

9. SCOPE OF WORKS

The Masterplan (see Figure One, page iii) for Dee Why Lagoon Wildlife Refuge has been developed as a result of community consultation and the identification of values for the Refuge. The Masterplan represents and identifies the key management objectives for the Refuge and shows the physical locations of the key actions.

A number of actions proposed for the Dee Why Lagoon Wildlife Refuge are the result of other studies carried out for the area. This Plan of Management and Masterplan links these other studies together to define a comprehensive list of key actions for the Refuge within the one document.

It should be noted that the Masterplan indicates that a boardwalk and viewing platform is proposed to provide access through bushland to the lagoon edge. The exact location of this is yet to be defined. A study of migratory and resident birds has been carried out by Peter Smith and Associates. The study recommends possible locations for the boardwalk and viewing platform and the final location is to take into account social and environmental issues and values of the Refuge.

Similarly the exact location of the viewing platform for Dee Why Beach is yet to be defined. The platform is to be visually unobtrusive and should not negatively impact on the functions of the Dee Why Surf Life Saving Club or the environmental integrity of the sand dunes. It is desirable, both economically and environmentally, to locate the platform along the northern embankment in front of the Dee Why Surf Club. This location must be investigated to ensure it will not impact on the functions of the Dee Why Surf Life Saving Club. This location would also be easily accessible for the aged and mobility impaired.

The indicative costs for the key works proposed through this Plan of Management are detailed in Table Nine (overleaf). The exact location of work is to be defined during the detailed design phase. With this in mind, prices for works as described may vary. It is for this reason that a cost/unit price has been identified to enable a more accurate cost estimate during the detailed design phase.

An annual maintenance fee of 5% has also been included in Table Nine. This figure is an estimated percentage of the total cost of works proposed which should be set aside annually for maintenance. The type of development will effect the amount of funding to be set aside each year. Some works may require high maintenance during their establishment, such as landscaping, whilst other works, such as footpaths, may require minimal maintenance for the first few years.



Table 9. Summary of costs for proposed works

Item (funding source)	Unit	Cost / unit	Number of units	Total cost	Annual Maint.
Multi-use pathway - Pittwater Road to Hawkesbury Avenue (Section 94)					
• Site Preparation	-	-	-	\$2,000	
• Earthworks	-	-	-	\$11,250	
• Drainage	-	-	-	\$7,575	
• Cycleway - 2.5m wide colour concrete					
Pittwater Road to Clarence Avenue, 108m	m ²	\$60	270	\$16,200	
Clarence Ave to Hawkesbury Ave, 204m	m ²	\$60	510	\$30,600	
• Landscaping	-	-	-	\$6,640	
• Miscellaneous	-	-	-	\$2,000	
• Signs and Entrances					
Information/directions signs	ea	\$750	4	\$3,000	
Bollards/fencing at entrances	ea	\$750	2	\$1,500	
• Lighting					
Solar lighting of multi-use pathway (312 metres)	ea	\$5,000	2	\$10,000	
• Contingency	10%	-	-	\$9,077	
• Professional Costs	10%	-	-	\$9,984	
Sub Total				\$109,826	
Annual Maintenance	5%				\$5,491
Lighting of existing multi-use pathway – Hawkesbury Avenue to The Strand (Section 94)					
• Lighting					
Solar lighting of multi-use pathway (approx. 475 metres)	ea	\$5,000	2	\$10,000	
• Contingency	10%	-	-	\$1,000	
Sub Total				\$11,000	
Annual Maintenance	5%				\$550
Timber boardwalk and viewing platform to lagoon edge (Section 94)					
• Timber boardwalk	m	\$500	315	\$157,500	
• Concrete headwall	ea	\$1,500	2	\$3,000	
• Timber viewing platform	m ²	\$250 - \$1,250	4	\$1,000 - \$5,000	
• Contingency	10%	-	-	\$16,150 - \$16,550	
• Professional Costs	10%	-	-	\$17,765 - \$18,205	
Sub Total				\$195,415 - \$200,255	
Annual Maintenance	5%				\$9,771 - \$10,013
Walking track linking multi-use pathway with track behind dunes (Section 94)					
• Crushed sandstone pathway (1m wide)	m ²	\$20	360	\$7,200	
• Drainage	-	-	-	\$3,700	
• Entry bollards	ea	\$750	2	\$1,500	
• Contingency	10%	-	-	\$1,240	
• Professional Costs	10%	-	-	\$1,364	
Sub Total				\$15,004	
Annual Maintenance	5%				\$750



Table 9 continued.

Item (funding source)	Unit	Cost / unit	Number of units	Total cost	Annual Maint.
Dee Why Beach accessible viewing area (Section 94)					
• Site establishment, levelling, equipment and excavation.	-	-	-	\$2,648	
• New retaining wall (brick)	m	\$215	18	\$3,870	
• Cement render	m ²	\$15.80	18	\$285	
• Concrete paving	m ²	\$37.30	15	\$560	
• Brick paving	m ²	\$53.10	35	\$1,860	
• Stainless handrails	M	\$325	8.5	\$2,763	
• Miscellaneous	-	-	-	\$2,200	
• Contingency	10%	-	-	\$1,419	
• Professional Costs	10%	-	-	\$1,560	
Sub Total				\$17,165	
Annual Maintenance	5%				\$858
Public amenities building (partial funding through S94)					
• Construction and fit out of public amenities building (8m x 12.5m)	m ²	\$2,000	100	\$200,000	
Annual maintenance	5%				\$10,000
Boundary fencing (General revenue)					
• Near Long Reef car park	m	\$30	225	\$6,750	
• Along western side of James Meehan Reserve	m	\$30	115	\$3,450	
• From Pittwater Road to Hawkesbury Ave	m	\$30	160	\$4,800	
• Contingency	10%	-	-	\$1,500	
• Professional Costs	10%	-	-	\$1,650	
Sub Total				\$18,150	
Annual Maintenance	5%				\$908
Facilities (Section 94)					
• Installation of picnic tables	Each	\$1,800 - \$8053	Approx. 3	\$5,400 - \$24,159	
• Installation of garbage bins	Each	\$875	Approx. 3	\$2,625	
• Interpretive signage	Each	\$100 - \$150	Approx. 10	\$1,000 - \$1,500	\$28,284
• Contingency	10%	-	-	\$903 - \$2,828	
• Professional Costs	10%	-	-	\$993 - \$3,111	
Sub Total				\$10,920 - \$34,224	
Annual Maintenance	5%				\$546 - \$1,711
Bicentennial Coastal Walkway (Section 94)					
• Entrance	-	-	-	\$21,500	
• Walkway	-	-	-	\$154,000	
• Entrance – Lagoon Mouth	-	-	-	\$12,000	
Sub Total				\$187,500	
Annual Maintenance	5%				\$9,375
TOTAL				\$764,980 - \$793,124	

