2 Sustainable Marine Environments C.1.3 Coastline and Estuary Management Program Other relevant plans: Manly Council - Integrated Catchment Management Strategy (2004)	
STAFF INVOLVED:	

Water Cycle Management Team Leader

DOES BID DEVIATE FROM ORIGINAL BID? EXPLAIN:

See below recommendation to carry forward the funds for later stages of the project.

OVERALL EVALUATION AND CONCLUSION consider success of the project, medium/long term prospects or impacts. Will this bid be continued? Opportunities and Challenges.

Climate Change and Flooding is expected to impact all aspects of environment and urban zoned conditions. An adequate Flood Risk Management Study and Plan is key to managing risk in these areas.

The Floodplain Risk Management Study and Plan will ultimately relate to:

- Consideration of the specifications in the 2005 *Floodplain Development Manual*
- Consideration of flood risk in Climate Change Adaptation Planning
- Consideration of flood risk in Council's new LEP and subsequent DCP and amendments

These programs relate directly to on ground design, construction and urban planning.

Preliminary cost estimates for ALS / LIDAR data at the time of the 2009/10 financial year Environment Levy Bid application were approximately \$60,000. However, In the 2009/2010 financial year, the Sydney Coastal Councils Group (SCCG) and other parties advised Council that ALS / LIDAR data, suitable for the preparation of Flood Studies and Floodplain Risk Management Studies, will now be made available through these agencies to reduce expenses to Council. This opportunity continues to be pursued by Council staff. Alternatively, if data is acquired commercially, the price may also now be as low as \$7,000 for specifications identical to use used in the Manly Lagoon Catchment Flood Study.

As a result, it is recommended by WCM Team Leader that the existing Env Levy allocation for this purpose is now carried forward to the next financial year(s) to support subsequent stages of the project (eg as potential Council 1 : 2 matching funding for a NSW Government Floodplain Management Program Grant Application).

Environment Levy



ANNUAL REPORT 2009/10

PROJECT TITLE:	Gross Pollutant Trap (GPT/SQID) and Alternate Water Source Maintenance	
PROJECT TYPE:	<input type="checkbox"/> NEW PROJECT	<input checked="" type="checkbox"/> ONGOING PROJECT
FINANCIALS:	Years project funded: Since 2003	

TARGET DATES (commenced, estimated completion etc): Ongoing

Project is ongoing and essential. Council resolution allows up to 10% of the Environment Levy to be allocated to maintenance annually (~\$94,600)

BRIEF PROJECT DESCRIPTION:

GPTs maintenance: Scientific research conducted in Manly has demonstrated Council's GPT, litter boom, and litter net maintenance program to prevent approximately 110,000 kg of sediment and gross litter, more than 700 kg of concentrated nutrients (TN and TP), and more than 80 kg of Zinc and other metals derived from catchment land uses annually from entering Manly's waterways, including Burnt Bridge Creek and Manly Lagoon. This prevents up to 2.4 tonnes of resultant algal growth in these waterways, and substantial environmental damage from sedimentation, eutrophication, and acute and chronic toxicity. This program funds the maintenance of these pollutant prevention activities.

Alternate water source maintenance: The uptake of sustainable alternate water sources (harvesting and re-use of stormwater, groundwater, grey water, rainwater, and effluent; capital works funded through another environment levy program) has contributed to Manly Council reducing its town-water consumption by 55% between 2000/01-2008/09; the preservation of green open spaces (irrigation unrestricted by Sydney Water restrictions); and the establishment of an increasingly water-wise community. Alternate water sources are now used in 2010 for a wide host of functions including irrigation of much of Manly's open spaces, in street sweeping vehicles, in mobile irrigation tankers, in high pressure cleaning of public spaces, and a host of other functions. Ongoing operational and maintenance costs of these programs, including periodic maintenance, de-sludging, replacement, repair, and upgrade, to maintain system integrity and the achievements described, of pumps, tanks, connection points, housing, and electrical connections associated with these programs, require maintenance funds. Such maintenance funds for existing capital programs are drawn from this levy bid.

OBJECTIVES of the project:	Result: were they achieved? explanation:
Prevention of stormwater pollution to waterways by maintaining Gross Pollutant Traps (GPTs)	Yes - Ongoing
Maintenance of alternate water source systems (stormwater, groundwater, and rainwater reuse systems)	Yes – Ongoing
INDICATORS for evaluation:	Statistic:
Volume of pollutant prevented from entering waterways	169 Tonnes captured/prevented in 2009/10 year.
Alternate water source systems maintained	Systems maintained, providing ongoing substantial potable water savings and financial savings in potable

Discussion:

GPTs maintenance: The cleansing/maintenance contractor responsible for cleansing works associated with all GPTs provides an annual report for all Council GPTs, detailing load removed, issues with each device, and other performance aspects. Figures are recorded for GPT performance, and monitoring and inspections regularly undertaken to ensure the best performance of each individual GPT is achieved.

Alternate water source maintenance: All alternate water sourcing projects continue to operate within standard conditions as a result of periodic ongoing maintenance in repair or replacement of pumps, tanks, and other works.

TBL ASSESSMENT:

Environment: The Gross Pollutant Trap (GPT) program reduces wet weather stormwater pollution to waterways, improving environmental quality.

Maintenance of existing capital alternate water source systems ensures reduction in use of Sydney dam supplies for use of non-potable purposes, including use of local stormwater, groundwater, and rainwater sources to live within the local water cycle.

Financial: The GPT program is cost effective and reduces the need for more costly down-stream waterway rehabilitation and dredging activities (for example of Manly Lagoon sands), through upstream pollution capture and control.

Maintenance of alternate water sourcing systems ensures annual potable water savings of in excess of \$170,000/year on Sydney Water rates through substitution of potable water with alternate supplies.

Social: The GPT program improves water quality and social amenity in Manly's numerous waterways. Maintenance of alternate water source systems ensures green ovals and reserves for social use, and irrigation not subject to water restrictions.

KEY OUTCOMES:

- GPT maintenance during the period undertaken – 169 tonnes captured in 2009/10 year

Clean Date	Load Removed (total tonnes)
July 2009	40.7
October 2009	40.7
January 2010	32.9
March 2010	31.9
June 2010	22.6
Total	169

- Maintenance of alternate water sourcing undertaken, and minor monitoring work for both programs

POLICY REFERENCES (e.g. plans of management, recovery plans, strategies etc include references):

Manly Council Management Plan (2006-2009):

Manly Sustainability Strategy (2006):

Manly Council Education for Sustainability Strategy (2003):

Other relevant plans:

Manly Council

- **Integrated Catchment Management Strategy (2004)**
- **Manly Lagoon Estuary and Floodplain Management Plans (1998)**

State and Federal Government

- **Sydney Harbour Catchment Blueprint (2003)**
- **Sydney Middle Harbour Stormwater Management Plan (1999); reviewed 2002**
- **Sydney Northern Beaches Stormwater Management Plan (1999)**
- **DEC: Managing Urban Stormwater (2004).**

DOES BID DEVIATE FROM ORIGINAL BID? EXPLAIN:

No

OVERALL EVALUATION AND CONCLUSION consider success of the project, medium/long term prospects or impacts. Will this bid be continued? Opportunities and Challenges.

The bid is an essential ongoing bid in the short, medium and long term, to maintain existing capital projects and achieve environmental, financial, and social benefits in water quality and alternate water sourcing for the Manly community.

In total there exists 16 GPTs, 4 booms, and 5 net devices. If existing GPTs (and litter booms and nets) are not maintained, results will include the anaerobic decomposition of current stored loads, the conveyance of all future pollutant loads (see above for annual loads in kg) directly into waterways as all GPTs will fill and additional loads will by-pass the traps (including onto Manly Ocean Beach via the Steinton St Pipe, Burnt Bridge Creek and Manly Lagoon), with modification to the hydraulic conductivity of Council's stormwater conveyance system also possible due to blockages. This will contribute to the degradation of Manly's waterways.

If existing alternate water sources are not maintained, this will result in periodic pump/tank/system failure, dramatically reducing available water supplies for irrigation of much of Manly's open spaces, water available to street sweeping and high pressure cleaning, and a host of other functions, until maintenance / repair funds do become available. Water volumes available for these end-users would revert back to higher town-water volumes used prior to alternate water source development. It will also result in sludge and pollutant build up in tanks, threatening water quality, and limiting capacity for Council to commit to taking on any new alternate water sourcing projects. It would contribute to the dieback of Manly's green spaces, and also increased cost to Council (up to \$170,000 / year

ongoing greater, based on previous potable-water volumes used in 2000/01).

Environment Levy



ANNUAL REPORT 2009/10

PROJECT TITLE:	Sustainable Groundwater Management and Managed Aquifer Recharge Study	
PROJECT TYPE:	<input type="checkbox"/> NEW PROJECT	<input checked="" type="checkbox"/> ONGOING PROJECT
FINANCIALS:	Years project funded: 2008/09 only.	
<p>TARGET DATES (commenced, estimated completion etc): <i>Project deferred.</i></p> <p>WCM Team Leader's Note (2009/10):</p> <p>Review of project outcomes with Senior Management identified that groundwater should be investigated and managed in a regional framework (eg SHOROC, NSW DECCW) rather than a Council-specific investigation.</p> <p>This is given consideration of:</p> <ul style="list-style-type: none">- Groundwater recharge zones, discharge zones, and aquifers not aligning with Manly LGA boundaries- Groundwater licensing by Agencies other than Council and cross-government responsibilities- Establishment of NSW Government Draft Groundwater and Surface Water Sharing Plans (2010) <p>As a result this Manly Council specific project has been deferred.</p> <p>In 2009/10 a SHOROC Water Cycle Management Working Group was established with monthly and bi-monthly meetings of water technical staff from all Councils, Sydney Water, and NSW Agencies. This group has identified that further groundwater investigations are appropriate within the context, timelines, and priorities of this group. Whilst this group further examines this issue, Manly Council will continue to apply a precautionary and conservative approach to groundwater management and utilisation.</p> <p>Reallocation of this Environmental Levy funding has been approved by Senior Management to pollution prevention activities within the Manly LGA as the most beneficial purpose.</p>		

Original PROJECT DESCRIPTION:

Groundwater is an extremely valuable water resource to Manly Council. Many properties in the Manly LGA are also extracting groundwater for residential irrigation purposes. It is currently used by Council as an irrigation

water source for most of Council's open spaces and public reserves in place of drinking water, including:

- Ivanhoe Park
 - LM Grahams Reserve
 - West Esplanade
 - Clontarf Reserve
 - Manly Ocean Beachfront Reserve
 - East Esplanade
 - Manly Swim Centre Gardens
 - Town Hall Lawn
 - Gilbert Park
 - mobile irrigation tanker vehicles throughout the LGA.
- (Total groundwater abstraction, approximately 250,000 L/week).

This contributes directly to Council cost savings in excess of \$100,000 per annum based on the price of drinking water (\$500,000 over five years). These cost savings are expected to increase by 145% in the next two years, given the projected increase in the price of drinking water from \$1.33/thousand litres to \$1.96/thousand litres in 2009/10 (SWC IPART NSW Pricing Submission S07/11797).

However, groundwater is fragile resource, and over-extraction of Groundwater resources can result in decline in the quality and quantity of groundwater and loss of resource, in addition to possible environmental harm, through mechanisms such as seawater intrusion. To date, Council's groundwater usage has been guided by project and site specific environmental investigations, rather than a strategic understanding of LGA wide aquifer capacities, yields, aquifer connectivity, and key resource and recharge locations. At present in particular, aquifer catchments, total aquifer recharge, and safe extraction limits, are unknown.

This environment levy allocation will fund an LGA wide study of existing groundwater resources (quality and quantity), safe yields, and to identify strategic locations and management frameworks for current and future groundwater management, and utilisation in place of drinking water for irrigation.

Undertaking a groundwater study of this type is recommended by Council's Climate Change Working Group (10 October 2007 meeting), and is also a medium priority management action recommended for immediate implementation in Council's Clontarf / Bantry Bay Estuary Management Plan (WQ Action 4.1).

Additionally, it is expected that long-term groundwater use will require aquifer flow balance through strategic (**managed**) aquifer recharge (M.A.R.). The study funded through this budget bid would also seek to identify suitable locations for future M.A.R. projects, such as natural increased aquifer infiltration, percolation, and replenishment, using existing sources including catchment rainwater for long-term sustainable use.

Original OBJECTIVES of the project:	Result: were they achieved? explanation:
<p>Specifically, the proposed study will inform:</p> <ul style="list-style-type: none"> - Annual natural recharge to Manly's aquifers - Safe extraction limits from Council's individual aquifers and bores - Assessment of existing impacts of abstraction (including Community extraction) - Total LGA wide aquifer resources - Strategic locations for future abstraction 	<p><i>Project Deferred – as above.</i></p>

<ul style="list-style-type: none"> - Strategic locations for Managed Aquifer Recharge (M.A.R.) <p>The information provided from the study will be beneficial for the following programs within Council:</p> <ul style="list-style-type: none"> - Sustainable Groundwater Extraction and Management (Natural Resources) - Open Space / Public Reserve Irrigation under water restrictions (Parks and Gardens) - Total Catchment Management (Natural Resources) - Protection of Waterway and Environmental Health (Natural Resources) 	
INDICATORS for evaluation:	Statistic:
<p>Identification of aquifer catchments</p> <p>Identification of annual aquifer recharge</p> <p>Identification of total groundwater extraction (council and community)</p> <p>Identification of safe sustainable and critical level of extraction</p> <p>Assess salinity and acidity levels of abstracted groundwater</p> <p>Identification of strategic locations for Managed Aquifer Recharge</p>	<p><i>Project Deferred – as above.</i></p>
<p>Discussion:</p> <p>Ramifications if not completed:</p> <p>Collapse or decline of Council's groundwater resources due to mismanagement or misunderstanding in the future would require the re-instatement of previous high drinking water use, and associated cost to Council (in excess of \$100,000 per year) in the absence of a replacement water source. Prior to development of extraction schemes for Groundwater, at all of Council's primary open spaces and reserves, Council previously paid \$100,000 more a year in irrigation water rates to service these locations (2001 compared with 2006, Source: Sydney Water). Collapse or decline of Council's groundwater resources may also result in environmental harm, including modification to groundwater dependent ecosystems and soil conditions.</p> <p>Further, turf loss and turf replacement costs at Council's ovals when irrigation water is restricted would be expected, at typical cost of between \$30,000 - \$50,000 per oval per year (Source: Parks Co-ordinator).</p>	
TBL ASSESSMENT:	

<p>Environment: The project will aim to protect the values of groundwater, to ensure effective and environmentally guided management.</p> <p>Financial: The project will continue to maintain historic low uses of potable water use by Council and associated cost savings.</p> <p>Social: The project will maintain beneficial alternate water source irrigation of public playing and sporting fields, reserves, and parks.</p>
<p>KEY OUTCOMES:</p> <p><i>Project Deferred – as above.</i></p>
<p>Original POLICY REFERENCES (e.g. plans of management, recovery plans, strategies etc include references):</p> <p>Manly Council Management Plan (2007-2010):</p> <p>Manly Sustainability Strategy (2006):</p> <p>Manly Council Education for Sustainability Strategy (2003):</p> <p>Other relevant plans:</p> <p>Manly Council</p> <ul style="list-style-type: none"> • Integrated Catchment Management Strategy (2004) • On-site Stormwater Management Plan (2003) • Water Savings Action Plan 2008/09 – 2012/13 • Clontarf / Bantry Bay Estuary Management Plan (EMP) <p>State and Federal Government</p> <ul style="list-style-type: none"> • Sydney Harbour Catchment Blueprint (2003) • Sydney Middle Harbour Stormwater Management Plan (1999); reviewed 2002 • Sydney Northern Beaches Stormwater Management Plan (1999) • DEC: Managing Urban Stormwater (2004).
<p>DOES BID DEVIATE FROM ORIGINAL BID? EXPLAIN:</p> <p>No</p>
<p>OVERALL EVALUATION AND CONCLUSION consider success of the project, medium/long term prospects or impacts. Will this bid be continued? Opportunities and Challenges.</p> <p>The project has been deferred for reasons provided above. This bid will not be continued and reallocation of this Environmental Levy funding has been approved by Senior Management to pollution prevention activities within the Manly LGA as the most beneficial purpose.</p>

PROJECT TITLE:	Sustainable Water Resources and Water Savings Action Plan Development	
PROJECT TYPE:	<input type="checkbox"/> NEW PROJECT	<input checked="" type="checkbox"/> ONGOING PROJECT
FINANCIALS:	Years project funded: Since 2004	
TARGET DATES (commenced, estimated completion etc): Project is ongoing and essential. Council is required by NSW legislation to complete a Water Savings Action Plan, with annual progress reports in water savings implementation submitted to the NSW Department of Environment, Climate Change and Water, and the plan updated every four years. Implementation of individual water savings measures is a decision of Council. These continue to be implemented based on a ranking of payback period for water savings and cost-effectiveness.		

BRIEF PROJECT DESCRIPTION: Sustainable Water Resources As a result of climate change impacts, water restrictions, the increasing price of drinking water, and <i>water-wise rules</i> , Council's ability to maintain essential services including parks, ovals and garden irrigation in addition to waste and cleansing services is placed under pressure. Simultaneously, available water resources in other elements of the water cycle including stormwater, roofwater, groundwater, grey water, and effluent remain prodigious. Other elements of the water cycle are now managed as a resource for re-use (rather than waste products) to live in a sustainable manner within available local water supplies. There exists considerable synergies between Council objectives in supplementing restricted town-water supplies; stormwater management, and managing alternate water supplies. This is through the harvesting, treating, and on-use of stormwater, roofwater, groundwater, grey water, and effluent. This budget bid continues to fund the development of sustainable alternate water supplies at new sites in the Manly LGA. Water Savings Action Plan Development In the face of reducing drinking water supplies, the NSW Government in 2005 passed legislation (Water Savings Order) requiring all local councils to prepare a mandatory Water Savings Action Plan. This budget bid continues to fund the roll-out of water savings actions identified within Council's Water Savings Action Plan, with implementation based on a ranking of the payback period of water
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<p>savings, and cost-effectiveness.</p> <p>This budget bid continues to reduce drinking water consumption, save Council money on water and wastewater charges, ensure compliance with Water restrictions and NSW Government legislation, and increase the sustainability of Manly.</p>	
OBJECTIVES of the project:	Result: were they achieved? explanation:
Implementation of sustainable water resourcing schemes (groundwater re-use, stormwater harvesting, rainwater tanks)	Yes – Ongoing
Completion of Council's First Water Saving Action Plan (2008/09 – 2012/13) and approval by the NSW Government, and implementation of savings measures	Yes – Plan completed and approved by the Minister for Climate Change, Water, and the Environment on 27 June 2008. Implementation underway of savings measures continuing.
INDICATORS for evaluation:	Statistic:
Reduction in Council potable water consumption (KL/year)	Council Potable Water Consumption in 2008/09 was 80.35 million litres (55% lower than 2000/01 consumption). 2009/10 data was not available at time of print (released November 2010).
Reduction in Council water bills	The reduction in potable water consumption between 2000/01 and 2008/09 represents a saving to Council on potable water bills of approx \$170,000/yr ongoing.
<p>Discussion:</p> <p>The Sustainable Water Resources and development of the Water Savings Action Plan represent best practice water management in Australia by Manly Council. Council was been recognised in March 2008 in a Water Management audit conducted by Sydney Water, which ranked Council's water conservation and management capacity within Sydney's top 7 Councils.</p> <p>Council's Water Savings Action Plan 2008/09 – 2012/13 was written in 2008. Council is now working to implement cost-effective savings measures within the Water Savings Action Plan over a four year period.</p>	
<p>TBL ASSESSMENT:</p> <p>Environment: Development of sustainable alternate water sources and Water Savings Action Plan (WSAP) implementation reduces Council reliance on Sydney dam-supplies, and exposure to water restrictions. Use of local stormwater, groundwater, and rain water improves the extent to which Council lives within the local water cycle, and ensures year-round green parks and reserves not subject to water restrictions.</p> <p>Financial: Development of sustainable alternate water supplies provides significant long term cost savings to Manly Council. Existing water savings have achieved reductions in potable water use of 55% and have secured cost savings in potable water bills of \$170,000/year ongoing. Additionally, many actions identified in Council's Water Savings Action Plan, have payback periods of less than 3 years.</p> <p>Social: Development of sustainable alternate water sources and Water Savings Action Plan implementation</p>	

ensure green parks and reserves year round, not subject to water restrictions. They also provide substantial opportunity to encourage community adoption of sustainable water management options.

KEY OUTCOMES:

Implementation of savings measures documented in Council's Water Savings Action Plan 2008/08 – 2012/13 was continued, following plan completion in 2008 financial year.

Expenditure included:

- Water Savings tanks Installed at Manly Swimming Pool (including tanks, concreting works, earth movements, electrical, pipework, equipment hire, plumbing) – recommendation of WSAPlan **(70% of funding)**
- Other Projects **(30% of funding)**:
 - Rainwater Tank and Groundwater tank system improvements – various (Balgowlah Depot, Ivanhoe Park, Gilbert Park, LM Graham Reserve, Clontarf Reserve)
 - Installation of new First Flush Devices on all rainwater tanks, and operational improvements
 - Water Savings (Fairlight Beach, Manly Swim Centre, Gilbert Park), consumables, water usage auditing and reporting
 - Groundwater annual licence fee payments to NSW Government (all bores)

POLICY REFERENCES (e.g. plans of management, recovery plans, strategies etc include references):

Manly Council Management Plan (2006-2009):

Manly Sustainability Strategy (2006):

Manly Council Education for Sustainability Strategy (2003):

Other relevant plans:

Manly Council

- Integrated Catchment Management Strategy (2004)
- Manly Lagoon Estuary and Floodplain Management Plans (1998)
- On-site Stormwater Management Plan (2003)

State and Federal Government

- Water Savings Order (NSW Government)
- 2006 Metropolitan Water Plan
- Sydney Water Restrictions (Level III)
- Sydney Middle Harbour Stormwater Management Plan (1999); reviewed 2002
- Sydney Northern Beaches Stormwater Management Plan (1999)
- DEC: Managing Urban Stormwater (2004).

DOES BID DEVIATE FROM ORIGINAL BID? EXPLAIN:

No

OVERALL EVALUATION AND CONCLUSION consider success of the project, medium/long term prospects or impacts. Will this bid be continued? Opportunities and Challenges.

The bid is an essential ongoing bid in the short, medium and long term, to achieve financial, environmental, and social benefits through alternate water sourcing and water savings given the importance of environmental sustainability and green parks and reserves to the Manly community. Substantial achievements to date include a 55% reduction in Council's potable water consumption, providing Council savings in drinking water bills of approx \$170,000/year ongoing.

Existing Council sites to which sustainable alternate water resources (harvested stormwater, groundwater, or rainwater use) have already been implemented include:

- Ivanhoe Park
- LM Grahams
- Manly Swim Centre Gardens
- West Esplanade
- East Esplanade
- Clontarf Reserve
- Mobile Irrigation Tankers
- Manly Ocean Beachfront
- Manly Council Depot
- Keirle Park
- Seaforth Oval
- Manly Corso
- Cleansing and sweeping vehicles

Environment Levy



ANNUAL REPORT 2009/10

PROJECT TITLE:	Water Cycle Monitoring & Integrated Decision Support Tool and Manly Lagoon Non-Grant Related Management	
PROJECT TYPE:	<input type="checkbox"/> NEW PROJECT	<input checked="" type="checkbox"/> ONGOING PROJECT
FINANCIALS:	Years project funded: Since 2004	
TARGET DATES (commenced, estimated completion etc): Project is essential and ongoing		

BRIEF PROJECT DESCRIPTION:

Council has an integrated water quality and quantity monitoring program for understanding and managing Manly's water cycle to increase the extent to which Council operates sustainability within local water supplies and systems. This bid relates to funding for this key water quality and quantity monitoring program. Objectives of the water cycle monitoring program in Manly are two fold:

(1) The monitoring program informs management actions so past and present impacts on Manly's water cycle elements can be reversed, current impacts can be minimised, human health and

environmental risks can be minimised, and all future land use and management decisions impacting on the water cycle can be informed by monitoring of water quality and quantity. Water cycle elements impacted through past and present actions include: groundwater (extraction and interception / quality decrease through contamination), stormwater (increase in volume and conveyance / decrease in quality), grey water (discharge into groundwater decreasing groundwater quality), sewage (ex-filtration into waterways), and Lagoon and floodplain (flooding / eutrophication increase / quality decrease).

(2) This monitoring program also assists in determining the most appropriate treatment and management practices to ensure that risks associated with the use of *alternate water sources* (such as groundwater, stormwater, roofwater, grey water, and effluent) for end-uses in public open spaces are controlled, minimised, and pollutant levels compliant with end-use purposes. Alternate water sources are currently used for a wide range of purposes in Manly including irrigation, cleansing, high pressure cleaning and other activities.

The monitoring program considers a host of pollutants, time and space, and quantitative and qualitative factors. The benefits derived from this program inform a wide variety of Council's activities, relating to both preservation of healthy waterways (environmental management) and alternate water sourcing and local re-use. The ongoing program seeks to incorporate all data to facilitate agreed upon objectives between organisations with a stake in the management of key waterways and alternate water sourcing projects.

OBJECTIVES of the project:	Result: were they achieved? explanation:
1. Installation and operation of water quality and quantity monitoring equipment for groundwater, stormwater, grey water, sewage, and Lagoon	Groundwater – Yes (ongoing) Stormwater – Yes (targetted) Grey water – Awaiting potential systems Sewage – Yes (ongoing) – Dry Weather Sewer Leak Investigation Program Active. Manly Lagoon – Limited (Sydney Water data used as substitute)
2. Reporting on monitoring findings quarterly and at relevant committees	Yes
3. Evaluate Council actions and adapt accordingly (considering seasonal valuations) – adaptive management	Yes. New management policies continually adapted in response to water quality responses
4. Incorporate data into common database and established triggers against relevant guidelines	Yes. Ongoing
5. Re-assess monitoring framework and adapt monitoring accordingly for best practice	Yes. Ongoing
INDICATORS for evaluation:	Statistic:
Data collection, database systems establishment, communication, and integration into management procedures and systems, ongoing improvement	Data collection, database systems establishment, communication, and integration into management procedures and systems, ongoing improvement

TBL ASSESSMENT:

Environment: The water monitoring program informs the environmental condition of Manly's waterways and water re-use schemes in response to strategic decision making and ongoing pressures from urban development. As such, it is an essential tool in environmental restoration and management.

Financial: The water monitoring program is structured to maximise the cost benefit of water quality monitoring through maximising the extent to which sample analysis is conducted internally by trained Council officers (for example through use of specialised water quality probes and sample storage), rather than outsourcing these costs. The program ensures the safe operation of water re-use schemes (alternate water sourcing) which contribute to substantial Council cost savings in potable water use.

Social: The water monitoring program ensures the safe environmental operation of re-use schemes and tracks environmental improvement in waterways in response to strategic decision making.

KEY OUTCOMES:

In the 2009/10 financial year:

- Dry weather sewer leak investigation program was undertaken in Manly Lagoon and Ocean and Harbour Beaches in partnership with UTS to improve waterway conditions. Now underway in Burnt Bridge Creek. Where sewer leaks were located these were fixed, improving water quality.
- Monitoring and data collection of alternate water sourcing projects was improved and data centralised
- Monitoring of stormwater harvesting flows in pipe network at LM Graham reserve undertaken
- CCTV investigation of stormwater pipes was undertaken to aid flow estimation
- Water sampling and testing conducted
- Flood Level Monitoring of Manly Lagoon and non-grant related expenditure incurred in Manly Lagoon flood level management and pollution control.

POLICY REFERENCES (e.g. plans of management, recovery plans, strategies etc include references):

Manly Council Management Plan (2006-2009):

Manly Sustainability Strategy (2006):

Manly Council Education for Sustainability Strategy (2003):

Other relevant plans:

Manly Council

- Integrated Catchment Management Strategy (2004)
- Manly Lagoon Estuary and Floodplain Management Plans (1998)
- On-site Stormwater Management Plan (2003)

State and Federal Government

- Water Savings Order (NSW Government)
- 2006 Metropolitan Water Plan
- Sydney Water Restrictions (Level III)

- Sydney Harbour Catchment Blueprint (2003)
- Sydney Middle Harbour Stormwater Management Plan (1999); reviewed 2002
- Sydney Northern Beaches Stormwater Management Plan (1999)
- DEC: Managing Urban Stormwater (2004).

DOES BID DEVIATE FROM ORIGINAL BID? EXPLAIN:

No

OVERALL EVALUATION AND CONCLUSION consider success of the project, medium/long term prospects or impacts. Will this bid be continued? Opportunities and Challenges.

The bid is an essential ongoing bid in the short, medium and long term, given the importance of water to the Manly community.

Without the water cycle monitoring program, there exists a significant risk to groundwater sources, surface waters, and pollution of waterway's from current urban activities in the Manly LGA.

Further, without regular alternate water sourcing monitoring, unmanaged risks from Council's numerous alternate water sourcing programs could make such cost saving programs unviable.

Further, without water cycle monitoring there exists the possibility of poor allocation of funds and lack of benefit from water cycle treatment interventions through management actions remaining independent from demonstrated on-ground outcomes. Little evaluation will occur of Council's progress towards ecosystem health and primary contact guidelines.

Environment Levy



ANNUAL REPORT 2009/10

PROJECT TITLE:	Water Cycle Management Team Leader		
PROJECT TYPE:	<input type="checkbox"/>	NEW PROJECT	<input checked="" type="checkbox"/> ONGOING PROJECT
FINANCIALS:	Years project funded: Since 2004		
TARGET DATES (commenced, estimated completion etc): Ongoing			

BRIEF PROJECT DESCRIPTION:

The Water Cycle Management Team Leader seeks to coordinate the WCM team to manage elements of the water cycle in Manly Council to achieve an economically and environmentally sustainable supply of water, protect the values of groundwater, catchment, floodplain, and Lagoon waterways, and ensure effective and environmentally guided sewerage and wastewater disposal. The WCMTL arose to meet this need.

OBJECTIVES of the project:	Result: were they achieved? explanation:
structural and non-structural stormwater pollutant treatment interventions for waterway health;	Yes and ongoing. Ongoing maintenance and cleaning of 24 GPT. Investigation of bioretention systems for stormwater treatment.
major SewerFix programs (Sydney Water) to reduce the incidence of sewer overflows in the Manly Lagoon catchment and broader LGA;	Yes and ongoing. Liaise with Sydney Water and SewerFix Alliance to reduce incidence of sewer overflows.
implementation of the Integrated Catchment Management Strategy and water cycle management aspects in the Manly Sustainability Strategy and Management Plan;	Yes and ongoing. Developed Burnt Bridge Creek Restoration program consisted of 6 catchment management and water cycle management components.
Dry weather sewer leak investigation program	Yes and ongoing Successful partnership program with Sydney Water
Implementation of NSW Environmental Trust Funded Burnt Bridge Creek Integrated Restoration Program (BBCIRP) 2009-2011	Yes and ongoing. Underway until 2011.
leak auditing and water wastage minimisation;	Yes and ongoing. Detailed monitoring of water usage of council facilities and identify water leaks using EDC Online, and GIS tools.
development and implementation of Council's mandatory Water Savings Action Plan and water conservation activities;	Yes. Water Savings Action Plan completed. Water conservation activities implementation in progress.
alternate water source development in Manly for a sustainable water supply, including harvesting and re-use of groundwater, storm water, roof water, grey water, and effluent;	Yes and ongoing. Design stormwater harvesting system for Balgowlah Golf Course. Manage the Effluent Re-use project.
Development of new Flood Risk Management Plans and Flood Study for high flood risk areas,	Yes and ongoing New Flood Study under development in Partnership with Warringah Council for Manly Lagoon Catchment

	(3 year project)
environmental water quality and quantity monitoring, licensing, risk minimisation, and management action.	Yes and ongoing. Ongoing monitoring water quality and quantity of stormwater, rainwater and bore water.
Coordination of team and grant application	Yes and ongoing. Successfully attracted in excess of \$4million in external grant funds to date.
INDICATORS for evaluation:	Statistic:
1. Reduction in water consumption and water rates (\$), through water conservation and alternate water sourcing actions	Achieve 55% reduction of potable water consumption.
2. Reduction in stormwater pollution into waterways	Prevent and remove pollution from waterways.
3. Reduction in sewage ex-filtration into waterways	Completed Dry Weather Sampling Program for all beaches to investigate sewer leaks to recreational areas.
4. Refinement in co-ordination of integrated monitoring and assessment frameworks	Undertake Sustainable Ground Water Management Program which includes monitoring water quality and installing usage meters to monitor bore water extraction.
5. Reduction in flood re-occurrence and asset (stormwater pipe) replacement cost	Concept design multi-purpose water cycle features for LM Graham Reserve to reduce flood risk and achieve alternate water sourcing. Review the NSW Floodplain Risk and Council's Flood policies.
6. Maintenance of service delivery under water restrictions where water is required through alternate water sourcing	Monitor water quality and extraction quantity on all Council's stormwater and groundwater harvesting/ extraction sources. Save more than 30 ML potable water.
7. Additional external resources (grant and levy funds) available to implement water cycle management works	Develop Burnt Bridge Creek Restoration program (successfully attracted \$2M Urban Sustainability Program funding 2009).
8. Development of Flood Study, Flood risk management plans for high risk Flood Areas	Development of new Manly Lagoon Flood Study underway
9. Successful implementation of major projects including Lagoon remediation, water recycling	Manly Lagoon rehabilitation works at Sites 1&2 to occur in late 2010.
TBL ASSESSMENT: Environment: Water cycle Management aims to protect the values of groundwater, catchment, floodplain, and Lagoon waterways, and ensure effective and environmentally guided sewerage and	

wastewater disposal. The works aims to achieve a sustainable environment.

Financial: Current major projects for Manly Lagoon and floodplain for which grant funds (\$690,000) have been received; and for Burnt Bridge Creek Integrated Restoration Project (\$1.997million) have been awarded will adequately be completed with sufficient staff resources at Council to proceed. Council achieved a 55% reduction of potable water consumption, equivalent to \$170,000/yr savings.

Social: Stormwater management within Manly receives the targeted and proactive attention to achieve community values of health for Manly's waterways.

KEY OUTCOMES:

- 100% of the bid goes to the salary of the Water Cycle Management Team leader
- Manage the Water Cycle Management Team and projects
- Manage all issues relating catchment management, floodplain risk management, water cycle management, alternate water sourcing and Sewer leak Reduction
- Develop Burnt Bridge Creek Integrated Restoration program (with 6 integrated water cycle management components, which attracted \$1.997 million Urban Sustainability grant)
- Develop Sustainable Ground Water Management Program
- Develop Dry Weather Sampling Program for all beaches and Manly Lagoon
- Develop Water Saving Action Plan
- Achieve 55% reduction of potable water consumption

POLICY REFERENCES (e.g. plans of management, recovery plans, strategies etc include references):

Manly Council Management Plan (2006-2009):

Manly Sustainability Strategy (2006):

Manly Council Education for Sustainability Strategy (2003):

Other relevant plans:

Manly Council

- Integrated Catchment Management Strategy (2004)
- Manly Lagoon Estuary and Floodplain Management Plans (1998)
- On-site Stormwater Management Plan (2003)

State and Federal Government

- Water Savings Order (NSW Government)
- 2006 Metropolitan Water Plan
- Sydney Water Restrictions (Level III)
- Sydney Harbour Catchment Blueprint (2003)
- Sydney Middle Harbour Stormwater Management Plan (1999); reviewed 2002
- Sydney Northern Beaches Stormwater Management Plan (1999)
- DEC: Managing Urban Stormwater (2004).

DOES BID DEVIATE FROM ORIGINAL BID? EXPLAIN:

No

OVERALL EVALUATION AND CONCLUSION consider success of the project, medium/long term prospects or impacts. Will this bid be continued? Opportunities and Challenges.

The Water Cycle Management Team Leader seeks to manage elements of the water cycle in Manly Council to achieve an economically and environmentally sustainable supply of water, protect the values of groundwater, catchment, floodplain, and Lagoon waterways, and ensure effective and environmentally guided sewerage and wastewater disposal. The WCMTL arose to meet this need. This bid will be continued.

Environment Levy



ANNUAL REPORT 2009/10

PROJECT TITLE:	Feasibility Assessment - New Gross Pollutant Trap (GPT)- Manly Cove and North Harbour Coastline Management Plan (CMP) areas		
PROJECT TYPE:	<input checked="" type="checkbox"/>	NEW PROJECT	<input type="checkbox"/> ONGOING PROJECT
FINANCIALS:	Years project funded: 2009/10		
TARGET DATES (commenced, estimated completion etc): Remaining funds intended to be expended during 2010/11			

BRIEF PROJECT DESCRIPTION:

Manly Council currently maintains a host of stormwater pollution prevention devices including Gross Pollutant Traps, litter booms, sediment traps, and nets. These devices capture and prevent large volumes of harmful pollutants including sediment, gross litter, nutrients (TN and TP), and heavy metals (zinc, copper, lead) from entering waterways from catchment land-uses. Maintenance of these devices is funded from a separate annual maintenance environment levy bid application, and is shown to prevent approximately 110,000 kg/year of sediment and gross litter and 700 kg of concentrated nutrients from entering waterways.

However, existing devices only service a fraction of the major stormwater pipes and catchment areas in the Manly Council area. The remainder of these catchments and stormwater outlets contribute significant ongoing pollution to the aquatic environment. Water quality and marine pollution were highlighted as issues of high concern in community consultation for the *Manly Cove and North Harbour Coastline Management Study /*

Plans, in addition to the Manly Sustainability Strategy (2006).

Under this project, it is planned to carry out a feasibility assessment and preliminary design, of appropriate structural pollution prevention devices (GPTs) in two key catchments in Manly which currently require additional stormwater pollution capture – in major stormwater trunk lines in the Manly Cove and North Harbour Coastline Management Plan (CMP) catchments.

Installation of GPTs in Manly Cove and North Harbour for additional stormwater pollution prevention are key recommendations of Council's respective *Manly Cove Coastline Management Plan (Management Option 4.1.9)* and *North Harbour Coastline Management Plan (Management Option 1.4.1)*. As such, this project is a joint undertaking by Council's *Water Cycle Management* and *Coastal Management* Teams.

EL Expenditure during 09/10 specifically included:

- Preparation of project brief and tendering
- Project management

OBJECTIVES of the project:	Result: were they achieved? explanation:
Manly Cove Catchment: <ul style="list-style-type: none"> • Feasibility assessment of location for GPT installation in target stormwater trunk line • Preliminary design 	No, costs quoted were too high to carry out a feasibility assessment. Not to be pursued.
North Harbour Catchment: <ul style="list-style-type: none"> • Feasibility assessment of location for GPT installation in target stormwater trunk line • Preliminary design 	No, costs quoted were too high to carry out a feasibility assessment. To be pursued if additional funds are available
INDICATORS for evaluation:	Statistic:
Completion of feasibility assessments and preliminary design of Manly Cove & North Harbour catchments	Not completed. To be pursued with one catchment, North Harbour

Discussion: On tendering for feasibility study and preliminary design, the costs quoted were high and beyond budget and hence all tenders were rejected. It was decided not to proceed with feasibility assessments but use shelf designed GPT and implement at North Harbour site only if additional funds are available. This is likely to occur during 2010/11.

TBL ASSESSMENT:

Social: The project was expected to improve water quality for users of the coastal and estuary waters. It is expected to have positive improvements on social aspects such as of community health, community wellbeing, and minor implications on community involvement, education and safety.

Environment: The program is expected to improve marine water quality. The project has significant positive implications on environmental aspects such as pollution, vegetation & habitat enhancement and marine biodiversity and minor implications on water efficiency and waste management.

Financial: The program is expected to be cost effective. The project has significant positive implications on aspects such as infrastructure development and life cycle costs and minor implications on research and

development. On completion, the project will require maintenance costs.

KEY OUTCOMES:

- Preparatory works completed

POLICY REFERENCES (e.g. plans of management, recovery plans, strategies etc include references):

- Manly Cove Coastline Management Study (2009)
- North Harbour Coastline Management Plan (2010)
- Sydney Harbour Catchment Blueprint (2003)
- Sydney Middle Harbour Stormwater Management Plan (1999); reviewed 2002
- Sydney Northern Beaches Stormwater Management Plan (1999)
- DECCW: Managing Urban Stormwater (2004).

DOES BID DEVIATE FROM ORIGINAL BID? EXPLAIN:

No.

OVERALL EVALUATION AND CONCLUSION consider success of the project, medium/long term prospects or impacts. Will this bid be continued? Opportunities and Challenges.

The program is an essential in the short, medium and long term to extend coverage under a host of stormwater pollution prevention devices including Gross Pollutant Traps, litter booms, sediment traps, and nets. These devices capture and prevent large volumes of harmful pollutants including sediment, gross litter, nutrients (TN and TP), and heavy metals (zinc, copper, lead) from entering waterways from catchment land-uses.

The program will be modified to achieve completion of a GPT in North Harbour catchment only. To achieve this further funds will be required.

6. Lagoon Conservation & Remediation Program

This section provides project specific reports relevant to the Lagoon Conservation & Remediation Program.

Environment Levy



ANNUAL REPORT 2009/10

PROJECT TITLE:	Manly Lagoon Life Festival		
PROJECT TYPE:	<input checked="" type="checkbox"/> NEW PROJECT	<input type="checkbox"/> ONGOING PROJECT	
FINANCIALS:	Years project funded: 2008/09		
TARGET DATES (commenced, estimated completion etc): 23 August 2009			

BRIEF PROJECT DESCRIPTION:

This long overdue event provided the first Forum to update the residents and community on the implementation of the Integrated Catchment Management Strategy 2004 (ICMS) for Manly Lagoon and improvements to the Lagoon and was recommended in the Minutes of the Manly Lagoon Committee in 2005.

The (ICMS) for Manly Lagoon requires Council to report its progress on the Lagoon to the community through an annual community Forum. This event provided focus for the first of such forums on the shores of Manly Lagoon on a Sunday 23 August from 11.00am to 4pm. The event's activities and programs were of interest to all of the community including children of all age groups, their parents, local businesses, sporting groups etc.

OBJECTIVES of the project:	Result: were they achieved? explanation:
To present the first Forum to update the community on the implementation of the ICMS and improvements to the Lagoon as recommended in the minutes of the Manly Lagoon Committee in 2005.	This event was very well attended. Activities all over the site attracted a constant stream of people of all ages who engaged well with all of the activities. Presentations gave attendees a good understanding of the processes and included:
Educate the residents and community of progress and activities associated with the varied facets of the Lagoon's protection and rehabilitation. Raise	<ul style="list-style-type: none"> A comprehensive presentation on history, existing

awareness of local environmental issues and impacts.	<p>condition, impacts and future actions, including dredging.</p> <ul style="list-style-type: none"> • The flood study and impacts and action. • The science behind the actions that Council is taking. • The role that companies play in environmental management. • Historical exhibition of 19th and early 20th century pictures to help the community understand the physical changes that have taken place. • Extensive display of Kids, Companies & Creeks program. • Save Manly Dam group campaign and video exhibition. • Stalls of existing community bushcare groups brought the work of current groups to the community's notice. • The festival atmosphere prevailed through music and other activities, including participation in a giant sculpture, artists with easels painting the lagoon landscapes. • The Lab at the Lagoon, a special feature for National Science week gave adults and children hands on opportunities to learn about the lagoon processes through experiments. • Great Waterbird walk gave everyone an opportunity to appreciate local bird life.
Showcase all the different programs that both Councils have undertaken to educate the community.	
Recognise the achievements of past community champions and inspire a new generation of champions to support Councils restoration and remediation programs.	
An entertaining and informative event which will become a catalyst for future community support.	
Enable locals to network with other like-minded people.	
Raise awareness of other community action groups existing for their participation.	
Bring community together in a relaxed manner in which locals can co-create ways to make positive changes in their lives that will have a flow on effect in the community.	
Empower children and adults to raise awareness of environmental issues relating to the lagoon.	
INDICATORS for evaluation:	Statistic:
Qualitative evaluations will be conducted through surveys and provide indications of participant satisfaction	High attendance at presentations and participation in all activities
By quality of exhibitors, actions groups and associations participating in the event	Quality of exhibitors and action groups resulted in good attendance all day. Memories exhibition attracted constant engagement all day
Audience attendance for attractions, exhibitions and activities	Festival attracted at least 5,000 patrons, particularly local residents and people who use the lagoon regularly
Discussion: -	
TBL ASSESSMENT: Not provided.	
KEY OUTCOMES: In addition to the needs detailed in the policy references below, this event exceeded expectations in	

attendance, level of interest and participation and atmosphere. The theme of memories and the last 20 years illustrated by photos, media boards, banners and artwork celebrating achievements pleased past participants and inspired new ones. Recognition that the Lagoon foreshore is recognized as one of 19 National Wetland Education Centres in Australia.

POLICY REFERENCES (e.g. plans of management, recovery plans, strategies etc include references):

- The Integrated Catchment Management Strategy 2004 (ICMS) which requires Council to report progress to the Community through an annual community forum.
- A joint event in conjunction with Warringah Council as supported by the Manly Lagoon Catchment Coordinating Committee (reference minutes:13 March 2008)

DOES BID DEVIATE FROM ORIGINAL BID? EXPLAIN:

No bid originally submitted.

OVERALL EVALUATION AND CONCLUSION consider success of the project, medium/long term prospects or impacts. Will this bid be continued? Opportunities and Challenges.

This event satisfies the requirements of the ICMS to report to the community annually on progress.

Environment Levy



ANNUAL REPORT 2009/10

PROJECT TITLE:	Implementation of the Manly Lagoon and Catchment Integrated Catchment Management Strategy & Manly Lagoon Rehabilitation Works (Emergent)	
PROJECT TYPE:	<input type="checkbox"/> NEW PROJECT	<input checked="" type="checkbox"/> ONGOING PROJECT
FINANCIALS:	Years project funded: Since 2007	
All funds held in reserve for Sites 1&2 dredging to occur in November 2010.		
TARGET DATES (commenced, estimated completion etc): Ongoing program subject to ongoing partnership with Warringah Council and NSW DECCW Estuary Management Fund. In 2009/10 Sandpiper Dredging was engaged to carry out rehabilitation works at Sites 1&2. The Review of Environmental Factors (REF) for the works were completed, NSW Government Environmental Approval obtained, and the final public exhibition of the REF is scheduled to occur in July/August 2010, with works scheduled to occur in November 2010.		

BRIEF PROJECT DESCRIPTION:

Implementation of the Manly Lagoon Rehabilitation Works in line with those identified in the Manly Lagoon Floodplain Management Plan and Manly Lagoon Estuary Management Plan and implementation of high priority actions outlined in the Manly Lagoon & Catchment Integrated Catchment Management Strategy.

Grant funding to the amount of \$240,000, \$350,000 and \$100,000 (total \$690,000) has been received under the Department of Natural Resources' Estuary Management Program (now Department of Environment, Climate Change, and Water) for the implementation of the Manly Lagoon Rehabilitation Works and priority actions outlined in the Manly Lagoon & Catchment Integrated Catchment Management Strategy (2004).

Accumulated funds will be allocated for use principally with dredging and rehabilitation works at 'Sites 1 and 2' (so called) in Manly Lagoon.

Matching total funding must be provided by Manly and Warringah Councils in a ratio of 50% (NSW Govt): 25% (MC): 25% (WC).

The Sites 1 and 2 project will be managed by Manly Council with works undertaken in November 2010.

OBJECTIVES of the project:	Result: were they achieved? explanation:
Implementation of the Manly Lagoon Rehabilitation Works sites 1 and 2	ongoing
INDICATORS for evaluation:	Statistic:
Benefits of the project as specified in the ICMS and Statement of Environmental Effects, such as: <ul style="list-style-type: none"> - Improve water quality - Reduce flooding - Improve tidal exchange between the lagoon and ocean; - Remove restrictions to fish passage; - Avoid continued sand migration upstream smothering aquatic vegetation. 	Funds held in reserve for Sites 1&2 dredging to occur in November 2010.
<p>Discussion:</p> <p>Guided by the NSW Government's Estuary Management Manual 1990, and Floodplain Management Manual, which outlines a structured management process leading to the adoption and implementation of such local Management Plan, Council continues to implement high priority projects outlined in the ML&C ICMS and the Manly Lagoon Rehabilitation works.</p> <p>Implementation of the Manly Lagoon Rehabilitation Works will:</p> <ul style="list-style-type: none"> - Improve water quality - Reduce flooding 	

- Improve tidal exchange between the lagoon and ocean;
- Remove restrictions to fish passage;
- Avoid continued sand migration upstream smothering aquatic vegetation.

Specific other actions outlined in the ML&C ICMS for implementation include but are not limited to the following:

- Targeted education & regulation
- Monitoring & evaluation
- Catchment Cleansing
- At-source prevention measures
- Gross pollutant interception & rain water tank installation
- In stream dredging and remedial works for removal of contaminated sediment from Manly Lagoon

These actions will be the subject of future Manly Lagoon environment levy bid applications.

TBL ASSESSMENT:

Environmental: Implementation of the Manly Lagoon Rehabilitation Works will:

- Improve water quality
- Reduce flooding
- Improve tidal exchange between the lagoon and ocean;
- Remove restrictions to fish passage;
- Avoid continued sand migration upstream smothering aquatic vegetation.

Financial: Grant funding to the amount of \$240,000, \$350,000 and \$100,000 has been received under the Department of Natural Resources' Estuary Management Program for the implementation of the Manly Lagoon Rehabilitation Works and priority actions outlined in the Manly Lagoon & Catchment Integrated Catchment Management Strategy (2004).

Funds sort under Levy funding are required to match the NSW Government contribution. Given the Warringah Council and NSW Government Contributions, the project represents good investment and value for money.

Social: The members of Manly Lagoon Catchment Consultative Committee meet quarterly to consult the progress of Manly Rehabilitation Works. Community representatives have expressed their views strongly on the progress Manly Rehabilitation Works. It is anticipated that the Manly and Warringah communities would welcome to see considerable improvements to the Lagoon environment.

KEY OUTCOMES:

- Continued project planning and environmental assessment preparation has been undertaken
- Funds held in reserve for Sites 1&2 dredging to occur in November 2010.

POLICY REFERENCES (e.g. plans of management, recovery plans, strategies etc include references):

Manly Council Management Plan (2006-2009):

Manly Sustainability Strategy (2006):

Other relevant plans:

Manly Council

- Integrated Catchment Management Strategy (2004)
- Manly Lagoon Estuary and Floodplain Management Plans (1998)
- On-site Stormwater Management Plan (2003)

State and Federal Government

- Sydney Northern Beaches Stormwater Management Plan (1999)
- DEC: Managing Urban Stormwater (2004).

DOES BID DEVIATE FROM ORIGINAL BID? EXPLAIN:

No

OVERALL EVALUATION AND CONCLUSION consider success of the project, medium/long term prospects or impacts. Will this bid be continued? Opportunities and Challenges.

At the advice of DECCW, Council is to undertake the implementation of Estuary and Floodplain Plans in order to satisfy best management practice, to meet statutory obligations and to secure future funding.

Ongoing implementation of these adopted Plans in partnership with Warringah Council will provide Council, community and stakeholders with a balance that satisfies community and user group needs within the study Sites, while satisfying Council obligations.

By undertaking these works at **Sites 1 and 2** Council is complying with the Estuary and Floodplain Management Program and meeting partnership agreements with Warringah Council.

Future Environment Levy bid applications will seek to secure further funding to implement other designated actions in the Estuary and Floodplain Management Plans. Thus this bid will be continued.

7. COASTLINE MANAGEMENT PROGRAM

This section provides project specific reports relevant to the Coastline Management Program.

Environment Levy

ANNUAL REPORT 2009/10

PROJECT TITLE:	Coastal Environmental Projects		
PROJECT TYPE:	<input type="checkbox"/> NEW PROJECT	<input checked="" type="checkbox"/> ONGOING PROJECT	
FINANCIALS:	Years project funded: 2003/04 - 2009/10		
TARGET DATES (commenced, estimated completion etc): on-going			

BRIEF PROJECT DESCRIPTION:

Council has elected to develop Coastline Management Plans (CMP's) for the Manly Cove and North Harbour study areas and Estuary Management Plans (EMPs) in response to legislative requirements/community issues and in accordance with current best practice for the management of coastal and estuary foreshores. This work follows on from the successful development and ongoing implementation of the Cabbage Tree Bay, Little Manly and Forty Baskets CMPs and Clontarf/Bantry Bay EMP. Further, the Manly Ocean Beach CMP and Emergency Action Plan were adopted by Council during February 2008 with grant funding already acquired to assist with implementation.

The Environment Levy supported two positions of the Coastal Management Team during 09/10. One member of the team resigned and remained vacant since the start of the financial year. The Team is responsible for planning and implementation of CMPs and EMPs. An overview of the main tasks undertaken for the period to June 2010 is provided as follows:

- Manly Cove CMP Development
- Implementation of Manly Cove CMP
- North Harbour CMP Development
- Implementation of Manly Ocean Beach CMP/EAP
- Implementation of Clontarf/Bantry Bay EMP
- Implementation of Cabbage Tree Bay Management Plan
- Implementation of Little Manly Cove CMP

<ul style="list-style-type: none"> • Implementation of Forty Baskets CMP • Implementation of North Harbour CMP • Development of Dinghy Storage program in key locations across the Manly LGA • Remediation and monitoring of Coastal hazards and climate change • Boat ramps, foreshore pools & swimming Enclosures • Technical support • Grant / budget administration • Representation on Committees <p>EL Expenditure during 09/10 specifically included:</p> <ul style="list-style-type: none"> • Salary cost to Estuary Management Officer 	
OBJECTIVES of the project:	Result: were they achieved? explanation:
To promote the protection and rehabilitation of the coastal zone environment through facilitating the development of the remaining Coastline Management Plans.	Yes, although ensuring a balance between human interaction and use of Manly's foreshores with the natural environment is always a challenge. The development of CMP/EMPs and technical advice provided by the Coastal management Team provides a mix of planning, education, compliance and on the ground improvements for natural coastal and estuarine ecological environments.
To guide and carry out the implementation of the Little Manly, Forty Baskets and Cabbage Tree Bay, Manly Ocean Beach Coastline Management Plans, and Clontarf/Bantry Bay Estuary Management Plans associated with coastal zone management as they are adopted by Council.	Yes. Staged implementation of the adopted CMPs and EMPs continue in line with budget availability and identified community need. Notable works include remediation of coastal hazard sites, installation of seagrass friendly moorings, preparation of Sandy Bay landscape Masterplan, preparation for maintenance dredging of the Clontarf pool, recognition of Manly-Freshwater as National Surfing Reserve and finalisation of Cabbage Tree Bay Aquatic Reserve Management Plan.
To guide the development of the Manly Cove and North Harbour CMPs.	Yes. North Harbour CMP was developed and adopted by Council (March 2010). Manly Cove Coastal Zone Management Plan continues to be developed with considerable progress made during the 2009/10 year. Manly Cove Coastline Management Study was finalised and endorsed (December 2009).
INDICATORS for evaluation:	Statistic:
Remediation measures for coastal hazards	1 site completed, increased protection of property and life from coastal hazards/processes
Development of North Harbour CMP	North Harbour Coastline Management Plan adopted
Development of Manly Cove CZMP	Manly Cove Coastline Management Study finalised
Seagrass friendly moorings	30 moorings installed at Manly Cove East

Discussion: The CMPs are intended to provide a strategic plan for each study area with a long-term time frame of 10-20 years (with appropriate revisions). Implementation of the CMP's will involve considerable expenditure and therefore implementation must have regard to resource availability and to other priorities of Council and the other agencies identified in the Action Plan.

These documents assist Council in ensuring holistic management for the specific areas which address interconnected, aquatic & terrestrial management issues. Considerable progress has been made toward the improved management of coastal and estuarine environments through the development of the Cabbage Tree Bay (2000), Little Manly (2004), Forty Baskets (2004), Manly Ocean Beach CMPs (2008) and Clontarf/Bantry Bay EMP (2008). Further, councils coastal management planning ensures that important statutory obligations are appropriately met.

The development of the Manly Cove Coastal Zone Management Plans is currently underway with anticipated completion during 2010/11.

TBL ASSESSMENT:

Social: The program improves safety for users of the coastal and estuary foreshores. It has positive improvements on social aspects such as of community wellbeing, community involvement, heritage, education and minor implications on equity & diversity, health, safety and governance. There are also opportunities for community participation in implementation as well as monitoring.

Environment: The program supports a comprehensive study of coastal processes and risks, has significant positive implications on environmental aspects such as biodiversity, land integrity, introduces seagrass friendly moorings, finalises management plan for an aquatic reserve and proposes extension of another aquatic reserves.

Financial: The program is cost effective and reduces risks to human and property through remediation measures to coastal hazards and thus offers financial benefits. The strategic approach of the CMP/EMP development and implementation, through community involvement, ensures that community funds are spent on priority projects identified in consultation with the community.

KEY OUTCOMES:

- North Harbour Coastline Management Plan finalised and adopted.
- Manly Cove Coastline Management Study finalised and endorsed
- First draft of the Manly Cove CZMP completed
- Cabbage Tree Bay Aquatic Reserve Management Plan finalised (DECCW) and publicly exhibited
- 30 seagrass friendly moorings installed replacing traditional moorings.
- Sandy Bay Landscape Masterplan finalised and endorsed by committees.
- Coastal hazards eliminated/reduced at one site. Detailed design finalised for 5 other sites
- Preliminary design of the North Harbour Reserve Landscape Masterplan completed
- Preliminary design of the Ellery's Punt Reserve Landscape Masterplan completed
- Manly-Freshwater has been accepted as National Surfing Reserve and preparation for dedication ceremony on-going.

POLICY REFERENCES (e.g. plans of management, recovery plans, strategies etc include references):

- Manly Management Plan 2009-12
- Manly Sustainability Strategy 2006 (C.1.3.1 Develop & implement comprehensive CMPs for all areas)

- North Harbour Coastline Management Plan 2010
- Manly Ocean Beach Emergency Action Plan 2008
- Clontarf/Bantry Bay Estuary Management Plan 2008
- Sydney Regional Environmental Plan – Sydney Harbour Catchments 2005

DOES BID DEVIATE FROM ORIGINAL BID? EXPLAIN:

Yes, One member of the 2-member team resigned and remained vacant since the start of the financial year.

OVERALL EVALUATION AND CONCLUSION consider success of the project, medium/long term prospects or impacts. Will this bid be continued? Opportunities and Challenges.

The program is essential in the short, medium and long term, to maintain existing coastal team position, capital projects and achieve environmental, financial, and social benefits in coastal, marine and estuarine management for coastal Manly.

The program has been highly successful in achieving a number of milestones, restoring ecosystem through installation of seagrass friendly moorings, finalising REF to address siltation at Clontarf Swimming enclosure, reducing/eliminating coastal hazards at one sites, developing management plans for North Harbour, Manly Cove and Cabbage Tree Bay Aquatic Reserve, developing landscape masterplans for Sandy Bay, North Harbour Reserve and Ellery's Punt Reserve and securing recognition of the Manly-Freshwater as National Surfing Reserve.

This bid will be continued.

Environment Levy



ANNUAL REPORT 2009/10

PROJECT TITLE:	Coastal Hazard Remediation Stage 1		
PROJECT TYPE:	<input type="checkbox"/>	NEW PROJECT	<input checked="" type="checkbox"/> ONGOING PROJECT
FINANCIALS:	Years project funded: 2006/07 - 2009/10		
TARGET DATES (commenced, estimated completion etc): Stage 1 works completed June 2009. Expenditure of grant funds achieved during the 2008/09 fiscal year. This budgeted grant fund received as final payment after acquittal of the project expenditure. Remaining funds intended to be expended during 2010/11.			

BRIEF PROJECT DESCRIPTION:

During 2003-04 Manly Council commissioned consultants to undertake Coastline Hazard Definition Studies (CHDS) for the foreshore of Forty Baskets, Little Manly, Manly Ocean Beach and Cabbage Tree Bay and Davis Marina to Manly Point.

The Studies defined the coastline hazards associated with the study areas, including an assessment of beach erosion, shoreline recession, sand drift, coastal inundation, stormwater erosion, slope and cliff instability and climate change. The CHDS's also detailed the relevant coastal processes within each area that contribute to the above mentioned hazards, provided detailed management options and listed further assessments that were required to further define and mitigate potential hazards.

Council is responsible for the mitigation of risks identified on public lands and is remediating identified hazards in a staged approach based on the level of risk posed.

Funding for this project has been acquired under the 2004/05 under Natural Disaster Mitigation Program. During 2008/09, works completed on rockfall stabilization at three sites on Marine Parade.

EL Expenditure during 09/10 specifically included adjustment to expenditure made during 2008/09

OBJECTIVES of the project:	Result: were they achieved? explanation:
To ensure any protective works minimise impact upon beach amenity and access, and where practical improve existing amenity and access	Yes, Further works designed and implemented at three sites on Marine Parade.
To take into account the potential for future climate change to affect the magnitude of coastline hazards	Yes, it is expected that rock fall from coastal cliffs will increase due to the impact of climate change. Rockfall stabilization works at three Marine Parade sites will reduce/eliminate coastal hazards.
To reduce to an acceptable level, the risk to property and risk to life as a result of slope and cliff instability.	Yes, rockfall stabilization works at three Marine Parade sites will reduce/eliminate the risk to property and risk to life. Marine Parade is intensively used by people.
INDICATORS for evaluation:	Statistic:
Number of high risk coastal hazards remediated	Three high risk rock fall sites remediated in 2008/09
<p>Discussion: The success of this project will be measured through minimising the risk to property and risk to life. Works have been implemented at Fairlight and Delwood Beaches and continued at three high risk rock fall sites on Marine Parade during 2008/09, effectively improving the level of risk posed by sandstone undercuts to an acceptable level.</p> <p>Remediation measure at a site near Davis Marina is planned with anticipated completion during 2010/11.</p>	
TBL ASSESSMENT:	
Social: The project improves safety for users of the coastal and estuary foreshores, have positive implications	

on social aspects such as community wellbeing, community involvement and, ensure social needs of the community and offer significant social benefits.

Environment: Works undertaken take into account environmental issues such as habitat value and geoheritage conservation.

Financial: Remediation of coastal hazards and subsequent removal of public risk reduces likelihood of future costs associated with damage to property and/or loss of life.

KEY OUTCOMES:

Reduction of risk to life and/or property at sites 17, 18 and 22 on Marine Parade.

POLICY REFERENCES (e.g. plans of management, recovery plans, strategies etc include references):

- Manly Ocean Beach & Cabbage Tree Bay Coastline Hazard Definition Study May 2003
- Manly Sustainability Strategy 2006
- Manly Ocean Beach Coastline Management Plan 2008

DOES BID DEVIATE FROM ORIGINAL BID? EXPLAIN:

No

OVERALL EVALUATION AND CONCLUSION consider success of the project, medium/long term prospects or impacts. Will this bid be continued? Opportunities and Challenges.

Council is strategically approaching the removal of risk in public areas in a staged approach based on the level of risk posed by identified coastal hazards. The project is fully successful with completion of works at three sites on Marine Parade.

This bid will not be continued.

Environment Levy



ANNUAL REPORT 2009/10

PROJECT TITLE:	Coastal Hazard Remediation Stage 2		
PROJECT TYPE:	<input type="checkbox"/> NEW PROJECT	<input checked="" type="checkbox"/> ONGOING PROJECT	
FINANCIALS:	Years project funded: 2006/07 - 2009/10		
TOTAL FOR YEAR:	\$112,500	\$44,536	\$67,964
TARGET DATES (commenced, estimated completion etc): Stage 1 works completed June 2009.			

Expenditure of grant funds achieved during the 2008/09 fiscal year. This budgeted grant fund received as final payment after acquittal of the project expenditure. Remaining funds intended to be expended during 2010/11.

BRIEF PROJECT DESCRIPTION:

During 2003-04 Manly Council commissioned consultants to undertake Coastline Hazard Definition Studies (CHDS) for the foreshore of Forty Baskets, Little Manly, Manly Ocean Beach and Cabbage Tree Bay and Davis Marina to Manly Point.

The Studies defined the coastline hazards associated with the study areas, including an assessment of beach erosion, shoreline recession, sand drift, coastal inundation, stormwater erosion, slope and cliff instability and climate change. The CHDS's also detailed the relevant coastal processes within each area that contribute to the above mentioned hazards, provided detailed management options and listed further assessments that were required to further define and mitigate potential hazards.

Council is responsible for the mitigation of risk identified on public lands and is remediating identified hazards in a staged approach based on the level of risk posed.

Funding for this project has been acquired under the 2005/06 under Natural Disaster Mitigation Program.

The focus is on completion of rockfall stabilization works at one site on Marine Parade and completion of detailed engineering design of 5 priority sites during 2009/10.

EL Expenditure during 09/10 specifically included:

- Rock fall stabilization works at Marine Parade
- Detailed geotechnical design for remediation works at 5 priority sites
- Project management

OBJECTIVES of the project:	Result: were they achieved? explanation:
To ensure any protective works minimise impact upon beach amenity and access, and where practical improve existing amenity and access	Yes partly, Works on-going at one site on Marine Parade.
To take into account the potential for future climate change to affect the magnitude of coastline hazards	Yes, it is expected that rock fall from coastal cliffs will increase due to the impact of climate change. Rockfall stabilization works at one Marine Parade site will reduce/eliminate coastal hazards
To reduce to an acceptable level, the risk to property and risk to life as a result of slope and cliff instability.	Yes, rockfall stabilization works at one Marine Parade site will reduce/eliminate the risk to property and risk to life. Marine Parade is intensively used by people.
INDICATORS for evaluation:	Statistic:
Number of high risk coastal hazards remediated	One high risk rock fall site being remediated Detailed geotechnical design and cost estimate completed for remediation measures at 5 sites

Discussion:

The success of this project will be measured through minimising the risk to property and risk to life. Works have been implemented at three high risk rock fall sites and continued at one site on Marine Parade during 2009/10, effectively improving the level of risk posed by sandstone undercuts to an acceptable level.

Remediation measure at further sites, already detailed designed, are planned with anticipated completion during 2010/11.

Application has been made for a grant of \$140,000 from the Natural Disaster Resilience Grants Program on 13 April 2010.

TBL ASSESSMENT:

Social: The project improves safety for users of the coastal and estuary foreshores, have positive implications on social aspects such as community wellbeing, community involvement and, ensure social needs of the community and offer significant social benefits.

Environment: Works undertaken take into account environmental issues such as habitat value and geoheritage conservation.

Financial: Remediation of coastal hazards and subsequent removal of public risk reduces likelihood of future costs associated with damage to property and/or loss of life.

KEY OUTCOMES:

- Reduction of risk to life and/or property at site 22 on Marine Parade
- Detailed geotechnical design and cost estimate for remediation measures at 5 sites

POLICY REFERENCES (e.g. plans of management, recovery plans, strategies etc include references):

- Manly Ocean Beach & Cabbage Tree Bay Coastline Hazard Definition Study May 2003
- Manly Sustainability Strategy 2006
- Manly Ocean Beach Coastline Management Plan 2008

DOES BID DEVIATE FROM ORIGINAL BID? EXPLAIN:

No

OVERALL EVALUATION AND CONCLUSION consider success of the project, medium/long term prospects or impacts. Will this bid be continued? Opportunities and Challenges.

Council is strategically approaching the removal of risk in public areas in a staged approach based on the level of risk posed by identified coastal hazards. The project is fully successful with completion of works at three sites on Marine Parade.

This bid will be continued.



ANNUAL REPORT 2009/10

PROJECT TITLE:	Harbour Foreshores CMP Implementation	
PROJECT TYPE:	<input type="checkbox"/> NEW PROJECT	<input checked="" type="checkbox"/> ONGOING PROJECT
FINANCIALS:	Years project funded: 2006/07 - 2009/10	
TARGET DATES (commenced, estimated completion etc): Remaining funds intended to be expended during 2010/11.		

BRIEF PROJECT DESCRIPTION:

The Harbour based Coastline Management Plans of Little Manly, Forty Baskets and North Harbour have been developed internally at a substantial cost reduction. Manly Cove is currently under internal development with completion anticipated for early 2011.

Each CMP takes into account: implications of coastal planning policy and guidelines; the type and nature of hazards; aesthetic, recreational and ecological values; social factors, including the needs and desires of the community (through community and Stakeholder consultation); and long term considerations of climate change.

Council is committed to the implementation of high priority Actions identified within the CMP's during this financial year and beyond. Specific actions that will be implemented during 2009-10 include:

- a) Design and REF for dredging of Clontarf pool
- b) North Harbour Reserve Landscape Masterplan Preparation & Implementation (part)
- c) Ellery's Punt Seawall Restoration Project Design & Implementation

EL Expenditure during 09/10 specifically included:

- Topographic survey and soil investigations for the North Harbour Reserve

<ul style="list-style-type: none"> • Detailed topographic survey for Ellery's Punt Reserve • REF preparation and ecological survey in Clontarf • Project management 	
OBJECTIVES of the project:	Result: were they achieved? explanation:
Provide sustainable long-term management strategies for Harbour Foreshore areas.	Yes, 2 landscape Masterplan are being developed for North Harbour and Ellery's Punt Reserves that will provide long-term management strategies in regards to disabled access, access to water, parking, picnic facilities, improvement of reserves, restoration of heritage, seawalls.
Determine how limited resources can be best utilised to balance environmental conservation and the enjoyment of the areas by user groups.	Yes. Completed ecological survey provided information on important ecological habitats including seagrass, seahorses. Review of Environmental Factors (REF) assess comprehensive impacts due to maintenance dredging of Clontarf pool and hence contributes to maintenance of environmental aspects of the area. Clontarf pool is a popular recreation area for residents.
INDICATORS for evaluation:	Statistic:
North Harbour Reserve Landscape Masterplan	Preliminary design finalised and presented to HFCMC, Access, LMUD and MSW committees
Ellery's Punt Reserve Landscape Masterplan	Preliminary design finalised and presented to LMUD committee.
Maintenance dredging of Clontarf Pool	Ecological study completed, REF document finalised
Identification and protection of items of heritage value	Existing heritage items at Ellery's punt such as sandstone retaining and tram ramp will be restored protected
<p>Discussion: The CMPs are intended to provide a strategic plan for each study area with a long-term time frame of 10-20 years (with appropriate revisions). Implementation of the CMP's involves considerable expenditure and therefore implementation must have regard to resource availability and to other priorities of Council and the other agencies identified in the Action Plan.</p> <p>These masterplans will be implemented as funds become available. However, completion and adoption of Masterplan documents make Council eligible to seek external assistance such as Sharing Sydney Harbour Access Program.</p> <p>The development of the North Harbour And Ellery's Punt Reserves Landscape Masterplan is currently underway with anticipated completion during 2010/11.</p>	

TBL ASSESSMENT:

Social: The program improves safety for users of the coastal and estuary foreshores. It has positive improvements on social aspects such as of community wellbeing, community involvement, heritage, safety, education and minor implications on equity & diversity, health and governance. There are also opportunities for community participation in implementation as well as monitoring.

Environment: The program improves on long-term open space management. The project has significant positive implications on environmental aspects such as vegetation & habitat enhancement and biodiversity, land integrity and minor implications on pollution and waste management.

Financial: The program is expected to be cost effective. The project has significant positive implications on aspects such as infrastructure development and life cycle costs and minor implications on business attraction and retention.

KEY OUTCOMES:

- Preliminary design finalised and presented to HFCMC, Access, LMUD and MSW committees
- Preliminary design finalised and presented to LMUD committee.
- Ecological study completed, REF document finalised

POLICY REFERENCES (e.g. plans of management, recovery plans, strategies etc include references):

- Manly Management Plan 2009-12
- Manly Sustainability Strategy 2006
- North Harbour Coastline Management Plan 2010
- Clontarf/Bantry Bay Estuary Management Plan 2008
- Sharing Sydney Harbour Access Plan, 2003
- Sydney Metropolitan Strategy 2005

DOES BID DEVIATE FROM ORIGINAL BID? EXPLAIN:

No

OVERALL EVALUATION AND CONCLUSION consider success of the project, medium/long term prospects or impacts. Will this bid be continued? Opportunities and Challenges.

The program is essential in the short, medium and long term, to implement high priority projects identified under different C/EMPs and achieve environmental, financial, and social benefits in coastal, marine and estuarine management for coastal Manly.

The program has been successful in starting a number of projects like developing landscape masterplans for North Harbour Reserve and Ellery's Punt Reserve and initiating ecological study & REF preparation for Clontarf pool

This bid will not be continued.



ANNUAL REPORT 2009/10

PROJECT TITLE:	Manly Ocean Beach CMP Implementation	
PROJECT TYPE:	<input checked="checked" type="checkbox"/> NEW PROJECT	<input type="checkbox"/> ONGOING PROJECT
FINANCIALS:	Years project funded: 2009/10	
TARGET DATES (commenced, estimated completion etc): This is the first part of \$150,000 matching to a grant from DECCW offered in 2006. Funds intended to be expended during 2010/11.		

BRIEF PROJECT DESCRIPTION:

Council has elected to develop a Coastline Management Plan (CMP) and Emergency Action Plan (EAP) for Manly Ocean Beach in response to legislative requirements/community issues and in accordance with current best practice for the management of coastal foreshores. This work follows on from the successful development and ongoing implementation of the Cabbage Tree Bay, Little Manly and Forty Baskets Coastline Management Plans.

The Manly Ocean Beach CMP and EAP were formally endorsed at Council's CPS Meeting of 11th February 2008.

Manly Ocean Beach Emergency Action Plan

Changes to the provisions of the *Coastal Protection Act (1979)* during 2004 resulted in Council also being required to develop emergency response mechanisms for the Manly Ocean Beach study area. As such, the Manly Ocean Beach Draft Emergency Action Plan has been prepared.

Specific actions which require prompt implementation include (but are not limited too):

- Undertake a trial of identified emergency protection measures for coastal erosion on Manly Ocean Beach
- Technical design for rock toe and/or contiguous pile toe protection to facilitate removal of rock apron south of The Corso stairs.
- Develop design to formalise the existing rock scour protection at the Pacific St stormwater outlet
- Investigation into groundwater levels behind the Manly Ocean Beach Seawall
- Monitoring of beach profile behaviour
- Accessibility feasibility study for provision of all-access onto Manly Ocean Beach
- Sediment removal near Queenscliff Bridge
- Development application for emergency protection works, including design/methodology and Statement of Environmental Effects

This project relates to technical design for rock toe and/or contiguous pile toe protection to facilitate removal of rock apron south of The Corso stairs.

Although the works are on-going, no expenditures have been booked during 09/10.	
OBJECTIVES of the project:	Result: were they achieved? explanation:
To manage the beach erosion and shoreline recession hazards now and into the future in a manner that maintains or improves beach amenity and ensures an acceptable risk of damage to beachfront assets.	Yes partially, seawall toe protection works have been designed. Implementation on-going.
INDICATORS for evaluation:	Statistic:
Seawall toe protection measures	Approximately 200 metres of existing sandstone seawall will be protected against wave action and scour.
Discussion: Council has been successful in gaining \$150,000 grant funding under the Department of Environment & Climate Change's Coastline Management Program (2006/07). This funding was allocated on a 50/50 basis. Council has in 2009/10 matched \$65,000 from EL. There is need to match another \$85,000 from EL in 2010/11 to meet the anticipated \$300,000 total project cost.	
TBL ASSESSMENT: Social: The program improves safety for users of the coastal and estuary foreshores. It has positive improvements on social aspects such as of community wellbeing and safety and minor implications on heritage and employment. Environment: The program improves on long-term environmental protection. The project has significant positive implications on environmental aspects such as land integrity and minor implications on vegetation & habitat enhancement. Financial: The program is expected to be cost effective. The project has significant positive implications on aspects such as infrastructure development and life cycle costs and minor implications on internal and external costs.	
KEY OUTCOMES: <ul style="list-style-type: none"> • Construction of 200 m of secant pile wall and capping beam 	
POLICY REFERENCES (e.g. plans of management, recovery plans, strategies etc include references): <ul style="list-style-type: none"> • Manly Management Plan 2009-12 • Manly Sustainability Strategy 2006 • Manly Ocean Beach Coastline Management Plan 2008 • Manly Ocean Beach Emergency Action Plan 2008 • Coastal Erosion Protection Reform Package 2010 	
DOES BID DEVIATE FROM ORIGINAL BID? EXPLAIN: No	
OVERALL EVALUATION AND CONCLUSION consider success of the project, medium/long term prospects or impacts. Will this bid be continued? Opportunities and Challenges.	

The program is essential in the short, medium and long term, to implement high priority projects identified under Manly Ocean Beach Coastline Management Plan 2008 and Manly Ocean Beach Emergency Action Plan 2008 and achieve environmental, financial, and social benefits in coastal, marine and estuarine management for coastal Manly.

The program has been successful in starting the design works for toe protection works and continued implementation.

This bid will be continued.

8. Education for Sustainability Program

This section provides project specific reports relevant to the Education for Sustainability Program.

Environment Levy



ANNUAL REPORT 2009/10

PROJECT TITLE:	Education for Sustainability Program (EfS)		
PROJECT TYPE:	<input type="checkbox"/>	NEW PROJECT	<input checked="" type="checkbox"/> ONGOING PROJECT
FINANCIALS:	Years project funded: 6		
TARGET DATES (commenced, estimated completion etc): Ongoing program.			

BRIEF PROJECT DESCRIPTION:

Education for Sustainability:

The grouping of education projects into one program (Education for Sustainability) builds on the successes of previous environmental education programs and allows for better management of them. These programs to date have gained a significant amount of momentum.

This budget bid builds on this momentum and expands the education program to address other important aspects of sustainability. The ramifications if this project is not carried out will result in the momentum of these projects being lost. Essentially without funding, the environmental education program will be extremely limited in its capacity to deliver projects.

Each project addresses specific actions from various Council management plans and strategies, predominantly the Education for Sustainability Strategy and the Manly Sustainability Strategy.

1. OOSH Environmental Education Program

2. Schools Environmental Education & Grants

3. Community Environmental Education

4. Staff Environmental Education 5. Climate Change Education Strategy and Implementation 6. Rainwater Tank Referral Program 7. Manly Sustainability Fair	
OBJECTIVES of the project:	Result: were they achieved? explanation:
<p>Various objectives which allow for the promotion and delivery of a diverse range of environmental education initiatives for sustainability have been established. Different community groups including schools, businesses, volunteers and industry are targeted through the delivery of the EfS initiatives which aim to better inform the groups of issues and other matters which include, but are not limited to sustainable environments. These include:</p> <ul style="list-style-type: none"> • To develop, organise and evaluate various key environmentally educational programs • To better inform the community about sustainability and promote behavioural change • To target key learning's for behavioural change at the community and within Council • To achieve adoption of multi-disciplinary approaches for sustainability within council • To contribute to, and address actions from Council Management plans and strategies 	<p>Yes, 2009/10 proved a very successful year for the Education for Sustainability Program, mainly due to the evaluation of the community engagement aspect of the program with it resulting in the <i>Green Up Your Life!</i> Sustainable Living Program which has been hugely successful with the participation of 965 members of the community since its inception in September 2009.</p> <p>Other highlights of success include the development of the Green & Groovy Kid's Recycled Art monthly workshops held at Manly Library.</p> <p>Schools engagement this year, also extended to the 'Ready, Set, Grow!' School Food Garden one-off program with NSW Health which resulted in an increased engagement with schools and the implementation of composting/worm-farming systems and school food gardens within the schools. Three schools also received the School Grant.</p> <p>Staff engagement this year pinnacle with the Staff Mer-recycled Christmas Decorating Competition which saw more than half the Town Hall Office participate in what was a fun and engaging lesson on sustainability not just at Christmas but throughout the year.</p> <p>Through the expansion of our education initiatives through these two programs in particular we have been better able to engage, empower and educate the larger community on sustainability.</p>

<p>INDICATORS for evaluation:</p> <p>The EfS programs are evaluated twice yearly and delivered strategically to obtain indicators, so that measurable outcomes can be achieved. These mainly include, but are not limited to:</p> <ul style="list-style-type: none"> • Surveys which are completed by attendees at environmental awareness events • Community perceptions which are noted during community consultation during events • Numbers of people who register for environmentally educational events • The 'Who Cares about the Environment' survey • Numbers of, and the value of partnerships created through the programs • Committee feedback provided for project managers • Staff commendment noted during environmental events 	<p>Statistic:</p> <p>Surveys completed and evaluated to provide ongoing feedback and improvement of programs.</p> <p>Anecdotal feedback is recorded and fed back into programs.</p> <p>Most events were booked to capacity</p> <p>Not funded this reporting period</p> <p>Extensive partnerships formed with external organizations, community groups, NGOs, State and Federal Government.</p> <p>All environmental committees provided positive feedback to the CEP team and often noted their thanks to staff for their efforts</p> <p>965 community members participated in the program since its inception in September 2009.</p>
<p>Discussion: The Education for Sustainability program continues to be extremely well received with consistent positive feedback and booked out events. All evaluations are used to feedback into programs providing a continuous loop of improvements to ensure the programs are hitting their targets effectively.</p>	
<p>TBL ASSESSMENT:</p> <p>The Education for Sustainability Program is directed by Manly's 'Education for Sustainability Strategy (2006)', and consists of a series of environmental education projects that will assist Manly move toward a sustainable society (Manly Sustainable Strategy, 2006; Education for Sustainability Strategy, 2003). It ensures Manly Council takes a holistic and integrated approach to environmental education and builds on the success of past education initiatives.</p> <p>Education is recognised as a key component in achieving a sustainable future and “it is widely agreed that education is the most effective means that society possesses for confronting the challenges of the future” (UNESCO, 1997). The EfS program enables education to be managed holistically and to be integrated throughout all sections of council.</p>	

KEY OUTCOMES:**1. OOSH Environmental Education Program**

3 workshops were held engaging 95 children. This program was extended into the Green & Groovy Kid's Recycled Art Workshops program, with workshops being held monthly at Manly Library.

2. Schools Environmental Education & Grants

1544 children have been engaged through this program. 4 schools were recipients of School Grants of \$2000 each for environmental programs.

3. Community Environmental Education

The community environmental education program was evaluated and developed into *The Green Up Your Life!* Sustainable Living Program which is an education for sustainability initiative designed to engage, educate, empower and inspire the local community in the face of climate change and an increasing need for individuals, communities and countries to be rapidly shifting towards a sustainable way of life. The program is comprised of:

1. Practical workshops (a minimum of 1/month)
2. Swap to Shop events, e.g. Clothes Swaps (quarterly)
3. Documentary screenings at the local Cinema on issues pertaining to sustainability (quarterly)
4. Promotion of Manly Council's Sustainability Events e.g. Sustainability Fair & Fair Trade Markets

The purpose of the documentary screenings and Swap to Shop events being to engage a new, larger and more diverse crowd beyond the usual suspects and the workshops are to provide practical advice on how to take those next steps once engaged. It has proven a great success having had the participation of just under 1000 people from the community since its inception in September 2009 (not including participation in the Sustainability Fair or Fair Trade Markets).

4. Staff Environmental Education

The Staff Mer-recycled Christmas Decorating Competition was held engaging at 120 Manly Council staff. The promotion and bulk-order of the reusable coffee cups 'Keep Cups' was also facilitated. Staff education will be built upon in the next financial year.

5. Climate Change Education Strategy and Implementation

It has been integrated into the Education for Sustainability Strategy Review.

6. Rainwater Tank Referral Program

The rainwater tank referral program continues to be a success, however due to marketplace competition from other manufactures the program will be re-evaluated in 2010/2011

7. Manly Sustainability Fair

The 2009 Manly Sustainability Fair was held over the weekend of 6-7 June 2009 in the Manly Council Chambers Forecourt, opposite Manly Wharf. Integrated within the Manly Food & Wine Festival, the Sustainability Fair invited the community to learn about sustainable ways to live while enjoying food and entertainment in a fun, exciting atmosphere. Over 25,000 people attended the Sustainability Fair over the weekend with 600 surveys being filled out which fed into the development of the rest of our programs for the year.

8. Hill to Harbour Tours

Funding for this program was not received and so the program was not continued throughout this financial year.

POLICY REFERENCES (e.g. plans of management, recovery plans, strategies etc include references):

The Education for Sustainability Program, through its various projects, addresses criteria from the following Local Management Plans:

1. Manly Sustainability Strategy (various actions)
2. Manly Councils Management Plan, 2007–10 (various actions)
3. Education for Sustainability Strategy, 2003 (various actions)
4. Greenhouse Action Plan (various actions)
5. Surfing the Future - A Vision for the Manly Local Government Area for 2025
6. Integrated Catchment Management Strategy - Manly & Warringah, 2003 (various actions)

The Education for Sustainability Program also addresses actions from various State, National and International Plans which include:

1. Agenda 21 – Chapter 36: “Promoting Education, Public Awareness and Training”
2. National Action Plan – Environmental Education for a Sustainable Future
3. Learning for Sustainability: NSW Environmental Education Plan 2007-10
4. NSW Department of Education and Training: Environmental Education Policy

DOES BID DEVIATE FROM ORIGINAL BID? EXPLAIN:

No.

OVERALL EVALUATION AND CONCLUSION consider success of the project, medium/long term prospects or impacts. Will this bid be continued? Opportunities and Challenges.

These programs are excellent examples of ‘at-source’ management for sustainable development.

All EfS programs are at times undertaken in busy locations which are highly visible in the community. This includes the many awareness events which include, but are not limited to presentations, expositions, tours, tree planting days, workshops, forums and evenings. All of these initiatives require on-site facilitation. There are many different aspects involved for the successful delivery which includes design, delivery, supervision, monitoring and education.

The dissemination of educational resources in different businesses and at educational events to

promote the programs also contributes towards a more informed community about the excellent work which is being undertaken by the Council through the EfS program.

The *Green Up Your Life!* Sustainable Living Program and the Kid's *Green & Groovy* Recycled Art Workshops were highlights for this year which will be continued on an ongoing basis due to their success.

Environment Levy



ANNUAL REPORT 2009/10

PROJECT TITLE:	Community Awareness of Environment Levy Projects	
PROJECT TYPE:	<input type="checkbox"/> NEW PROJECT	<input checked="" type="checkbox"/> ONGOING PROJECT
FINANCIALS:	Years project funded: ongoing	
TARGET DATES (commenced, estimated completion etc): Annual community newsletter completed.		

BRIEF PROJECT DESCRIPTION:	
A community newsletter (printed in the Manly Daily – full page) to inform and to promote the positive work of Levy projects to all members of the community to ensure continued support for the Levy. Undertaken at the request of the Environment Committee. This has been an ongoing levy funded initiative.	
OBJECTIVES of the project:	Result: were they achieved? explanation:
To promote the positive work of Levy projects to all members of the community to ensure continued support for the Levy.	The newsletter has been published with no negative community feedback registered.
INDICATORS for evaluation:	Statistic:
Newsletter printed in Daily	Newsletter printed
Response regarding community satisfaction	No responses
Discussion: n/a	
TBL ASSESSMENT:	
The minor financial expense incurred ensures that the community are kept informed about the outcomes of their Levy payments. In turn this would maintain community support for the Environment Levy to continue	

resulting in further social and environmental gains.

KEY OUTCOMES:

Dissemination of information concerning Environment Levy Projects to inform the community.

POLICY REFERENCES (e.g. plans of management, recovery plans, strategies etc include references):

Corporate Plan 5.1.1

DOES BID DEVIATE FROM ORIGINAL BID? EXPLAIN:

No

OVERALL EVALUATION AND CONCLUSION consider success of the project, medium/long term prospects or impacts. Will this bid be continued? Opportunities and Challenges.

Failure to communicate may lose support for the Levy. Bid to be continued.

Environment Levy



ANNUAL REPORT 2009/10

PROJECT TITLE:	Fair Trade in Manly		
PROJECT TYPE:	<input type="checkbox"/> NEW PROJECT	<input checked="" type="checkbox"/> ONGOING PROJECT	
FINANCIALS:	Years project funded:		
TARGET DATES (commenced, estimated completion etc): Ongoing			

BRIEF PROJECT DESCRIPTION:

Fair Trade is a growing international movement which ensures that producers in poor countries get a fair deal. Fair Trade is an alternative approach to conventional trade – it contributes to sustainable development by offering better trading conditions to and securing rights of, marginalised producers and workers – especially in low-income regions.

OBJECTIVES of the project:	Result: were they achieved? explanation:
To pass a Local Council Resolution	This resolution was passed in October 2005
To form a Community Steering Group	Formed in June 2008 and consists of 7 active members who meet quarterly providing ideas, forging partnerships with local networks on fair trade, as well

	as assisting in educating the community
To ensure availability of fair trade products in local shops (at minimum 1 retail outlet per 5,000 population)	Far in excess of this goal with 17 local shops currently offering fair trade products.
To ensure the use of fair-trade certified products in local enterprises.	Belaroma, Manly West Public, Balgowlah Uniting Church, BP Garages, national Bank all support Fair Trade.
To endeavour to attract media coverage and popular support for the campaign.	Something being done on a continuing basis. Press Release promoting the bi-annual Fair Trade markets. Peninsula Living, Manly Daily and Sydney Morning Herald also targeted.
<p>Progress Goals developed to ensure ongoing growth of the program.</p> <ol style="list-style-type: none"> 1. To increase the use of fair-trade certified products in local enterprises 2. To increase public awareness through education on fair trade 3. For Council to increasingly promote Manly's Fair Trade status through its events and public communications. 	<ol style="list-style-type: none"> 1. Fair Trade Steering Group and volunteers meeting with and encouraging local enterprises to switch to Fair trade. 2. Steering Group hand out Fair Trade Awareness Surveys and discuss the meaning of Fair Trade at our Fair Trade Markets 3. Banners, media and bi-annual Fair Trade Markets, Mayor's message.
INDICATORS for evaluation:	Statistic:
<ul style="list-style-type: none"> • Surveys conducted at each Fair Trade Market • Community involvement/volunteer participation • An increased demand from Fair Trade stallholders to participate in future Fair Trade Markets • Advice requested from other Councils on how to support Fair Trade • Media coverage 	<p>In 2006, 50 surveys collected. In May 2010, 250 surveys completed. A significant increase in awareness and interest in Fair Trade in this period.</p> <p>Dedicated Steering Committee and community volunteer involvement in Fair Trade.</p> <p>Market started in 2006 with 8 stalls. In November 2009 there were 40 stalls.</p> <p>Ongoing. In this period advised Dunedin, Christchurch in New Zealand, Fremantle in Perth and Leichhardt Council in New South Wales.</p> <p>Media more aware of Fair Trade and more willing to promote</p>
<p>TBL ASSESSMENT: including identification of relevant UN Sustainable Cities Principles; Manly Sustainability Strategy:</p> <p>Fair Trade in Manly aims to educate residents and tourists alike on what Fair Trade means and to empower them with the knowledge of how they can support Fair Trade by demanding products that display the Fair</p>	

Trade logo which guarantees a socially responsible and environmentally sustainable good.

Fair Trade goods promote sustainable production and consumption as they value biodiversity and natural ecosystems overseas and locally and provide a means for consumers to minimise their ecological footprint.

Fair Trade also contributes towards eliminating world poverty and being such an intrinsically ethical cause, it draws cooperation from schools, business, faith groups, individuals etc., forming a network of support for Fair Trade in Manly; supporting sustainable futures worldwide.

KEY OUTCOMES:

Council meeting its Fair Trade accreditation responsibilities

POLICY REFERENCES (e.g. plans of management, recovery plans, strategies etc include references):

1. Manly Sustainability Strategy, 2006 (various actions)
2. Education for Sustainability Strategy, 2006 (various actions)

DOES BID DEVIATE FROM ORIGINAL BID? EXPLAIN: No

OVERALL EVALUATION AND CONCLUSION consider success of the project, medium/long term prospects or impacts. Will this bid be continued? Opportunities and Challenges.

The Fair Trade project has been very successful demonstrated by the fact that stallholders increased from 8 to 40; surveys increased from 50 to 250; it being easier to gain access to media coverage as more and more people becoming aware of Fair Trade. New local businesses/enterprises are joining the Fair Trade Association on a continuing basis. Other Councils are looking to Manly Council for advice on also becoming a Fair Trade Council including Leichhardt, Blacktown, Fremantle, Dunedin and Christchurch. Volunteers offer ongoing enthusiastic support of Manly council's Fair Trade endeavours.

Environment Levy



ANNUAL REPORT 2009/10

PROJECT TITLE:	Manly Ambassadors	
PROJECT TYPE:	<input type="checkbox"/> NEW PROJECT	<input checked="" type="checkbox"/> ONGOING PROJECT
FINANCIALS:	Years project funded: 3	
TARGET DATES (commenced, estimated completion etc): Completed project, ongoing through incorporation.		

BRIEF PROJECT DESCRIPTION:

BRIEF PROJECT DESCRIPTION

Manly Ambassadors is a volunteer program aimed at engaging the community through education that will encourage residents to play an active role in the conservation, preservation and promotion of our natural environment. In engaging and empowering residents to take pride in their local area we will encourage resident feedback, participation and community involvement. Participants will be invited to a series of training opportunities addressing some of our most crucial environmental issues incorporating train the trainer skills to further enhance this community education program.

As identified in the Manly Sustainability Strategy 2006 *To implement sustainable solutions in the community, empowerment and participation can be generated through education. Providing people with the knowledge and skills can foster sustainability action (pg 86.)*. Ambassadors is a direct example of a education program designed to improve behaviour, skills, awareness and knowledge about our unique natural environment. The environmental awareness survey of Manly council residents (*'who cares about the environment survey'*) identifies that Manly residents are quite concerned about the environment with 34% of residents indicating that were concerned a great deal and a further 56% stating they were concerned a fair amount. This is also reflected in the community support with have received for Ambassadors.

Community Participation is the key to a successful education strategy this will be further enhanced by the principles of volunteerism, accessing a large cross section of the community. Through community involvement in such a volunteer program we are not only providing educational opportunities but strengthening community cohesion, social wellbeing and trust. Promotion of broader environmental awareness empowers individuals to make informed choices and creates a greater sense of belonging, ownership and responsibility towards their local area.

OBJECTIVES of the project:	Result: were they achieved? explanation:
The objective of Manly Ambassadors is to involve residents within the local community through promoting sustainability within education. By engaging our residents we are providing information about coastal living practices, encouraging Ambassadors to promote sustainable living initiatives to their social networks, friends, family, neighbours and visitors. This is a bottom up community education program that will enable residents within the Manly community to be more environmentally aware and to conserve the Manly environment for future generations.	Residents were involved in the Green Up Your Life program which brings together all of the Community & Environmental Partnerships branch's programs and serves to incorporate everyday Ambassadors into Manly, not just badged members of the community. The Lessons from Dreamtime workshop was extremely well received and gave community members a much stronger understanding of the history of Manly from an Aboriginal perspective. Those ambassadors already in the community continued to be involved through refresher workshops and report and feedback any issues to Council as necessary.
INDICATORS for evaluation:	Statistic:
Performance will be monitored through participant feedback mechanisms, participant involvement and through the notifications made to Council by Ambassadors.	Excellent participant feedback – available in detail if requested. Also existing ambassadors continued to report back, and attended a number of refresher workshops during the year as part of the Green Up Your Life program.

Discussion: Due to the work carried out in previous years, Manly Ambassadors continues to be extremely popular and works well incorporated into the Green Up Your Life program, enabling existing Ambassadors to have refresher workshops as necessary and also for new members to come on board. The hours of the position managing the project have been reduced, but incorporation now enables the program to continue to be supported and financed often through other project budgets which explains the variance.

TBL ASSESSMENT:

Manly Ambassadors aims to educate residents on the uniqueness of the biodiversity and natural ecosystems of the land, coasts and ocean that they are privileged to call home and to grant them a sense of place and ownership to be guardians of its protection, preservation and restoration. Manly Ambassadors are trained and educated through an initial induction as well as full-day workshops and seminars throughout the year on topical environmental and sustainable concerns.

Flora and Fauna Protection, as well as sustainable living and minimising ecological footprints are central to the topics covered throughout the Ambassadors education and training, with the diverse ecosystems that surround Manly used to exemplify and promote the importance of and need for sustainable living. The continuation of this engaging volunteers program will continue to improve upon and ensure a liveable and involved Manly.

KEY OUTCOMES:

A natural, sustainable Manly through involvement of community thus recognising the intrinsic value of biodiversity and natural ecosystems, working together to protect and restore them, and helping to enable communities to minimise their ecological footprint.

Building on the distinctive characteristics of Manly, including its human and cultural values, history and natural systems. People are empowered to communicate with the local community and visitors alike through continual improvement, and fostering participation in programs and workshops.

POLICY REFERENCES (e.g. plans of management, recovery plans, strategies etc include references):

1. Manly Sustainability Strategy, 2006 (various actions)
2. Education for Sustainability Strategy, 2006 (various actions)
3. Northern Beaches Stormwater Management Plan, 1999 (various actions)
4. Integrated Catchment Management Strategy – Manly & Warringah, 2003 (various actions)

The Manly Ambassadors program also addresses actions from various state, national and international plans which include;

1. Agenda 21 – Chapter 36: ‘Promoting Education, Public Awareness and Training
2. National Action Plan – Environmental Education for a Sustainable Future 2000

Learning for Sustainability; NSW Environment Education Plan 2007 - 10

DOES BID DEVIATE FROM ORIGINAL BID? EXPLAIN:

Yes, funding for the program was forthcoming through other programs and initiatives enabling this effective program to be run on an extremely low budget for this financial year.

OVERALL EVALUATION AND CONCLUSION consider success of the project, medium/long term prospects or impacts. Will this bid be continued? Opportunities and Challenges.

Overall the program has been extremely successful with over 100 people trained and ‘working’ as ambassadors in the local community. The opportunity to incorporate the program into the Branch Green Up Your Life

Program has give the ambassadors program new life and more opportunity to engage more people across the residential, business and schools communities. The bid will not be continued due to the incorporation of the program and funding opportunities from other areas, resulting in savings for Council. Ambassadors continue to be involved in the community and recruit new members through their immersion in Manly's built and natural environment, its heritage, and special character.



ANNUAL REPORT 2009/10

PROJECT TITLE:	Community Garden & Nursery		
PROJECT TYPE:	<input type="checkbox"/> NEW PROJECT	<input checked="" type="checkbox"/> ONGOING PROJECT	
FINANCIALS:	Years project funded: 1		
TARGET DATES (commenced, estimated completion etc): Commenced on paper, negotiations underway & a suitable site selected.			

BRIEF PROJECT DESCRIPTION:	
<p>Development of a community garden for use by residents; including the group to be formed to manage the community garden which will be facilitated by the Cancer Council nsw.</p> <p>A suitable site will be developed to incorporate a community garden for residential gardening. The community garden will draw on and build from programs already in place to achieve its objectives.</p> <p>The garden experience will develop community participation in the local area, reduce social isolation and become a point of focus for education of healthy lifestyles, including exercise, community conversations and contact, satisfaction in achievement in a natural setting.</p> <p>The opportunity to join with a group of interested people will develop resident's knowledge and skills, whilst enhancing lifestyle.</p>	
OBJECTIVES of the project:	Result: were they achieved? explanation:

Increased residents knowledge on gardening practices such as composting, worm farming, mulching, drought tolerant native plants, water application etc.	These objectives will be realised once the garden and nursery is progressed further.
Residents produce their own food.	As above
Opportunity to develop a seed bank / seed for the garden.	As above
Sharing network for local indigenous species.	As above
Provide training for improved links between local community group and the nearby schools.	As above
INDICATORS for evaluation:	Statistic:
Increase residential sustainability knowledge and practices.	Statistics will be measured once the program is realised on ground.
Increase in residential knowledge of water saving gardening techniques.	As above
Increased knowledge of weed identification and acceptable plants.	As above

Discussion:

A number of sites were proposed and potential options examined in depth including:

- Manly West Park
- LM Graham Reserve
- Suwarrow Street
- Addison Road
- Griffiths Street

100 Griffiths Street Balgowlah

Council resolved to grant a Deed of License to the Cancer Council nsw for land at 100 Griffiths Street, Balgowlah as the most suitable current site for a community garden.

The Deed of License has been signed, a management committee established with the local community, guidelines set for operations and the planning of the site uses has commenced.

The keys to the site will be received by Cancer council nsw in the week commencing 30 August 2010.

TBL ASSESSMENT:

The garden will build on programs already in place to restore and enhance biodiversity in Manly by raising awareness of issues relating to conserving bushland, including native flora and fauna.

The Cancer council nsw Community garden centre will develop resident's knowledge and skills whilst working to achieve a healthy lifestyle, and to increase social interaction and community participation.

The garden will also provide a place for local residents to share stories, create a garden and environment of friendship and shared experiences, as well as a link to precinct groups and community groups.

KEY OUTCOMES:

The community garden will:

- Allow residents to participate in growing their own food using best practice garden methods and develop knowledge and skills in waste management and sustainable living.
- Create synergies with production of low water use plantings for nature strips and community areas to help reduce areas that require mowing.
- Provide a meeting place for those involved in the garden to inform other interested people, about water saving gardening principles and green gardening techniques, including weed control and identifying invasive plants, creating habitat gardens and a demonstration garden showing a range of drought tolerant plants species.
- Provide information and advice in weed identification.
- Empower the community through a sense of ownership and foster community spirit by forging new relations within the community, with the Cancer Council nsw and with council.
- Provide a link between community groups, residents and Cancer council nsw for healthy lifestyle opportunities and experiences.

POLICY REFERENCES (e.g. plans of management, recovery plans, strategies etc include references):

Manly Sustainability Strategy

Education For Sustainability

Towards Zero Waste Strategy

Who Cares about the Environment – Manly Council 2002

Manly Social Plan

Surfing the Future

DOES BID DEVIATE FROM ORIGINAL BID? EXPLAIN:

Yes, approvals and negotiations are continuing to ensure the program progresses in this financial year.

OVERALL EVALUATION AND CONCLUSION Consider success of the project, medium/long term prospects or impacts. Will this bid be continued? Opportunities and Challenges.

Progress is now being made to develop the reality of Manly's first Community Garden which is managed and controlled by the Cancer Council nsw under a Deed of License for 2 years. The garden

will provide an opportunity for benefits across a number of areas for a more cohesive and sustainably aware community encouraging learning, communication and sharing.

Environment Levy



ANNUAL REPORT 2009/10

PROJECT TITLE:	Ocean Care Day 2009		
PROJECT TYPE:	<input type="checkbox"/>	NEW PROJECT	<input checked="" type="checkbox"/> ONGOING PROJECT
FINANCIALS:	Years project funded: 2009/10		
TARGET DATES (commenced, estimated completion etc): Completed 12 December 2009			

BRIEF PROJECT DESCRIPTION:

Manly's Ocean Care Day Festival is an annual event coordinated by the Manly Environment Centre and supported by Manly Council, URM and Volunteers.

The festival is a fun, interactive and all-inclusive community event to raise awareness of the range of environmental issues we face today.

Celebrating the 'International Year of Astronomy', the 2009 Ocean Care Day Festival focussed on "Tidelines". Visitors were encouraged to discover their universe including the effects of the Moon and Sun on our tides and precious intertidal zone. Astronomers from Sydney Observatory were on hand to assist people look for the sun spots and prominences safely through a special H-Alpha telescope.

Other exhibits included the Manly Environment Centre 'Ocean Lab' which featured live displays, a wave machine supplied by Manly Hydraulics Laboratory that demonstrated the impact of ocean waves on our coastline and the SAM Trailer. An intern from Southern Cross University gave a series of talks and demonstrations on coastal processes and the impact of marine pollution. The Penguin Plaza featured our local Penguin Wardens, penguin badge making, information, photo boards and a display of Project Penguin artwork from six local schools. Other features included over 60 eco stallholders, an art exhibition and live music. The assistance of a major sponsor reduced Council expenditure.

OBJECTIVES of the project:	Result: were they achieved? explanation:
A community event that aims to provide information to people which will empower them to take action and make lifestyle choices that will create positive outcomes for themselves, the wider community	This year's Ocean Care Day theme was the International Year of Astronomy and major themes and activities featured scientists and staff from the Sydney Observatory with Solarviewing. This attracted

(locally and globally) and reduce the impacts on our aquatic environments and bushland areas.	<p>a new audience, including young people.</p> <p>The Ocean Lab marquee with its great diversity of activities and experiments attracted all age groups and a large audience throughout the day.</p> <p>In particular, the Manly Hydraulics Laboratory wave making machine helped people understand the physical processes of rising sea levels and storm surges.</p>
Conservation of local biodiversity promoted in a dedicated Penguin Pavilion and Plaza through various mediums	<p>Extensive exhibition of schoolchildren's work from Taronga Zoo's Project Penguin featured videos, puppet shows, science exercises, artworks.</p> <p>Penguin wardens provided info and sought more volunteers</p>
Provide information from experts in various fields	Sydney Observatory Scientists and staff, Marine Biologists,
Stormwater and Ocean Pollution – human impacts	Eco Divers provided graphic displays of local marine areas being damaged by irresponsible recreational fishers and stormwater
INDICATORS for evaluation:	Statistic:
International Year of Astronomy	Immense popularity of Solarscope
Continued awareness of protection of the Manly's Penguin Colony via the Penguin Pavilion and Plaza	<ul style="list-style-type: none"> • Many people were attracted to this large exhibition space and showed their interest by asking questions, looking at the exhibitions and volunteering to join the penguin wardens or involve their school in Project Penguin • Visitors to the Pavilion spent a lot of time looking at all aspects • The works of six schools were exhibited • The diversity of the content of exhibits and activities also applied to conservation of other species
Ocean Laboratory	<p>This new feature designed by one of our graduate interns, focused on interactive activities based around 6 Stations including:</p> <p>Station 1: wave Tank wonder simulated various coastal processes using the Wave Flume from MHL.</p> <p>Station 2: Jellyfish Jumble – a second tank demonstrating the similarity between prey species (jellyfish) to plastic bags.</p> <p>Station 3: Density Currents using a purpose-built tank to demonstrate upwelling and downwelling and the implications of global warming.</p> <p>Station 4: experiment with oil pollution impacts on marine life, demonstration tar ball and emulsification.</p>

	<p>Station 5: Oceanworld touchpool, live specimen displays</p> <p>Station 6: Using the Stormwater Action Trailer to show the effects of various pollutants and stormwater on the catchment and ocean.</p>
Artworks, music and artists and community tent	Artists spent a busy day with many locals and visitors appreciating the natural and environmental paintings, sculptures and other works. Musicians were also a keen focus of visitors as well as the stalls provided by environmental organizations.
Discussion:	
TBL ASSESSMENT: <p>The success of this event relied on the many volunteer hours contributed by MEC volunteers, student interns, artists, musicians, scientists, advisors and exhibitors</p>	
KEY OUTCOMES: <p>Key features of this event, exposed local people to concepts and experts not normally available at a local event. This increased the market reach of the event and exposed the audience to unique explanations of the physical processes of our environment.</p> <p>Support and Co-operation from CEP Branch, Bushland Management, Rangers and the Aboriginal Heritage Office as well as other key staff and personnel from local Council and organizations made the Day a great success.</p>	
POLICY REFERENCES (e.g. plans of management, recovery plans, strategies etc include references): <p>Sustainability Strategy, Coastline Management Plans, Recovery Plans</p>	
DOES BID DEVIATE FROM ORIGINAL BID? EXPLAIN: <p>Sponsor paid for printing which resulted in reduced spending of \$1,671.</p>	
OVERALL EVALUATION AND CONCLUSION – Once again this Day has become a highlight of the Sydney and Peninsula Events Calendar with more people attending each year – this year it is estimated that about 12,000 attended over the course of the Day.	

ANNUAL REPORT 2009/10

PROJECT TITLE:	MEC Cataloguing	
PROJECT TYPE:	<input type="checkbox"/> NEW PROJECT	<input checked="" type="checkbox"/> ONGOING PROJECT

FINANCIALS:	Years project funded: 2007
TARGET DATES (commenced, estimated completion etc): May 2011	

BRIEF PROJECT DESCRIPTION: Cataloguing of Manly Environment Centre resources to enable listing on the Shorelink catalogue.	
OBJECTIVES of the project:	
Improved access to MEC Resources	Over 60% of the collection has been listed
INDICATORS for evaluation:	Statistic:
Number of items in the collection listed	Over 60% or 20,000 of the collection has been listed electronically
<p>Discussion: Considerable progress has been made by volunteers in listing electronically items in four out of the six sections. In addition videos, CDs have been listed and newsletters/periodicals indexed.</p> <p>Categories and classifications have tested well and the next steps are:</p> <ul style="list-style-type: none"> . laminated spine identification labels for binders to be ordered and fitted . location and ordering of suitable heavy duty binders for specialist reference material . design and install signage for shelves . complete remainder of electronic listing 	
<p>TBL ASSESSMENT:</p> <p>MEC has the largest collection in Australia of environmental education materials accessible to the community.</p> <p>This unique collection has been made at no cost to Council. MEC Volunteers have carried out the administration over nearly 20 years and are now in the process of the electronic listing.</p>	
<p>KEY OUTCOMES:</p> <p>Expected outcome - online access to MEC resources through SHORELINK</p>	
<p>POLICY REFERENCES (e.g. plans of management, recovery plans, strategies etc include references):</p> <p>Sustainability strategy, recovery plans, coastline management plans, etc.</p>	
<p>DOES BID DEVIATE FROM ORIGINAL BID? EXPLAIN:</p> <p>No</p>	
<p>OVERALL EVALUATION AND CONCLUSION</p> <p>It will be a great advantage to have an electronic listing on the MEC and SHORELINK Website</p>	

9. Climate Change Program

This section provides project specific reports relevant to the Climate Change Program.

Environment Levy



ANNUAL REPORT 2009/10

PROJECT TITLE:	Climate Change Icon Project		
PROJECT TYPE:	<input type="checkbox"/> NEW PROJECT	<input checked="" type="checkbox"/> ONGOING PROJECT	
FINANCIALS:	Years project funded: 2007/08 & 2008/09		
TARGET DATES (commenced, estimated completion etc): 2010/11			

BRIEF PROJECT DESCRIPTION:

Project has not yet commenced. Project scoped to erect solar PV on Town Hall roof.

This project relates to a specific Council Resolution (Planning & Strategy Committee, 12 May 2008: Item for Brief Mention Report No. 8):

- That Council supports a \$150,000 budget allocation within this year's environment levy for an icon climate change project.
- That this \$150,000 be a one-off allocation for this year only, pending the Climate Change levy poll in September.
- That staff bring to the next Environment Committee meeting:
 - a recommendation of existing levy projects to the amount of \$150,000 to be deleted and/or deferred from this year's levy
 - a proposal for an icon project(s) focused on greenhouse reduction technologies and energy efficiency.

Further scoping to be determined through consultation with the relevant Council community committee.

OBJECTIVES of the project:	Result: were they achieved? explanation:
A program that achieves real greenhouse savings for Council and community that also encourages the community to act on similar initiatives.	Project not completed.
Further objectives to be determined through	N/A – at this stage.

consultation with the relevant Council community committee.	
INDICATORS for evaluation:	Statistic:
To be determined following scoping of the project.	N/A – at this stage.
Discussion: -	
TBL ASSESSMENT: A TBL assessment will be undertaken as part of the scoping process for this project, pending further direction from the executive.	
KEY OUTCOMES: Greenhouse gas reductions.	
POLICY REFERENCES (e.g. plans of management, recovery plans, strategies etc include references): Council resolution (Planning & Strategy Committee, 12 May 2008: Item for Brief Mention Report No. 8).	
DOES BID DEVIATE FROM ORIGINAL BID? EXPLAIN: No bid submitted as this was a Council resolution instructing direct allocation of funds.	
OVERALL EVALUATION AND CONCLUSION consider success of the project, medium/long term prospects or impacts. Will this bid be continued? Opportunities and Challenges. Project not yet commenced.	

Environment Levy



ANNUAL REPORT 2009/10

PROJECT TITLE:	Climate Change Impacts Risks		
PROJECT TYPE:	<input type="checkbox"/>	NEW PROJECT	<input checked="" type="checkbox"/> ONGOING PROJECT
FINANCIALS:	Years project funded: 2007/08, 2008/09; 2009/10		
TARGET DATES (commenced, estimated completion etc): This project has an anticipated completion date of November 2010 with remaining funds to be expended during 2010/11.			

BRIEF PROJECT DESCRIPTION:
Council continued to undertake the Climate Change Risk Management and Adaptation Project in 2009/10. This

Project received funding from, and was thus undertaken in accordance with, the Department of Climate Change (DCC) Local Adaptation Pathways Program (LAPP).

During 2009/10, A Risk Assessment and Adaptation Action Plan was finalised by an approved service provider (under the LAPP) and submitted to and accepted by DCC. The resultant document was significantly reworked by Council Staff into a more usable format for Council, i.e. a Draft Climate Change Adaptation Strategy (featuring the Draft Adaptation Action Plan) and comprehensive supporting document, incorporating the most recent climate change science and policy and integration and alignment of climate change mitigation and adaptation responses.

EL Expenditure during 09/10 specifically included:

- Consultancy fees for the development of the Adaptation Action Plan (in accordance with the LAPP).
- Consultancy fees for completion of the preliminary calculation of Council's Carbon Footprint (for alignment of climate change mitigation and adaptation responses)

OBJECTIVES of the project:	Results: were they achieved? Explanation:
Identify and evaluate climate change risks for the Manly LGA	YES: Climate change risks have been identified and evaluated for the Manly LGA. Council staff and community/stakeholder climate change risk workshops were held and a comprehensive risks assessment conducted following the process outlined in the Australian Government's publication "Climate Change Impacts & Risk Management: A Guide for Business and Government." Outcomes were integrated into a Climate Change Risk Assessment for Manly LGA.
Develop a climate change adaptation action plan for Manly LGA	80% developed. A prioritised Draft Climate Change Adaptation Action Plan has been developed for Manly under the LAPP process. This has undergone significant revision by staff to provide a more usable document for Council.
INDICATORS for evaluation:	Statistic:
Climate change risks assessment process completed	Comprehensive Climate Change Risk Assessment Report produced with risks matrices prepared for service delivery areas in Council.
Increased understanding of climate risks and identification of actions and necessary works required to treat risks.	Draft Adaptation Action Plan produced clearly identifying preferred and priority actions. 17 Council staff and 14 stakeholders participated in risk and adaptation workshops (increased understanding of climate change risks and necessary adaptation actions).
Discussion: The Draft Adaptation Action Plan integrates outcomes from the community/stakeholder and Council staff adaptation workshops and relevant adaptation actions identified in <i>Change Actions for Manly LGA> 2008 to 2038</i> (Cardno, 2008); <i>Systems Approach to Regional Climate Change Adaptation Strategies in Metropolises</i> " (Sydney Coastal Council Group, 2008), Council's submission to the "Senate Inquiry into Climate Change and Environmental Impacts on Coastal Communities" (2007).	

TBL ASSESSMENT:**Environment:**

Manly's coastal environment is highly susceptible to impacts of climate change, particularly sea level rise, increased frequency and intensity of storms, storm surge and increased temperatures. This project has identified a number of high and extreme climate change risks to the natural environment as a result of anticipated climate change impacts such as beach erosion, saltwater intrusion into freshwater ecosystems, increased sewer overflows and increased erosion and siltation of Manly Lagoon and other waterways. Adaptation actions have been determined to treat identified risks, and a prioritised and a Draft Adaptation Action Plan developed. This Plan provides Council with a strategic tool to direct resources to address these climate change risks, in order to protect and preserve the natural environment, and enhance to capacity of the environment to adapt to climate change impacts.

Financial:

The above mentioned impacts of climate change will have significant financial implications for Council and the community. This project has identified a number of high and extreme risks resulting from the above mentioned climate change impacts which will have significant financial implications for Council and the community. These include damage or destruction of Manly's low lying public and private coastal infrastructure, flooding of low lying areas including the CBD (reduced operation of businesses) and loss of beach amenity threatening the tourist based economy. The costs of inaction in the long term, far outweigh the cost of taking early action to address these climate change risks. This project has produced a prioritised Plan to address such risks in a strategic manner. Staged implementation of the Adaptation Action Plan (once finalised) will have significant economic benefits for Council and the community.

Social:

The impacts of climate change will have significant social ramifications for the Manly community. Identified risks include increased heat stress to the young and elderly, loss of low lying open space and recreational areas, and increased demand on emergency services. The Draft Adaptation Action Plan provides a strategic framework to treat such risks and thus staged implementation will have positive social impacts for the Council and community.

KEY OUTCOMES:

Completion of comprehensive Climate Change Risk Assessment for Manly LGA

Development of a Draft Adaptation Strategy (incorporating the Draft Adaptation Action Plan) plan for Manly LGA with community/stakeholder and Council staff involvement.

POLICY REFERENCES (e.g. plans of management, recovery plans, strategies etc include references):

Manly Council Management Plan (2008-2010): 5.1. Environment Program & 1.3.1 Risk Management.

Manly Sustainability Strategy:

C1.3.8: Incorporate latest climate change information into management decisions including consideration of a strategy to address sea level rise. Consider possible impacts on the underground aspects of development.

C2.4.1: Implement best-practice risk management through Coastal Plans of Management.

C2.4.2: Subject to review by Council's Climate Change Working Group, review the possible social, economic and environmental impacts of climate change on Manly and ensure there are planning or

management responses in place to address them by undertaking an assessment through the Australian Greenhouse Office's *Climate Change Impacts & Risk Management. A Guide for Business and Government*. Integrate recommendations into the review process of the Local Air Quality and Greenhouse Action Plan. Consider alternative power sources in this review.

C2.4.3: Continue to develop a comprehensive understanding of natural hazards affecting Manly's environment.

C2.4.8: Monitor scientific debate and interpret with the assistance of Council's Scientific Advisory Panel.C1.3.8

DOES BID DEVIATE FROM ORIGINAL BID? EXPLAIN:

No

OVERALL EVALUATION AND CONCLUSION consider medium/long term prospects or impacts. Will this bid be continued? Opportunities and Challenges.

Through this project, a comprehensive climate change risk assessment and risk treatment process has been undertaken, building on outcomes of previous climate change studies in Manly LGA. Key staff responsible for service delivery areas likely to be impacted from climate change have been involved in the process together with key external stakeholders and members of the Sustainability and Climate Change Committee, increasing the understanding of climate change risks and appropriate adaptation measures.

Once finalised the Draft Adaptation Strategy will provide a strategic framework to direct Council resources to address identified climate change risks. Staged implementation will have significant positive environmental, economic and social outcomes for Council and the community.

Anticipated challenges for the implementation of the plan include seeking sufficient funding to implement actions. However, as this project has been undertaken under the LAPP Program, it is hoped that the Federal Government will provide future funding for implementation of outcomes from this Program. It is anticipated that further funding through both the Environment Levy and General Revenue, will be required in future years to enable implementation of the plan.

Appendix A

Environment Levy Statement of Funds
(for period 1 July 2009 to 30 June 2010)