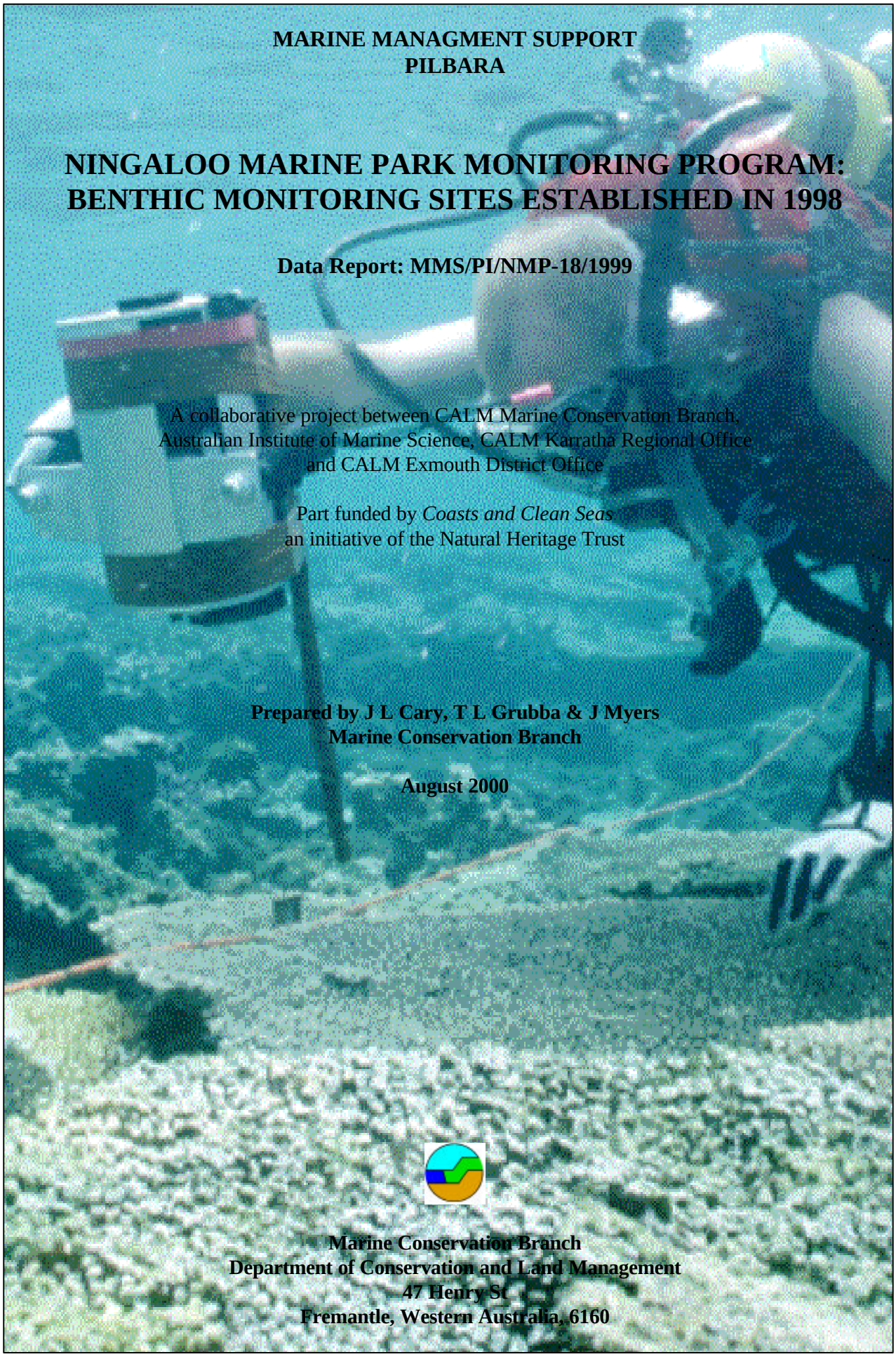

MARINE MANAGMENT SUPPORT
PILBARA

NINGALOO MARINE PARK MONITORING PROGRAM: BENTHIC MONITORING SITES ESTABLISHED IN 1998

Data Report: MMS/PI/NMP-18/1999

A collaborative project between CALM Marine Conservation Branch, Australian Institute of Marine Science, CALM Karratha Regional Office and CALM Exmouth District Office

Part funded by *Coasts and Clean Seas* an initiative of the Natural Heritage Trust

Prepared by J L Cary, T L Grubba & J Myers
Marine Conservation Branch

August 2000

Marine Conservation Branch
Department of Conservation and Land Management
47 Henry St
Fremantle, Western Australia, 6160

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Helping Communities Helping Australia

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SUMMARY

This data report presents sessile benthic coral community parameters measured at 21 'transect' sites established during the first survey of the *Ningaloo Marine Park Monitoring Program* (NMPMP) in May 1998. Seven of these sites were located in sanctuary zones, 12 in recreation zones and two in the proposed southern extension of the NMP. Site selection was influenced by historical information on back reef benthic communities from past surveys (Ayling *et al*. 1987; Forde 1994; Osborne and Williams in prep.). At each site three re-locatable permanent monitoring transects were established. The line intercept transect (LIT) method, using video footage taken from along each transect, was used to determine the percentage cover of benthic coral community categories (eg. live coral, hard coral, soft coral, dead coral, algae and abiotic).

The main objective of this survey was to establish a long-term monitoring program and provide baseline quantitative benthic habitat data along re-locatable transects to enable changes to the key conservation attributes of the Ningaloo Marine Park to be detected before unacceptable or irreversible impacts occur. Position-fixing of each transect was achieved by differential GPS to better than 3 m accuracy. High quality video footage was taken along three 50 m transects per site.

This project was partially funded by *Coasts and Clean Seas* an Initiative of the Natural Heritage Trust.

The NMPMP was coordinated by the Marine Conservation Branch (MCB) of the Department of Conservation and Land Management (CALM) and conducted in collaboration with the Australian Institute of Marine Science (AIMS) and CALM's Pilbara Region and Exmouth District.

Companion reports associated with this project are: Cary & Grubba (1998) and Cary *et al*. (1998).

1 INTRODUCTION

1.1 GENERAL

In 1998, Coasts and Clean Seas and initiative of the Natural Heritage Trust provided $103, 050 to the Department of Conservation and Land Management (CALM) to establish a long-term monitoring program to provide information on the 'health' of benthic communities of the NMP to detect any undesirable trends so that CALM, if necessary, can take remedial action to prevent irreversible changes from occurring.

The *Ningaloo Marine Park Monitoring Program* (NMPMP) is linked to the recommendations of the *Ningaloo Marine Park Management Plan 1989-1999;*

- Monitoring of marine flora and fauna be carried out to gain an understanding of factors which influence the stability of marine communities in the Park.
- Monitoring and periodic surveys of recreational and commercial use in and adjacent to the park be carried out to determine the effect of human usage on marine communities in the Park.

This data report presents sessile benthic coral community parameters measured at 21 'transect' sites established during the first field survey of the NMPMP in May 1998. The locality and boundaries of Ningaloo Marine Park and surrounds are shown in Figure 1.

The May 1998 field survey was coordinated by CALM in collaboration with the Australian Institute of Marine Science (AIMS). The Marine Conservation Branch (MCB) of CALM coordinated the program, which was conducted in collaboration with the Pilbara Regional Office and the Exmouth District Office.

1.2 BACKGROUND

The successful management of the marine environment is contingent upon comprehensive long-term monitoring programs that provide information on natural variability and long-term trends in key biological communities. Also to determine the status of important natural attributes at regular intervals and identify undesirable trends resulting from human activities in time for remedial management action to be implemented effectively. Monitoring programs generally comprise one or more of the following complementary objectives: (i) local scale impact and/or *compliance monitoring* that examines the effects of human activities in a localised area(s); (ii) temporally-constrained, broadscale *surveillance monitoring* to assess the impact of episodic regional physical and biological processes (eg the effect of cyclones and predators) and (iii) spatially-constrained, long-term monitoring of key biological parameters to determine the extent and cause of *natural variation* (eg seasonal and inter-annual variability) of key ecosystem attributes.

The spatial and temporal scale of on-going monitoring will determine the type of monitoring; ie. surveillance, compliance or natural variability. As the coral communities are the most dominant benthic habitat, the major focus of the field program was to monitor the coral communities. As the majority of human activities in the marine park occur within the easily accessible lagoon and back-reef reef (on the sea-ward edge of lagoon) the majority of monitoring sites were established in these areas. In this survey long-term monitoring sites were established on back-reef coral communities. Quantitative biological information to assess the 'health' of the coral communities was obtained using video footage from re-locatable permanent transects. Long term monitoring sites were established to provide baseline ecological data from which the impacts from human activities can be monitored and managed to ensure that all activities are ecologically sustainable.

1.3 AIM

The main aim of the NMPMP is to determine the 'health' of the major benthic habitats within the Ningaloo Marine Park and proposed southern extension.

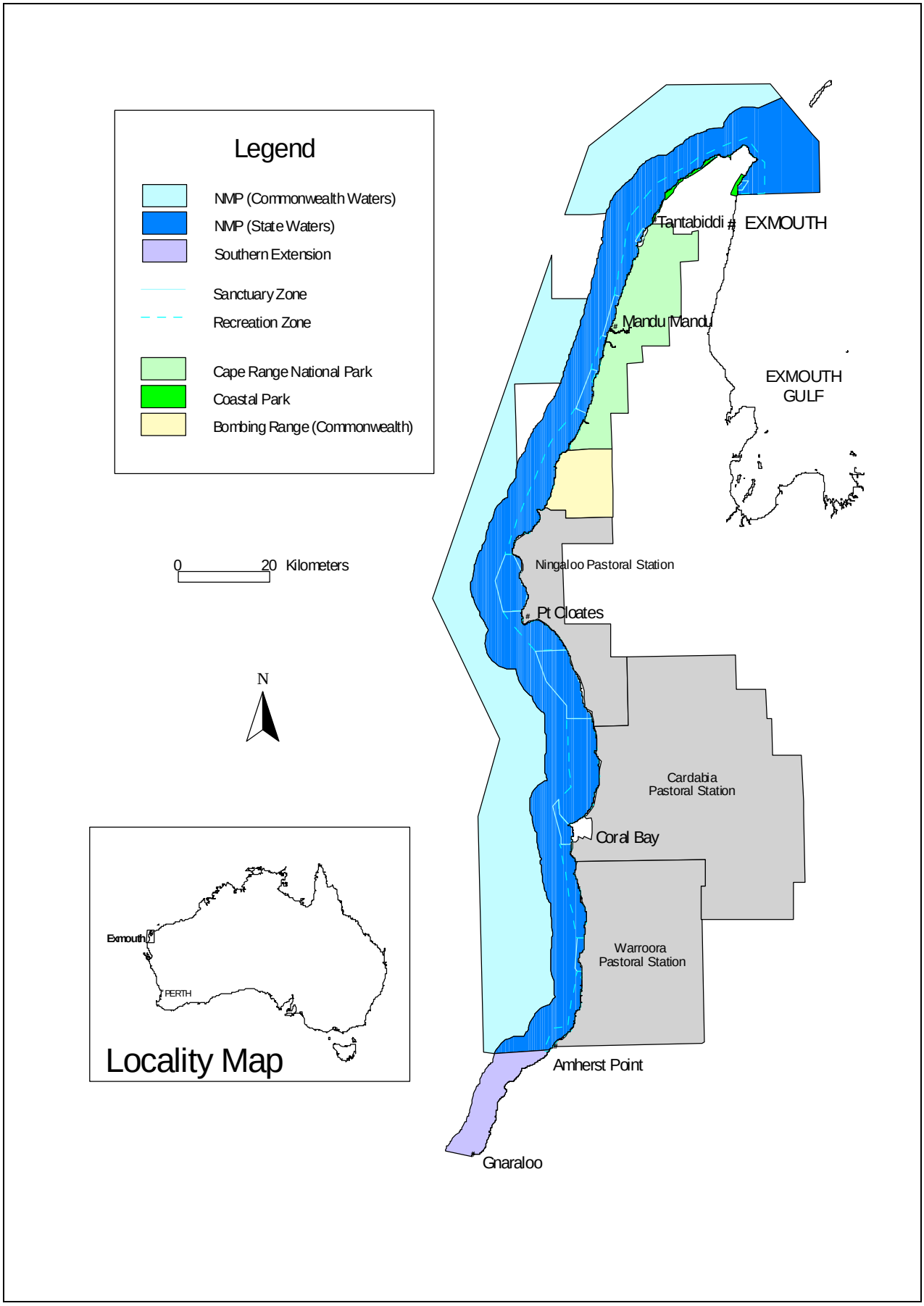

Figure 1. Location map of Ningaloo Marine Park and proposed southern extension.

2 METHODS

2.1 SITE SELECTION

Sites were selected to represent the ecological attributes of *back-reef* coral communities along approximately 300km of coastline from Bundegi reef in the north (Exmouth Gulf) to Gnarraloo in the south. A total of 21 representative sites were selected approximately every 15-20 km of coastline. These sites can be used for *surveillance monitoring* and a sub-set to monitor *natural variability*.

Site selection was further influenced if historical information of the 'health' of the coral communities from previous surveys was available. Historical data will assist in determining temporal changes. Studies reviewed to assist in site section included:

- Ayling A M and Ayling A L (1987). Ningaloo Marine Park: Preliminary fish density assessment and habitat survey; with information of coral damage due to *Drupella cornus* grazing. A report to CALM.
- Forde M J (1994). Ecology of the Muricid gastropod *Drupella cornus* and its significance as a corallivore on Ningaloo Reef, Western Australia. Master of Science degree from University of Western Australia.
- Osborne S and Williams (in preparation). Status of *Drupella cornus* outbreak at Ningaloo Reef. CALM report.
- Simpson *et al.* (1993). Destruction of corals and other reef animals by coral spawn slicks on Ningaloo Reef, Western Australia.
- Australian Institute of Marine Science - studies undertaken in Coral Bay.

2.2 ESTABLISHMENT OF 'TRANSECT' SITES

Twenty one 'transect' sites were established during the first survey of the *Ningaloo Marine Park Monitoring Program* undertaken in May 1998 (Table 1 and Figure 2). To monitor the spatial and temporal changes in benthic composition three permanent 50 m transects were established at each transect site. The transects were mainly set along the back reef at a depth contour of approximately 2m. Where practical the transects were set in a line, one after the other with the transect start and end points separated by a 10 m space. For this configuration the distance between the start of the first transect and the end of the last transect was 50+10+50+10+50=170m. The transects were permanently set up using star pickets (at the start of each transect and at the end of transect three) with a 50 m scaled (every 10cm) and weighted transect line following the contour of the seabed. The position of the start of each transect was recorded using differential GPS (datum AGD 84) which provides an accuracy of better than 3 metres. For further information on field survey methods see Cary & Grubba (1998).

2.3 VIDEO SAMPLING METHOD

The sessile benthic composition along each transect was recorded at a set height and speed, using a high quality Hi-8 video camera in an underwater housing, resulting in a transect 50 m long and approximately one metre in width being sampled. For information on sampling methodology for the collection of benthic habitat video imagery see Cary *et al*. (1998).

In addition to using the video transect technique, site, habitat and video information for each 'transect' site were recorded onto four data sheets:

1. *Transect data sheet* - differential GPS latitude and longitudes for each of the three transects at each site.
2. *Long-term monitoring site data sheet* - a site map which includes vessel location, transect locations and other features of interest.
3. *Habitat data sheet* – habitat description including dominant species and notes any impact or activity at the site.
4. *Video data sheet* - video time codes for each transect at each site.

2.4 VIDEO DATA ANALYSIS

2.4.1 Line Intercept Transect data

The mean percentage of a range of benthic categories (Table 3) was determined at each site from the video footage of three 50 m replicate transects using the line intercept transect (LIT) method (Loya 1978).

2.4.2 Line Intercept Transect analysed data

Basic statistical analysis was preformed on the LIT data using a 'standardised' Excel workbook. The workbook was set up with formulas to calculate means and standard errors for each transect at each site and provides a summary graph/table for the benthic categories at each site.

2.5 COMPARISON OF TWO VIDEO DATA ANALYSIS TECHNIQUES

The video footage from the 1998 'transect' monitoring sites was analysed by AIMS (Dampier office) using the AIMS Video Transect Analysis System (AVTAS) and by CALM using the Line Intercept Transect (LIT) method.

2.6 WATER DEPTH STANDARDISATION

In order to determine whether sites were intertidal or subtidal, the average water depth for each site was standardised to the chart datum and lowest astronomical tide. The average water depth was determined at each site by averaging the water depths recorded at the beginning of each transect (Table 1). The average water depth for each site was then standardised by subtracting the predicted tide height (for that location and time) from the average water depth (Table 1). Predicted hourly tide height tables were available for Coral Bay and Tantabiddi. The Tantabiddi table was used for N9: Bunderra and all sites north and the Coral Bay table was used for N10: Lefroy Bay and all sites south. See Appendix 1 for the predicted hourly tide height tables provided by the Department of Transport (DOT).

Table 1. Summary of long term 'transect' sites established in May 1998: historical information, site description and transect location (lat/long of beginning of transect 1). Sites (top to bottom) run in a counter clockwise direction from near Exmouth in the north to Gnarraloo in the south (see Fig 2).

No.	Site name	Zone	Site description	Longitude and Latitude*	Site Depth (metres)♀	Site Depth (metres)#	Previous studies
N19	Bundegi	Sanctuary	Back reef	21° 51.409' 114° 09.982'	1.8	0.5	1) Osborne 1991/1994.
N1	Bundegi	Recreation	Lagoon	21° 49.699' 114° 10.718'	2.9	1.7	1) Osborne 1991/1994.
N2	Mildura Wreck	Recreation	Back reef	21° 47.098' 114° 10.011'	3.3	2.1	No previous studies
N3	Vlamingh Head	Recreation	Back reef	21° 48.279' 114° 06.763'	4.0	2.8	No previous studies
N20	Jurabi Pt.	Recreation	Back reef	21° 51.412' 113° 59.951'	4.0	2.3	No previous studies
N5	Tantabiddi	Recreation	Back reef	21° 53.646' 113° 57.146'	2.9	1.8	1) Osborne 1991/1994.
N6	Ned's Camp/Mesa	Sanctuary	Back reef	21° 58.466' 113° 55.291'	1.0	0.0	1) Osborne 1991/1994. 2) Ayling 1987.
N7	Turquoise Bay	Sanctuary	Back reef	22° 06.570' 113° 52.655'	1.0	-0.5	1) Osborne 91/94.
N8	Osprey	Sanctuary	Back reef	22° 14.708' 113° 49.744'	1.5	0.0	1) Osborne 1991/1994. 2) Forde 1988.
N21	Yardie Creek	Recreation	Back reef	22° 18.909' 113° 47.783'	1.0	0.2	No previous studies
N9	Bunderra	Recreation	Back reef	22° 23.491' 113° 44.804'	1.8	0.7	1) Osborne 1991/1994.
N10	Lefroy Bay	Recreation	Back reef	22° 30.290' 113° 41.913'	1.8	0.1	1) Osborne 1991/1994.
N25	Pt. Billy	Recreation	Back reef	22° 33.105' 113° 39.407'	0.8	-0.5	No previous studies
N11	Pt. Cloates	Sanctuary	Back reef	22° 41.358' 113° 38.634'	1.8	0.1	1) Osborne 1991/1994.
N12	Dugong Sanctuary	Sanctuary	Back reef	22° 51.839' 113° 45.521'	2.5	0.9	No previous studies
N13	Bruboodjoo Pt.	Recreation	Back reef	22° 56.728' 113° 46.645'	1.0	-0.2	1) Osborne 1991/1994.
N22	North Coral Bay	Recreation	Back reef	23° 05.942' 113° 44.397'	1.5	0.5	No previous studies
N14	Coral Bay/Bill's Bay	Sanctuary	Back reef	23° 08.881' 113° 44.965'	1.8	0.7	1) Osborne 1991/1994 2) Forde 1988.
N24	Pelican Pt.	Recreation	Back reef	23° 20.023' 113° 46.671'	1.3	0.3	1) Osborne 1991/1994.
N17+	Cape Farquhar	N/A	Back reef	23° 37.410' 113° 36.887'	0.5	-0.4	No previous studies
N18+	Gnarraloo Bay	N/A	Back Reef	23° 45.758' 113° 32.500'	2.0	0.4	No previous studies

***DGPS coordinates were obtained using the datum AGD 84**

♀ average depth (m)

 # average depth (m) standardised to the chart datum and lowest astronomical tide

+ indicates sites south of Ningaloo Marine Park

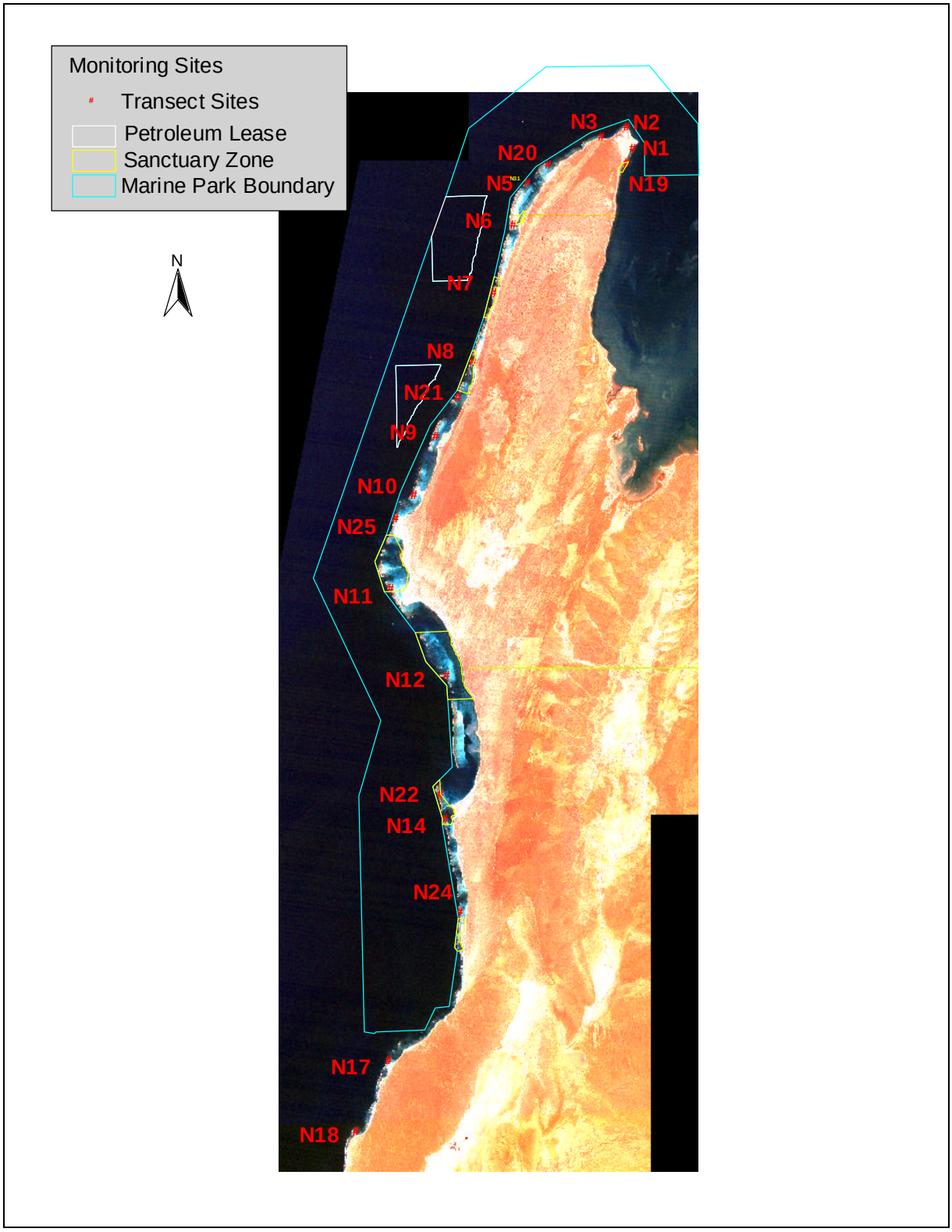

Figure 2. Location of long term monitoring 'transect' sites established in May 1998 in the Ningaloo Marine Park and proposed southern extension.

Table 2. Benthic category codes (adapted from English *et al.* 1997)

Category	Code	Notes/Remarks
Coral Families		
Acroporidae	ACR	
Dendrophylliidae	DEN	
Faviidae	FAV	
Pocilloporidae	POC	
Milleproidae	MIL	
Oculinidae	OCU	
Agariciidae	AGA	
Mussidae	MUS	
Fungiidae	FUN	
Merulinidae	MER	
Poritidae	POR	
General Coral Structures		
Digitate	D	(Acroporidae only) no 2° branching, e.g. Acropora digitifera, A. humilis
Tabular	T	(Acroporidae only) horizontal flattened plates, e.g. Acropora hyacinthus
Branching	B	at least 2° branching, e.g. Acropora palmata, A. fromosa
Encrusting	E	Major portion attached to substratum, plate-like, e.g. Acropora palifera, A. cuneata
Foliose	F	Coral attached at one or more points, leaf-like, e.g. Turbinaria sp.
Massive	M	Solid bolder or mound, e.g. Platygyra daedalea
Submassive	S	Forms small columns, knobs, or wedges, e.g. Porities lichen, Acropora. Palifera
Mushroom	MR	Solitary, free-living corals of Fungia
Heliopora	HL	blue coral
Millepora	ME	fire coral
Tubipora	TU	Organ-pipe coral, Tubipora musica
Dead Coral		
Dead Coral	DC1	Recently dead/bleached, white
	DC2	Dead coral with relatively new algal growth, rusty brown
Dead Coral with Algae	DCA	Coral is standing with (older) algal growth, skeletal structure can still be observed
Upturned plates	UP	Evidence of storm damage
Broken coral	BC	Coral fragments; impact other than storm/surge
Algae		
Algal Assemblage	AA	Consist of more than one species
Coralline Algae	CA	
Halimeda	HA	
Macroalgae	MA	Weedy/fleshy browns, reds, etc.
Turf Algae	TA	
Filamentous blue-green algae	FIL	
Seagrass		
Halophila ovalis	SGH	
Other Lifeforms		
Sponges	SP	
Molluscs	MU	
Urchins	U	
Soft Coral	SC	
Other	OT	Holothurians, anenomes, giant clams, etc.
Coral Predators		
Crown of Thorns	COT	
Drupella sp.	DRU	
Abiotic		
Rubble	R	Coral fragments
Sand	S	
Silt	SI	
Rock/Limestone Pavement	RK	

3 RESULTS

3.1 VIDEO SAMPLING METHOD – DATA SHEETS

See Appendix 3 for the four data sheets completed for each 'transect' site.

3.2 VIDEO DATA ANALYSIS

3.2.1 Line Intercept Transect data

See Appendix 4 for the LIT data.

3.2.2 Line Intercept Transect analysed data

See Appendix 5 for the LIT analysed data.

3.2.3 Summary of Line Intercept Transect analysed data

See Figure 3 for a summary of the percentage cover of major sessile benthic categories at long term monitoring 'transect' sites. See Figure 4 for a summary of the percentage cover of major coral families at long term monitoring 'transect' sites. See Appendix 6 for a summary of the LIT analysed data.

3.3 COMPARISON OF TWO VIDEO DATA ANALYSIS TECHNIQUES

Mean percentage of a range of benthic categories determined from LIT and AVTAS methods are found in Appendix 7. Comparison (correlation) between mean percentage of live hard coral determined from LIT and AVTAS methods are found in Appendix 8.

4 DATA MANAGEMENT

4.1 REPORT

Hard copies of this report will be held at three locations:

1. Marine Conservation Branch, Department of Conservation and Land Management, 47 Henry St., Fremantle Western Australia, 6010. Ph. (08) 9432 5100 Fax (08) 9430 5408.
2. Woodvale Library, Science and Information division, Ocean Reef Rd., Woodvale, Western Australia, 6026. Ph (08) 9306 1641.
3. Archives, Woodvale Library, Science and Information Division, Ocean Reef Rd., Woodvale, Western Australia, 6026. Ph. (08) 9405 5100 Fax. (08) 9306 1641.

The Marine Conservation Branch will hold digital copies of this report at the following directory pathways:

1. The Marine Conservation Branch Server" mcb on 'StreetTalk\User Data@FREM.MCB@CALM' [T:\Current_MCB_reports\MMS\mms_1899]
2. MCB Server full backup DAT tape [T:\Current_MCB_reports\MMS\mms_1899]
3. CD_ROM [mms_1899]
4. MCB homepage on the Department of Conservation and Land Management Intranet CALMweb: http://calmweb.calm.wa.gov.au/drb/ncd/mcb/rep_pdf/mms_reps/mms_1999/mmsrep00.htm#mms_1899

4.2 DIGITAL VIDEO TAPES

Digital tape duplicates of the original Hi-8 video tapes of the 21 NMPMP 'transect" sites will be held at two locations:

- Marine Conservation Branch, Department of Conservation and Land Management, 47 Henry St, Fremantle Western Australia, 6010.
- Corporate Information Services, Department of Conservation and Land Management, 50 Hayman Road, Como Western Australia, 6152. Box HOCD08 File Number: 1999F000508

The original Hi-8 video tapes will also held at the Marine Conservation Branch.

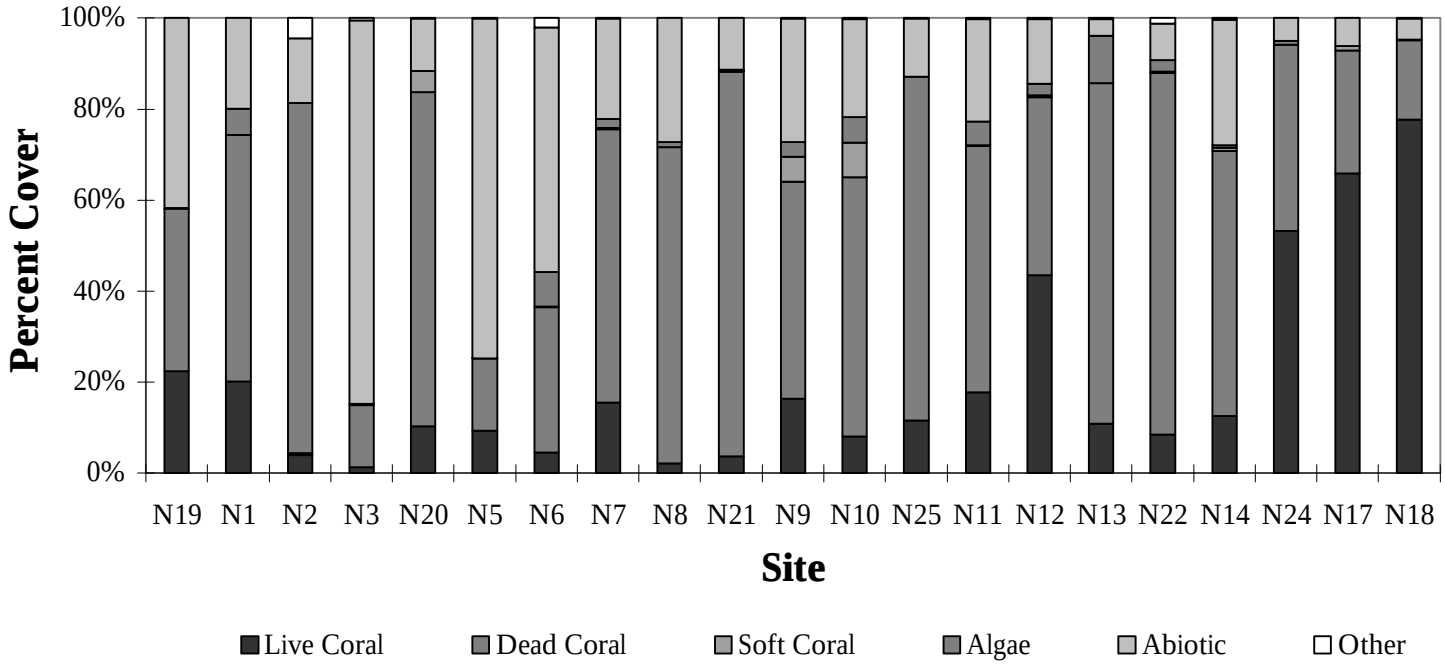

Figure 3. Percentage cover of major sessile benthic categories at long term monitoring 'transect' sites established in May 1998. Sites (left to right) run in a counter clockwise direction from near Exmouth in the north to Gnarraloo in the south (see Fig 2)

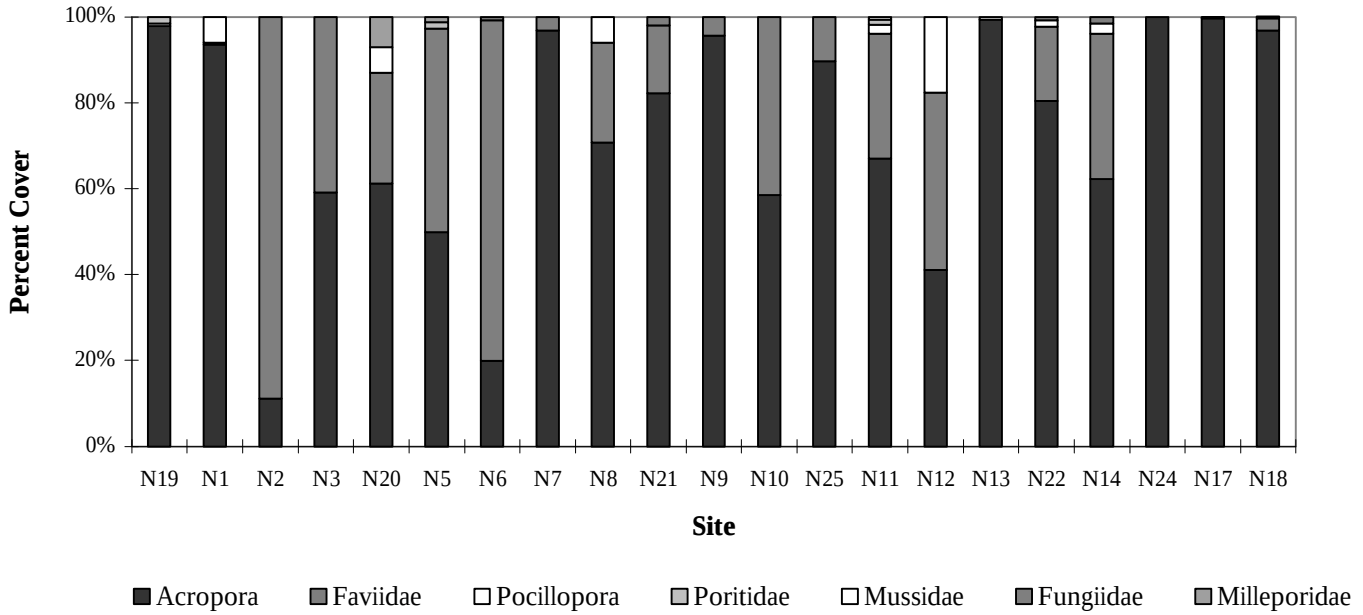

Figure 4. Percentage cover of major coral families at long term monitoring 'transect' sites established in May 1998. Sites (left to right) run in a counter clockwise direction from near Exmouth in the north to Gnarraloo in the south (see Fig 2)

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ACKNOWLEDGEMENTS

Direction

Director, Nature Conservation Division, CALM - Keiran McNamara
Manager, Marine Conservation Branch (MCB), Nature Conservation Division, CALM - Dr. Chris Simpson
Manager, Pilbara Region, CALM - Chris Muller

CALM Regional/District collaboration

Pilbara Region - Fran Stanley, Reserves Management Officer.
Exmouth District - Doug Myers, District Manager & Carolyn Williams, Conservation Officer Marine.
Project Leader and Field Team Leader - Jennie Cary, MCB & Tim Daly (20-29) MCB.

AIMS collaboration

WA Branch - Dr Andrew Heyward, Officer in Charge

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APPENDIX 1: Predicted tide heights (cm) for Coral Bay and Tantabiddi in May 1998

CORAL BAY

WESTERN STANDARD TIME -- PREDICTED TIDE HEIGHTS IN CMS

May 1998		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Fri	1	127	135	133	123	109	95	87	87	96	113	135	156	168	173	167	148	126	98	76	62	57	63	78	96
Sat	2	113	125	130	127	118	106	96	91	94	104	119	137	152	161	162	154	138	117	95	78	69	68	74	87
Sun	3	102	115	123	125	123	116	107	100	98	101	110	122	135	145	150	150	142	128	112	96	84	77	78	84
Mon	4	94	105	115	121	124	122	117	111	106	105	107	113	121	129	136	138	138	133	122	110	99	90	86	86
Tue	5	90	97	106	115	121	125	125	122	117	113	110	110	112	116	121	126	129	130	127	121	112	104	96	92
Wed	6	91	93	99	107	116	124	129	130	128	123	117	112	108	106	106	106	112	117	122	126	125	122	116	108	101
Thu	7	95	92	94	100	109	120	130	135	137	133	127	117	106	101	98	99	104	111	120	126	127	125	119	111
Fri	8	101	94	92	95	103	115	127	138	143	143	137	126	112	100	91	89	91	99	110	121	129	131	128	121
Sat	9	110	99	92	92	97	108	123	137	148	151	147	136	120	103	89	81	80	85	97	112	125	133	135	129
Sun	10	119	106	95	90	93	102	117	134	149	156	156	146	130	110	90	76	71	73	83	99	117	130	137	135
Mon	11	127	113	100	91	90	97	111	128	146	159	163	156	141	120	98	77	66	64	70	85	105	123	135	138
Tue	12	133	121	106	94	89	92	104	121	141	158	166	164	152	131	106	82	65	58	60	73	92	113	129	138
Wed	13	137	127	113	99	90	90	98	113	134	153	166	169	161	144	119	93	70	57	55	62	79	101	120	133
Thu	14	137	132	120	105	93	89	93	106	124	145	162	170	167	154	132	108	81	62	54	58	68	88	109	126
Fri	15	134	134	125	112	99	91	91	100	115	135	154	165	169	162	144	120	94	72	58	55	61	77	97	116
Sat	16	128	133	129	119	106	96	92	96	107	124	143	159	165	164	153	134	109	86	68	59	60	70	86	105
Sun	17	120	126	130	124	114	103	96	96	103	115	132	148	159	162	157	144	124	101	81	68	63	67	79	95
Mon	18	110	121	127	127	120	111	103	99	101	109	121	135	147	155	155	149	134	116	97	81	72	70	78	87
Tue	19	101	113	122	127	126	120	113	106	104	105	112	122	133	142	147	147	140	128	112	97	85	78	78	84
Wed	20	93	106	116	124	128	128	123	117	111	107	107	111	118	126	133	138	139	134	125	113	101	91	85	85
Thu	21	89	97	108	119	128	134	134	130	123	115	108	105	104	108	114	122	128	132	130	125	115	105	97	91
Fri	22	89	92	100	111	124	135	142	143	138	129	117	105	97	93	94	100	110	119	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Sat	23	93	90	93	102	116	132	145	154	154	147	133	116	99	86	79	80	87	99	114	126	132	132	128	115
Sun	24	103	93	90	95	106	123	141	157	165	164	153	134	111	89	72	65	66	76	92	111	127	135	136	126
Mon	25	116	101	91	89	97	111	131	152	169	175	170	155	131	103	78	60	53	56	69	90	113	130	138	137
Tue	26	128	113	96	89	90	100	117	140	162	177	181	172	152	124	93	67	50	45	51	69	93	117	133	140
Wed	27	136	124	106	93	87	91	104	124	148	169	182	182	170	146	115	84	59	45	43	53	73	99	121	135
Thu	28	139	132	118	102	90	87	94	109	130	154	172	181	178	162	136	105	76	54	44	46	59	82	106	125
Fri	29	137	137	127	113	98	89	89	98	114	135	156	171	176	170	151	125	96	70	54	48	54	70	92	113
Sat	30	129	136	133	122	109	96	90	93	102	118	138	155	165	167	158	139	114	89	68	57	56	65	82	102
Sun	31	119	130	134	129	119	107	97	94	97	107	122	138	150	157	155	145	127	105	85	70	64	66	77	93

TANTABIDDI

WESTERN STANDARD TIME -- PREDICTED TIDE HEIGHTS IN CMS

May 1998		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Fri	1	135	149	147	137	119	100	88	86	95	113	136	160	177	184	179	162	136	105	76	60	54	61	78	101
Sat	2	123	137	143	140	129	114	100	92	94	104	121	141	159	170	172	165	149	125	101	80	68	66	74	90
Sun	3	108	124	134	137	134	125	114	104	100	103	112	125	140	152	159	159	152	138	119	101	88	78	78	86
Mon	4	96	112	124	131	134	131	125	116	111	108	110	117	125	135	143	147	147	141	131	118	105	94	88	88
Tue	5	93	103	113	122	130	133	133	129	124	119	115	114	116	120	126	132	137	138	135	129	120	110	101	96
Wed	6	94	97	104	113	122	131	136	138	136	131	124	118	113	110	111	116	122	129	133	134	131	125	116	107
Thu	7	99	95	97	104	113	125	136	143	145	143	136	126	115	105	100	101	106	116	126	133	137	136	130	120
Fri	8	108	98	94	96	105	117	132	145	152	153	147	136	121	106	94	89	91	100	113	127	137	142	140	132
Sat	9	119	105	96	92	97	109	126	143	155	161	158	147	131	115	92	81	78	84	98	116	132	143	146	142
Sun	10	131	114	99	91	92	101	117	137	155	166	167	159	142	119	96	78	68	70	82	101	122	139	148	148
Mon	11	140	125	106	93	88	94	109	129	151	166	173	169	154	131	104	80	64	60	67	85	109	131	148	151
Tue	12	146	134	115	98	88	90	101	120	143	163	175	176	165	144	116	87	65	55	56	70	93	119	139	150
Wed	13	150	140	124	105	91	87	95	111	134	157	173	180	174	156	130	99	72	56	51	59	75	104	128	145
Thu	14	150	145	132	114	96	88	90	103	124	147	167	179	179	167	144	115	84	62	51	52	67	89	115	136
Fri	15	147	147	136	122	105	92	89	97	114	136	158	173	179	174	157	131	100	73	57	52	59	77	101	124
Sat	16	140	146	141	130	114	99	92	94	106	125	146	164	175	175	165	145	118	90	69	57	57	69	89	111
Sun	17	130	140	142	136	124	109	98	95	101	115	133	152	166	171	168	155	134	109	85	66	62	66	80	99
Mon	18	118	132	136	136	131	120	108	101	101	108	122	138	152	162	164	159	146	126	104	85	73	70	76	89
Tue	19	106	121	132	137	136	130	121	112	106	107	113	124	136	148	155	158	160	138	122	104	90	80	79	85
Wed	20	96	110	123	132	137	137	132	125	117	111	110	113	120	129	138	145	147	143	134	122	109	97	88	87
Thu	21	91	100	112	124	135	141	142	139	132	122	114	108	107	110	117	126	134	139	139	134	126	115	104	95
Fri	22	91	94	102	114	128	141	150	152	148	139	126	112	101	95	96	102	113	125	134	139	136	132	122	109
Sat	23	98	92	94	103	118	135	151	161	164	157	144	125	105	89	80	79	87	101	119	134	142	143	137	126
Sun	24	111	97	91	94	105	123	144	163	174	175	165	145	121	94	74	63	64	75	94	117	136	147	148	141
Mon	25	126	106	93	88	94	109	131	155	176	186	183	168	143	112	81	59	49	52	67	92	120	141	151	150
Tue	26	140	123	103	89	87	96	114	140	166	186	193	186	165	136	100	68	48	40	47	67	96	125	145	154
Wed	27	150	136	117	96	85	87	100	121	149	175	192	195	183	158	125	88	58	41	37	48	73	104	131	149
Thu	28	153	146	130	109	91	84	89	105	129	156	179	192	191	175	148	113	78	52	39	41	56	83	113	137
Fri	29	149	150	140	123	103	89	86	94	111	135	160	179	187	182	164	136	102	72	51	43	50	68	95	121
Sat	30	140	148	145	134	117	100	90	89	100	117	139	160	174	178	170	150	123	94	69	54	52	62	82	107
Sun	31	128	141	145	140	129	113	100	93	95	106	122	141	157	165	168	156	137	113	89	70	61	64	76	95

APPENDIX 2: NMP 05/98 video tapes

Tapes #	Programme	Description	Hi8 original	VHS copy	Digital copy
MMS/PI/NMP/BVT#1-05-98	Ningaloo Marine Park Monitoring Program	N5,N1,N19	Hi8	Yes	Yes
MMS/PI/NMP/BVT#2-05-98	Ningaloo Marine Park Monitoring Program	N2,N3,N6	Hi8	Yes	Yes
MMS/PI/NMP/BVT#3-05-98	Ningaloo Marine Park Monitoring Program	N7,N8	Hi8	Yes	Yes
MMS/PI/NMP/BVT#4-05-98	Ningaloo Marine Park Monitoring Program	Navy Pier,N20	Hi8	Yes	Yes
MMS/PI/NMP/BVT#5-05-98	Ningaloo Marine Park Monitoring Program	N21,N10,N9	Hi8	Yes	Yes
MMS/PI/NMP/BVT#6-05-98	Ningaloo Marine Park Monitoring Program	N11,N12	Hi8	Yes	Yes
MMS/PI/NMP/BVT#7-05-98	Ningaloo Marine Park Monitoring Program	General footage,N25,N12	Hi8	Yes	Yes
MMS/PI/NMP/BVT#8-05-98	Ningaloo Marine Park Monitoring Program	N14,N22,N24	Hi8	Yes	Yes
MMS/PI/NMP/BVT#9-05-98	Ningaloo Marine Park Monitoring Program	Monck Head general footage,N13,N17	Hi8	Yes	Yes
MMS/PI/NMP/BVT#10-05-98	Ningaloo Marine Park Monitoring Program	N17,N18	Hi8	Yes	Yes

APPENDIX 3: Data sheets

TRANSECT DATA SHEET

Project	NINGALOO MARINE PARK MONITORING PROGRAM			**Field Survey**		MAY 1998
Site No.	N19	**Site Name**	Bundegi Sanctuary	**Date**	5/5/98	**Recorder**	Lapwood
Time	13.00	**Video tape no.**	NMPMP/bvt/05.05.98 /#1		**Video operator**		Cary

T1	**Length (m)**	**50**	**Compass bearing (°)**		**Distance to T2 (m)**	10.0
Transect	**DGPS Lat**	**DGPS Long**	**Depth (m)**	**Picket type**	**Picket ht (m)**
Start	21° 51.409' S	114° 09.982' E	1.5-2.0	60cm Star/Steel	0.15
Finish	° ' S	° ' E			

Notes:
Live coral: 24%
Dead coral: 22%
Algae: 0%
Abiotic: 54%

T2	**Length (m)**	**50**	**Compass bearing (°)**		**Distance to T2 (m)**	10.0
Transect	**DGPS Lat**	**DGPS Long**	**Depth (m)**	**Picket type**	**Picket ht (m)**
Start	21° 51.429' S	114° 09.959' E	1.5-2.0	60cm Star/Steel	0.15
Finish	° ' S	° ' E			

Notes:
Live coral: 22%
Dead coral: 30%
Algae: 0%
Abiotic: 53%

T3	**Length (m)**	**50**	**Compass bearing (°)**			
Transect	**DGPS Lat**	**DGPS Long**	**Depth (m)**	**Picket type**	**Picket ht (m)**
Start	21° 51.453' S	114° 09.942' E	1.5-2.0	60cm Star/Steel	0.15
Finish	21° 51.472' S	114° 09.923' E	1.5-2.0	60cm Star/Steel	0.15

Notes:
Live coral: 19%
Dead coral: 66%
Algae: 0%
Abiotic: 41%

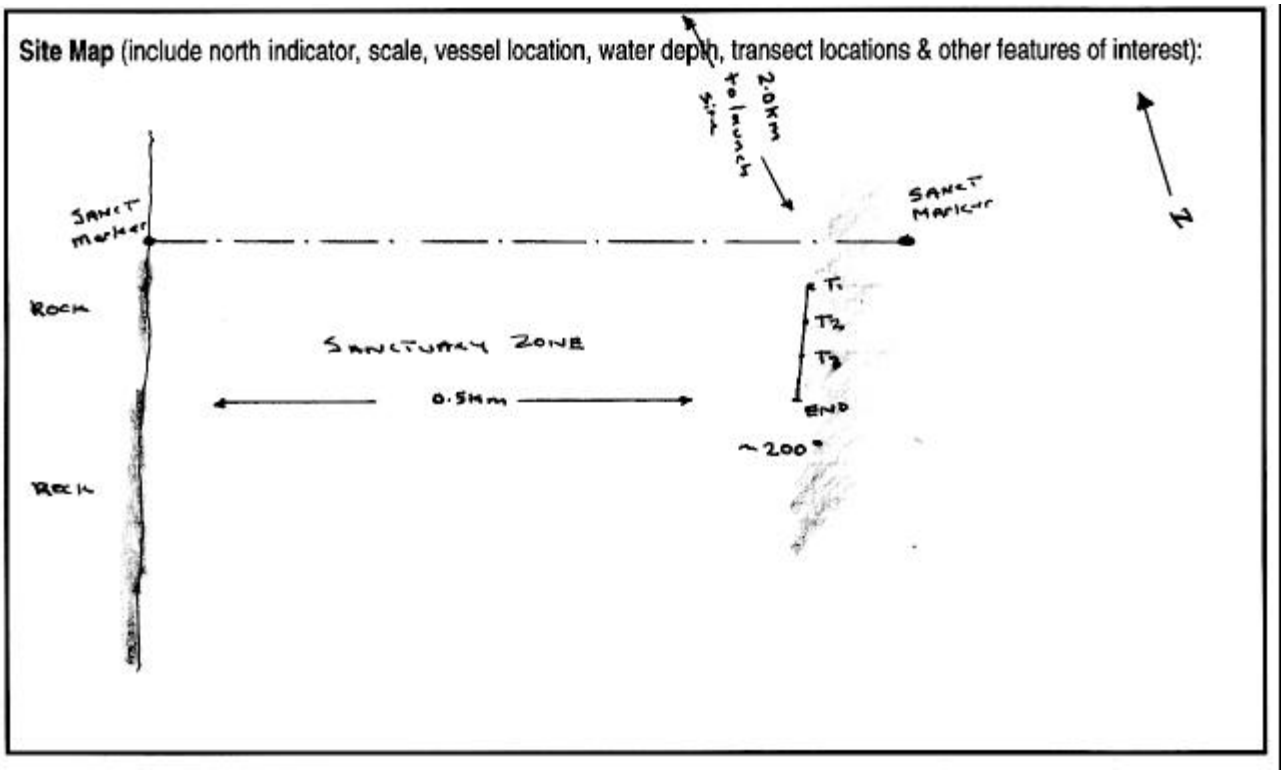
LONG-TERM MONITORING SITE DATA SHEET

Project	NINGALOO MARINE PARK MONITORING PROGRAM				**Field Survey**		MAY 1998
Site No.	N19	**Site Name**	Bundegi Sanctuary	**Date**	5/5/98	**Recorder**	Lapwood

GPS Latitude	**GPS Longitude**	**Differential**			
21° 51.409 ' S	114° 09.982 ' E	**Yes**	☒	**No**	☐

Habitat type	Back reef - coral dominated by a high diversity of *Acropora* sp. and growth forms. Very narrow back reef and reef. Bottom is coral rubble with approximately 30% live coral cover.						
Location of nearest transect from GPS position		**Transect No.**	T	**Compass bearing (°)**		**Distance (m)**	

Site Map (include north indicator, scale, vessel location, water depth, transect locations & other features of interest):



Notes:

HABITAT DATA SHEET

Project	NINGALOO MARINE PARK MONITORING PROGRAM				**Field Survey**		MAY 1998
Site No.	N19	**Site Name**	Bundegi Sanctuary	**Date**	5/5/98	**Recorder**	Grubba
Vessel	AIMS 4.3M NAIAD CALM 3.8M Zodiac	**Time**	13.32	**Weather**	> 5 knots		
Sea	Calm	**Water depth (m)**	2.0	**Water visibility (m)**	15.0		

GPS Latitude	GPS Longitude	Differential			
21° 51.409' S	114° 09.982' E	**Yes**	☒	**No**	☐

Site location	Site located immediately inside of the reef crest.

Habitat Description

Back reef - coral dominated by a high diversity of *Acropora* sp. and growth forms. Very narrow back reef and reef. Bottom is coral rubble with approximately 30% live coral cover.
Live coral: 22% (mean)
Dead coral: 39% (mean)
Algae: 0% (mean)
Abiotic: 41%

Dominant Species

Seagrass	
Macro-algae	
Coral	High diversity of *Acropora* sp (tabular and branching), *Porites* sp.
Fish	Pomacentridae (angelfish), Scaridae (parrotfish), Lutjanidae (snapper) and Chaetodontidae (butterflyfish).
Invertebrates	*Panulirus versicolor* x1(painted tropical rock lobster)

Other Features

Epinephelus tukula x 1 (potato cod), *Triaenodon obesus* x 1 (whitetip reef shark) and uniquely shaped *Acropora* sp.
High diversity of Pomacentridae (angelfish) and medium sized Scarids (parrotfish).

Impact or Activity

No obvious human impacts, Some previous cyclone damage. No *Drupella* sighted.

Video reference	NMPMP/bvt/05.05.98 /#1	**Aerial reference**	1985/WA 3434C /RUN /5154
Slide reference		**Print reference**	

VIDEO DATA SHEET

Project	NINGALOO MARINE PARK MONITORING PROGRAM				**Field Survey**		MAY 1998
Site No.	N19	**Site Name**	Bundegi Sanctuary	**Date**	5/5/98	**Recorder**	Cary
Start time	13.00	**Finish time**	15.30	**Depth (m)**	1.5-2.0	**Visibility (m)**	15.0

Underwater Video System	Blaupunkt CC894 camcorder in StingRay SR-700 housing

Focus mode				**Exposure mode**				**Program mode**				**White balance mode**			
Auto	☐	Manual	☒	Auto	☒	Manual	☐	Sports	☐	High-speed	☒	Auto	☒	Outdoor	☐

Lens system				**Filters**								**Lights**			
Wide-angle	☒	Zoom-macro	☐	None	☒	Red	☐	Yellow	☐	Orange	☐	On	☐	Off	☒

Video operator	Cary	**Tape no.**	NMPMP/bvt/05.05.98 /#1	**Height above substrate (cm)**	30
Time coding for all video footage at site:		**From:**	00:00:33:09	**To:**	00:00:52:02

Transect time coding	**Start**	**Finish**	**Total time (mins/secs)**
T1	00:00:34:01	00:00:38:38	4.37
T2	00:00:39:22	00:00:43:58	5.20
T3	00:00:44:41	00:00:49:33	5.37

Notes:

TRANSECT DATA SHEET

Project	NINGALOO MARINE PARK MONITORING PROGRAM				**Field Survey**		MAY 1998
Site No.	N1	**Site Name**	Bundegi	**Date**	5/5/98	**Recorder**	Lapwood
Time	12.10	**Video tape no.**	NMPMP/bvt/05.05.98 /#1		**Video operator**		Cary

T1	**Length (m)**	**50**	**Compass bearing (°)**	60	**Distance to T2 (m)**	10
Transect	**DGPS Lat**		**DGPS Long**	**Depth (m)**	**Picket type**	**Picket ht (m)**
Start	21° 49.699' S		114° 10.718' E	3.0	60 cm Star/ Steel	0.15
Finish	° ' S		° ' E			

Notes:
Live hard coral: 35%
Dead coral: 50%
Algae: 4%
Abiotic: 11%

T2	**Length (m)**	**50**	**Compass bearing (°)**	60	**Distance to T2 (m)**	10
Transect	**DGPS Lat**		**DGPS Long**	**Depth (m)**	**Picket type**	**Picket ht (m)**
Start	21° 49.725' S		114° 10.698' E	3.0	60cm Star/ Steel	0.15
Finish	° ' S		° ' E			

Notes:
Live hard coral: 11%
Dead coral: 62%
Algae: 11%
Abiotic: 17%

T3	**Length (m)**	**50**	**Compass bearing (°)**	60		
Transect	**DGPS Lat**		**DGPS Long**	**Depth (m)**	**Picket type**	**Picket ht (m)**
Start	21° 49.750' S		114° 10.682' E	3.0	60cm Star/ Steel	0.15
Finish	21° 49.776' S		114° 10.678' E	3	60cm Star/ Steel	0.15

Notes:
Live coral: 15%
Dead coral: 51%
Algae: 3%
Abiotic: 32%

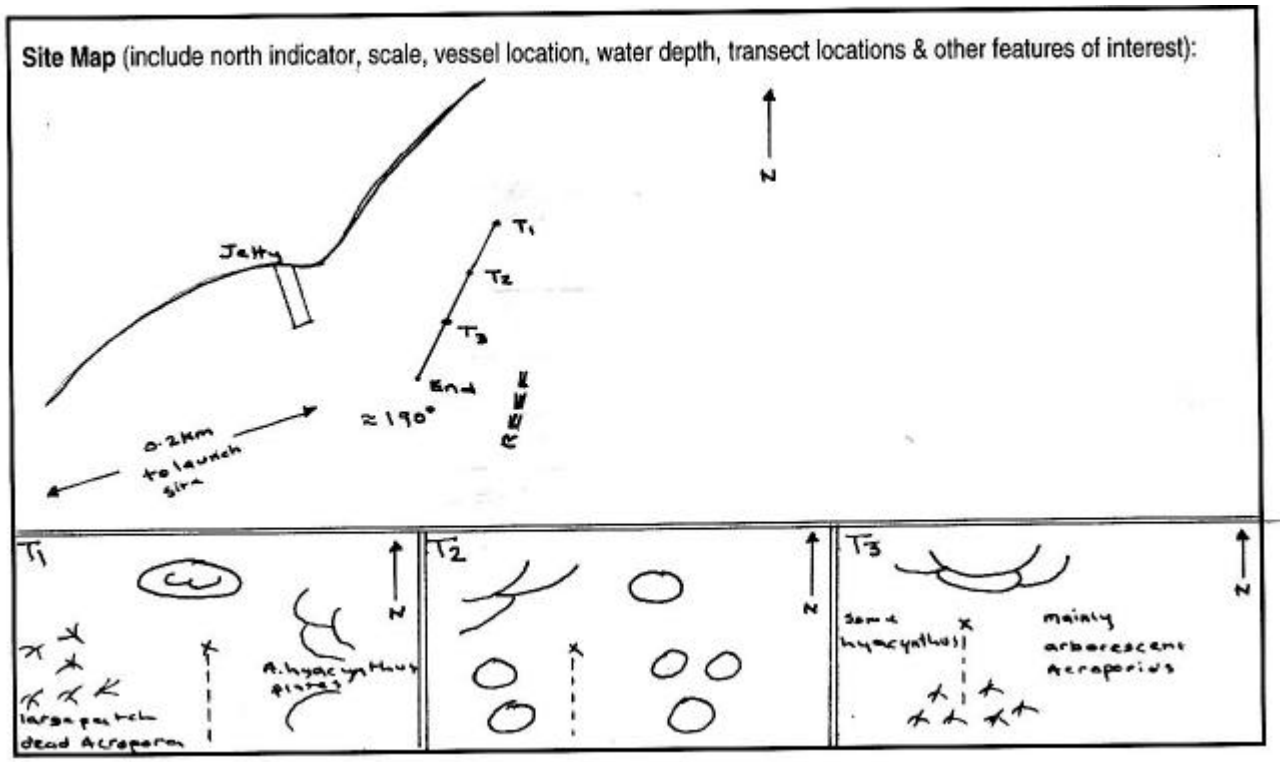
LONG-TERM MONITORING SITE DATA SHEET

Project	NINGALOO MARINE PARK MONITORING PROGRAM				**Field Survey**		MAY 1998
Site No.	N1	**Site Name**	Bundegi	**Date**	5/5/98	**Recorder**	Lapwood

GPS Latitude	**GPS Longitude**	**Differential**			
21° 49.699' S	114° 10.718' E	**Yes**	☒	**No**	☐

Habitat type	Back reef – coral with high silt load.						
Location of nearest transect from GPS position		**Transect No.**	T1	**Compass bearing (°)**	190	**Distance (m)**	10.0

Site Map (include north indicator, scale, vessel location, water depth, transect locations & other features of interest):



Notes:

HABITAT DATA SHEET

Project	NINGALOO MARINE PARK MONITORING PROGRAM				**Field Survey**		MAY 1998
Site No.	N1	**Site Name**	Bundegi	**Date**	5/5/98	**Recorder**	Cary
Vessel	AIMS 4.3M NAIAD CALM 3.8M ZODIAC	**Time**	1140	**Weather**	25 Knots SE		
Sea	20cm Waves	**Water depth (m)**	3.0	**Water visibility (m)**	7.0		

GPS Latitude	GPS Longitude	Differential			
21° 49.699' S	114° 10.718' E	**Yes**	☒	**No**	☐

Site location	Site located immediately inshore of reef platform to the north of the Bundegi public jetty.

Habitat Description

Back reef – coral with high silt load.
Live coral: 20% (mean)
Dead coral: 54% (mean)
Algae: 6% (mean)
Abiotic: 20% (mean)

Dominant Species

Seagrass	
Macro-algae	Dictyota sp (wide-branch)
Coral	*Monitipora* sp. and *Acropora* sp. and *A. hyacynathus* (tabular and digitate).
Fish	Few fish species observed. Medium-sized Scarids (parrotfish), Pomacentridae (damselfish), *Chromis* sp and *Cephalopholis* sp. x 4 (coral trout).
Invertebrates	

Other Features

Impact or Activity

Past storm damage evident – upturned plates (few years ago). High level of sedimentation. No *Drupella* sighted.

Video reference	NMPMP/bvt/05.05.98 /#1	**Aerial reference**	1985/WA 2286C /RUN /5157
Slide reference		**Print reference**	

VIDEO DATA SHEET

Project	NINGALOO MARINE PARK MONITORING PROGRAM				**Field Survey**		MAY 1998
Site No.	N1	**Site Name**	Bundegi	**Date**	5/5/98	**Recorder**	Cary
Start time	12.10	**Finish time**	12.31	**Depth (m)**	2.8-3.0	**Visibility (m)**	7.0

Underwater Video System	Blaupunkt CC894 camcorder in StingRay SR-700 housing

Focus mode				**Exposure mode**				**Program mode**				**White balance mode**			
Auto	☐	Manual	☒	Auto	☒	Manual	☐	Sports	☐	High-speed	☒	Auto	☒	Outdoor	☐

Lens system				**Filters**								**Lights**			
Wide-angle	☒	Zoom-macro	☐	None	☒	Red	☐	Yellow	☐	Orange	☐	On	☐	Off	☒

Video operator	Cary	**Tape no.**	NMPMP/bvt/05.05.98 /#1	**Height above substrate (cm)**	30
Time coding for all video footage at site:		**From:**	00:00:12:51	**To:**	00:00:33:08

Transect time coding	**Start**	**Finish**	**Total time (mins/secs)**
T1	00:00:13:39	00:00:19:26	6.25
T2	00:00:20:11	00:00:25:28	5.17
T3	00:00:26:59	00:00:32:07	5.48

Notes:

360° scan at the beginning of each transect. General footage at the end of transect 3.

TRANSECT DATA SHEET

Project	NINGALOO MARINE PARK MONITORING PROGRAM				Field Survey		MAY 1998
Site No.	N2	Site Name	Mildura Wreck	Date	6/5/98	Recorder	Lapwood
Time	11.20	Video tape no.	NMPMP/bvt/06.05.98 /#2		Video operator		Cary

T1	Length (m)	50	Compass bearing (°)	300	Distance to T2 (m)	10.0
Transect	DGPS Lat		DGPS Long	Depth (m)	Picket type	Picket ht (m)
Start	21° 47.098' S		114° 10.011' E	3.0	60cm Star/Steel	0.2
Finish	° ' S		° ' E			

Notes:
Live coral: 3%
Dead coral: 0%
Algae: 10%
Abiotic: 80%

T2	Length (m)	50	Compass bearing (°)	300	Distance to T2 (m)	10.0
Transect	DGPS Lat		DGPS Long	Depth (m)	Picket type	Picket ht (m)
Start	21° 47.089' S		114° 09.984' E	4.0	60cm Star/Steel	0.2
Finish	° ' S		° ' E			

Notes:
Live coral: 1%
Dead coral: 0%
Algae: 22%
Abiotic: 76%

T3	Length (m)	50	Compass bearing (°)	300		
Transect	DGPS Lat		DGPS Long	Depth (m)	Picket type	Picket ht (m)
Start	21° 47.063' S		114° 09.960' E	3.0	60cm Star/Steel	0.2
Finish	21° 47.045' S		114° 09.936' E	3.0	60cm Star/Steel	

Notes:
DGPS in operable – site positions taken on the following day.
T2: depth: 4m (ledge)
Live coral: 2% Dead coral: 0%
Algae: 72% Abiotic: 25%

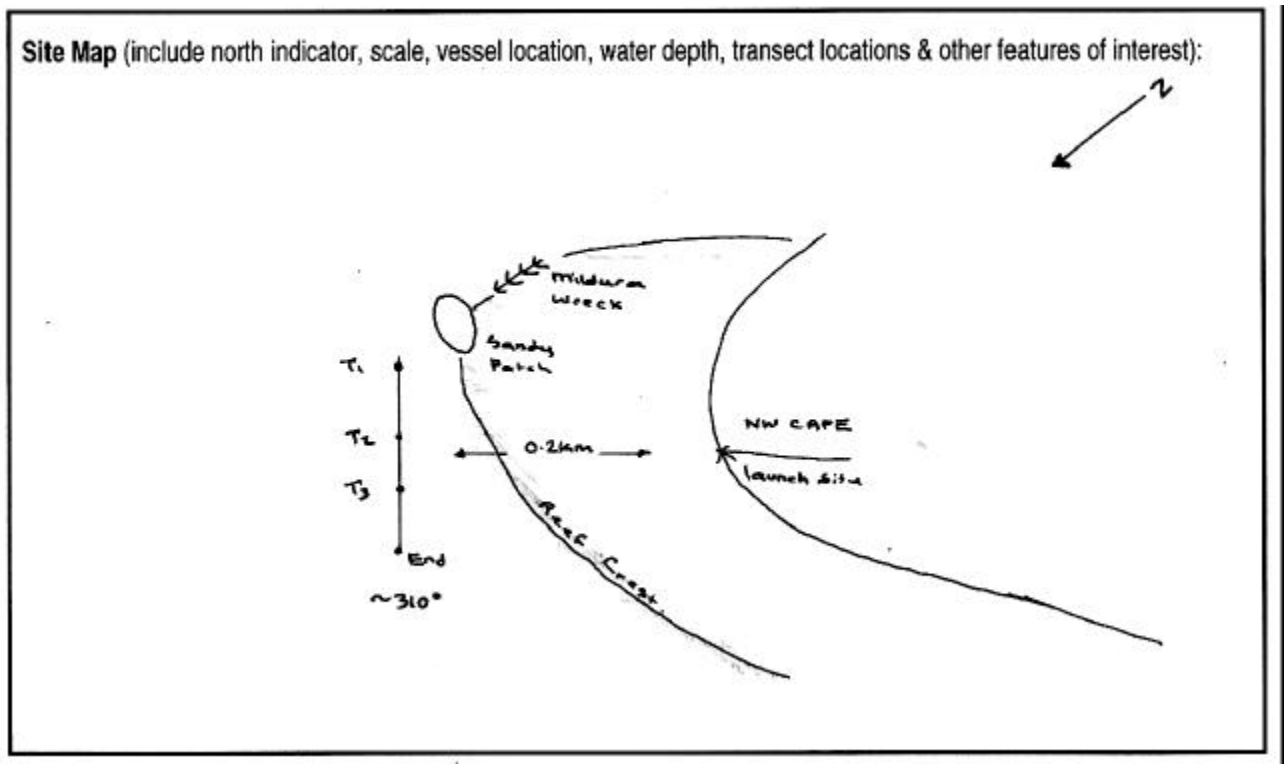
LONG-TERM MONITORING SITE DATA SHEET

Project	NINGALOO MARINE PARK MONITORING PROGRAM				**Field Survey**		MAY 1998
Site No.	N2	**Site Name**	Mildura Wreck	**Date**	6/5/98	**Recorder**	Fields

GPS Latitude	**GPS Longitude**	**Differential**			
21 ° 47.098 ' S	114 ° 10.011 ' E	**Yes**	☒	**No**	☐

Habitat type	Limestone pavement covered in macro algae and small coral colonies. High energy area (swell). Flat bottom, some depressions and ridges.						
Location of nearest transect from GPS position		**Transect No.**	T1	**Compass bearing (°)**	300	**Distance (m)**	10.0

Site Map (include north indicator, scale, vessel location, water depth, transect locations & other features of interest):



Notes:
All coral colonies very small in size. High energy zone, future access may be affected by sea conditions.
The site is best described as a reef flat rather than a back reef.

HABITAT DATA SHEET

Project	NINGALOO MARINE PARK MONITORING PROGRAM				**Field Survey**		MAY 1998
Site No.	N2	**Site Name**	Mildura Wreck	**Date**	6/5/98	**Recorder**	Grubba
Vessel	AIMS 4.3M NAIAD CALM 3.8M ZODIAC	**Time**	11.20	**Weather**	8 knots NE		
Sea	Slight swell	**Water depth (m)**	2.0-4.0	**Water visibility (m)**	12.0		

GPS Latitude	GPS Longitude	Differential			
21 ° 47.098 ' S	114 ° 10.011 ' E	**Yes**	☒	**No**	☐

Site location	Site located SW of the Mildura wreck.

Habitat Description

Limestone pavement covered in macro algae and small coral colonies. High energy area (swell). Flat bottom, some depressions and ridges.
Live coral: 2% (mean)
Dead coral: 0% (mean)
Algae: 35% (mean)
Abiotic: 60% (mean)

Dominant Species

Seagrass	*Halophila ovalis*
Macro-algae	Filamentous blue - green algae, *Dictyota* sp and *Amphiroa foliacea*.
Coral	*Acropora* sp (very small colonies), *Pocillopora* sp x2, *Sarcophyton* sp. (soft coral), *Sinularia* sp.(soft coral), *Platygyra* sp. (some) and occasional *Gonipora* sp.
Fish	Pomacentridae (damselfish), Pomacanthidae (angelfish), Labridae (juv. wrasse), Scaridae (juv. parrotfish), Acanthridae (surgeonfish), Balistidae (triggerfish) and *Rhinecanthus verrucosus* (blackpatch triggerfish).
Invertebrates	*Spirastrella vagabunda* (sponge), *Echinometra* sp. (sea urchin), Octopus cyanea (common reef octopus), *Tripneustes gratilla* (some)(sea urchin), *Linckia laevigata* (sea star), *Actinopga mauritiana* (sea cucumber), and *Oxycomantus bennetti* (feather star)

Other Features

Cypracea tigris (cowries) and *lambia chiragra* (spider conch)

Impact or Activity

High energy site (swell and waves). No *Drupella* sighted.

Video reference	NMPMP/bvt/06.05.98 /#2	**Aerial reference**	1994 /WA 3405C /RUN1/ 5068
Slide reference		**Print reference**	

VIDEO DATA SHEET

Project	NINGALOO MARINE PARK MONITORING PROGRAM				**Field Survey**		MAY 1998
Site No.	N2	**Site Name**	Mildura wreck	**Date**	6/5/98	**Recorder**	Myers
Start time	11.20	**Finish time**	13.30	**Depth (m)**	2.0-4.0	**Visibility (m)**	12.0

Underwater Video System	Blaupunkt CC894 camcorder in StingRay SR-700 housing

Focus mode				**Exposure mode**				**Program mode**				**White balance mode**			
Auto	☐	Manual	☒	Auto	☒	Manual	☐	Sports	☐	High-speed	☒	Auto	☒	Outdoor	☐

Lens system				**Filters**								**Lights**			
Wide-angle	☒	Zoom-macro	☐	None	☒	Red	☐	Yellow	☐	Orange	☐	On	☐	Off	☒

Video operator	Cary	**Tape no.**	NMPMP/bvt/06.05.98 /#2	**Height above substrate (cm)**	30
Time coding for all video footage at site:		**From:**	00:00:00:00	**To:**	00:00:22:14

Transect time coding	**Start**	**Finish**	**Total time (mins/secs)**
T1	00:00:06:05	00:00:10:43	4.38
T2	00:00:10:45	00:00:16:00	5.15
T3	00:00:17:05	00:00:21:24	4.19

Notes:

Program mode: 1/250 Speed

TRANSECT DATA SHEET

Project	NINGALOO MARINE PARK MONITORING PROGRAM				**Field Survey**		MAY 1998
Site No.	N3	**Site Name**	Vlamingh Head	**Date**	6/5/98	**Recorder**	Lapwood
Time	14.38	**Video tape no.**	NMPMP/bvt/06.05.98 /#2			**Video operator**	Cary

T1	**Length (m)**	**50**	**Compass bearing (°)**	330	**Distance to T2 (m)**	10.0
Transect	**DGPS Lat**		**DGPS Long**	**Depth (m)**	**Picket type**	**Picket ht (m)**
Start	21° 48.279' S		114° 06.763' E	3.0	60cm Star/Steel	0.2
Finish	° ' S		° ' E			

Notes:
Live coral: 1%
Dead coral: 1%
Algae: 0%
Abiotic: 98%

T2	**Length (m)**	**50**	**Compass bearing (°)**	330	**Distance to T2 (m)**	10.0
Transect	**DGPS Lat**		**DGPS Long**	**Depth (m)**	**Picket type**	**Picket ht (m)**
Start	21° 48.251' S		114° 06.738' E	4.0	60cm Star/Steel	0.2
Finish	° ' S		° ' E			

Notes:
Live coral: 2%
Dead coral: 0%
Algae: 0%
Abiotic: 98%

T3	**Length (m)**	**50**	**Compass bearing (°)**	330		
Transect	**DGPS Lat**		**DGPS Long**	**Depth (m)**	**Picket type**	**Picket ht (m)**
Start	21° 48.234' S		114° 06.715' E	5.0	60cm Star/Steel	0.2
Finish	21° 48.218' S		114° 06.695' E	5.0	60cm Star/Steel	0.2

Notes:
DGPS in operable – site positions taken on the following day
Horizontal water visibility 8 – 10m
Live coral: 2% Dead coral: 0%
Algae: 0% Abiotic: 97%

LONG-TERM MONITORING SITE DATA SHEET

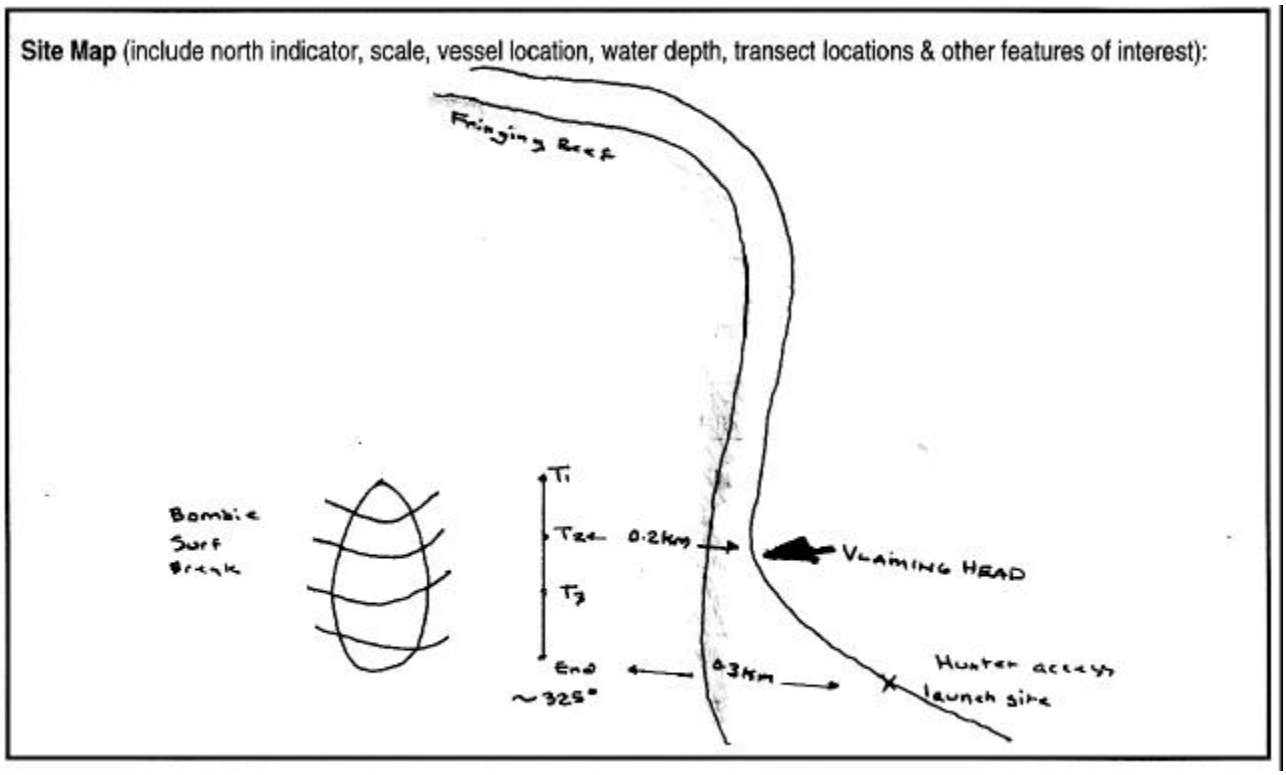
Project	NINGALOO MARINE PARK MONITORING PROGRAM				**Field Survey**		MAY 1998
Site No.	N3	**Site Name**	Vlamingh Head	**Date**	6/5/98	**Recorder**	Fields

GPS Latitude	**GPS Longitude**	**Differential**			
21 ° 48.279 ' S	114 ° 06.763 ' E	**Yes**	☒	**No**	☐

Habitat type	Limestone pavement- gulleys/grooves small coral colonies.

Location of nearest transect from GPS position	**Transect No.**	T	**Compass bearing (°)**		**Distance (m)**	

Site Map (include north indicator, scale, vessel location, water depth, transect locations & other features of interest):



Notes:
Very small coral colonies on limestone

HABITAT DATA SHEET

Project	NINGALOO MARINE PARK MONITORING PROGRAM				**Field Survey**		MAY 1998
Site No.	N3	**Site Name**	Vlamingh Head	**Date**	6/5/98	**Recorder**	Cary
Vessel	AIMS 4.3M NAIAD CALM 3.8 ZODIAC	**Time**	14.38	**Weather**	8 knots ENE		
Sea	Slight swell	**Water depth (m)**	3.0-5.0	**Water visibility (m)**	8.0-10.0		

GPS Latitude	GPS Longitude	Differential			
21 ° 48.279 ' S	114 ° 06.763 ' E	**Yes**	☒	**No**	☐

Site location	Site located to the north of Vlamingh Head.

Habitat Description

Limestone pavement- gulleys/grooves small coral colonies.
Live coral: 2% (mean)
Dead coral: 0% (mean)
Algae: 0% (mean)
Abiotic: 98% (mean)

Dominant Species

Seagrass	*Halophila ovalis*
Macro-algae	*Halimeda* sp., Filamentous blue-green algae, *Dictyota* sp., *Valonia ventricosa* and *Amphiroa foliacea*
Coral	*Acropora* sp., *Pocillopora* sp. x 2, *Sinularia* sp. x 3 (soft coral)., *Sacrophyton* (soft coral), *Platygyra* sp., *Gonipora* sp. and Blue *Acropora* sp. (digitate).
Fish	Pomacentridae (damselfish), Labridae (wrasse), Scaridae (parrotfish), *Choerodon* sp. (tuskfish), *Lethrinus nebulosus* (spangled emperor) x school, Pomacanthidae (juv. angelfish) and *Scomberomorus* sp. (mackerel).
Invertebrates	*Tridachna maxima* (giant clam), *Linkia* sp. (sea star), *Echinometra* sp.(some) (sea urchin) and *Tripneustes gratilla* (sea urchin)

Other Features

Impact or Activity

Surfing site located on north west side of site. No *Drupella* sighted.

Video reference	NMPMP/bvt/06.05.98 /#2	**Aerial reference**	1994 /WA 3405C /RUN1/ 5064
Slide reference		**Print reference**	

VIDEO DATA SHEET

Project	NINGALOO MARINE PARK MONITORING PROGRAM				**Field Survey**		MAY 1998
Site No.	N3	**Site Name**	Vlamingh Head	**Date**	6/5/98	**Recorder**	Myers
Start time	14.38	**Finish time**	16.30	**Depth (m)**	2.9	**Visibility (m)**	8.0-10.0

Underwater Video System	Blaupunkt CC894 camcorder in StingRay SR-700 housing

Focus mode				**Exposure mode**				**Program mode**				**White balance mode**			
Auto	☐	Manual	☒	Auto	☒	Manual	☐	Sports	☐	High-speed	☒	Auto	☒	Outdoor	☐

Lens system				**Filters**								**Lights**			
Wide-angle	☒	Zoom-macro	☐	None	☒	Red	☐	Yellow	☐	Orange	☐	On	☐	Off	☒

Video operator	Cary	**Tape no.**	NMPMP/bvt/06.05.98 /#2	**Height above substrate (cm)**	30
Time coding for all video footage at site:		**From:**	00:00:22:14	**To:**	00:00:40:24

Transect time coding	**Start**	**Finish**	**Total time (mins/secs)**
T1	00:00:22:50	00:00:27:00	4.10
T2	00:00:28:00	00:00:32:42	4.42
T3	00:00:33:52	00:00:38:29	4.37

Notes:

TRANSECT DATA SHEET

Project	NINGALOO MARINE PARK MONITORING PROGRAM				Field Survey		MAY 1998
Site No.	N20	Site Name	Jurabi Pt.	Date	12/5/98	Recorder	Grubba
Time	9.30	Video tape no.	NMPMP/bvt/12.05.98 /#4		Video operator		Grubba

T1	Length (m)	50	Compass bearing (°)	20	Distance to T2 (m)	10.0
Transect	DGPS Lat	DGPS Long	Depth (m)	Picket type	Picket ht (m)	
Start	21° 51.412' S	113° 59.951' E	4.0	60cm Star/Steel	0.2	
Finish	° ' S	° ' E				

Notes:
Important note: This site was established and filmed from south to north, as opposed to the north to south direction of the other sites.
Live coral: 13% Dead coral: 79%
Algae: 0% Abiotic: 9%

T2	Length (m)	50	Compass bearing (°)	20	Distance to T2 (m)	10.0
Transect	DGPS Lat	DGPS Long	Depth (m)	Picket type	Picket ht (m)	
Start	21° 51.383' S	113° 59.944' E	4.0	60cm Star/Steel	0.2	
Finish	° ' S	° ' E				

Notes:
Important note: This site was established and filmed from south to north, as opposed to the north to sound direction of the other sites.
Live coral: 21% Dead coral: 73%
Algae: 0% Abiotic: 6%

T3	Length (m)	50	Compass bearing (°)	20		
Transect	DGPS Lat	DGPS Long	Depth (m)	Picket type	Picket ht (m)	
Start	21° 51.356' S	113° 59.933' E	4.0	60cm Star/Steel	0.2	
Finish	21° 51.334' S	113° 59.916' E	4.0	60cm Star/Steel	0.2	

Notes:
Important note: This site was established and filmed from south to north, as opposed to the north to south direction of the other sites.
Live coral: 11% Dead coral: 69%
Algae: 0% Abiotic: 20%

LONG-TERM MONITORING SITE DATA SHEET

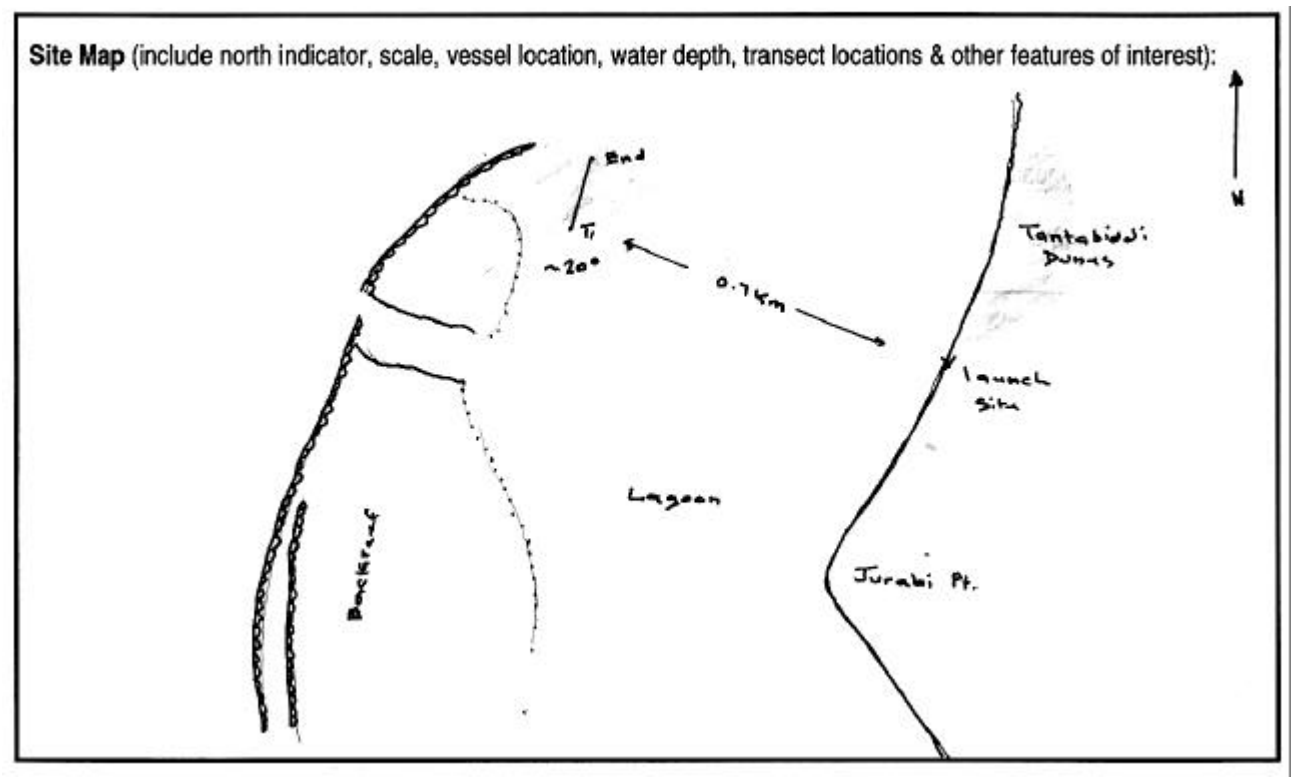
Project	NINGALOO MARINE PARK MONITORING PROGRAM				Field Survey		MAY 1998
Site No.	N20	Site Name	Jurabi Pt	Date	12/5/98	Recorder	Lapwood

GPS Latitude	GPS Longitude	Differential			
21° 51.412 ' S	113° 59.951 ' E	Yes	☒	No	☐

Habitat type	Habitat can be described as lagoon rather than back reef. The site is classified as a high-energy site (swell and surge). Limestone pavement with numerous depressions, ridges and overhangs. The benthic habitat dominated by soft corals. There is an abundance of fish life. There has been recruitment of *Acropora* sp. and *Pocillopora* sp.

Location of nearest transect from GPS position	Transect No.	T	Compass bearing (°)		Distance (m)	

Site Map (include north indicator, scale, vessel location, water depth, transect locations & other features of interest):



Notes:
Important note: This site was established and filmed from south to north, as opposed to the north to south direction of the other sites.

HABITAT DATA SHEET

Project	NINGALOO MARINE PARK MONITORING PROGRAM				**Field Survey**		MAY 1998
Site No.	N20	**Site Name**	Jurabi Pt.	**Date**	12/598	**Recorder**	Myers
Vessel	CALM Zodiac	**Time**	10.15	**Weather**	S/SE 20 knots		
Sea	Swell 1.0m	**Water depth (m)**	4.0	**Water visibility (m)**	15.0-20.0		

GPS Latitude	**GPS Longitude**	**Differential**			
21° 51.412' S	113° 59.951' E	**Yes**	☒	**No**	☐

Site location	Site located on northern edge of the fringing reef directly out from Jurabi Pt.

Habitat Description

Habitat can be described as lagoon rather than back reef. The site is classified as a high-energy site (swell and surge). Limestone pavement with numerous depressions, ridges and overhangs. The benthic habitat dominated by soft corals. There is an abundance of fish life. There has been recruitment of *Acropora* sp. and *Pocillopora* sp.
Live coral: 15% (mean)
Dead coral: 74% (mean)
Algae: 0% (mean)
Abiotic: 12% (mean)

Dominant Species

Seagrass	
Macro-algae	*Dictyota* sp. and *Galaxaura marginata*
Coral	*Sinularia* sp.(soft coral), *Lobophtyon* sp. (soft coral), *Sarcophyton* sp.(soft coral), *Heliopra coerulea*, *Millepora* sp. *Acropora* sp. (digitate), *Favites* sp., *Pocillopora* sp (many recruits) and occasional *Monitopora* sp. and *Porites* sp.
Fish	Many Chaetodontidae (butterflyfish), Pomacanthidae (angelfish), Labridae (wrasse) and occasional Scaridae (parrotfish)
Invertebrates	Many *Spirastrella vagabunda* (sponges), Holothurians (sea cucumbers) and occasional Comasteridae (feather stars), sea urchins, *Formia indica* (sea star) and clams.

Other Features

Cypraea tigris x 1 (tiger cowrie) and C. teres x 1 (cowrie).

Impact or Activity

Evidence of some bleaching on some *Acropora* sp. and *Favites* sp. Some recently coral mortality but no *Drupella* sighted.

Video reference	NMPMP/bvt/12.05.98 /#4	**Aerial reference**	1994 /WA 3434C /RUN /
Slide reference		**Print reference**	

VIDEO DATA SHEET

Project	NINGALOO MARINE PARK MONITORING PROGRAM				**Field Survey**		MAY 1998
Site No.	N20	**Site Name**	Jurabi Pt.	**Date**	12/5/98	**Recorder**	Myers
Start time	10.15	**Finish time**	12.15	**Depth (m)**	4.0	**Visibility (m)**	15.0-20.0

Underwater Video System	Blaupunkt CC894 camcorder in StingRay SR-700 housing											
Focus mode				**Exposure mode**				**Program mode**				**White balance mode**			
Auto	☒	Manual	☐	Auto	☒	Manual	☐	Sports	☒	High-speed	☐	Auto	☒	Outdoor	☐
Lens system				**Filters**								**Lights**			
Wide-angle	☒	Zoom-macro	☐	None	☒	Red	☐	Yellow	☐	Orange	☐	On	☐	Off	☒

Video operator	Grubba/Myers	**Tape no.**	NMPMP/bvt/ 12.05.98 /# 4	**Height above substrate (cm)**	30
Time coding for all video footage at site:		**From:**	: 00 : 06 : 15	**To:**	: 00 : 24 : 00

Transect time coding	**Start**	**Finish**	**Total time (mins/secs)**
T1	00 : 00 : 06 : 55	00: 00 : 11 : 44	5. 21
T2	00 : 00 : 12 : 51	00 : 00 : 17 : 40	5. 21
T3	00 : 00 : 18 : 49	00 : 00 : 24 : 00	5. 18

Notes:

Important note: Tape damaged due to flooded camera. Transect footage is undamaged but do not play tape past 0:21:00. Footage of Exmouth Navy Pier 0:00:00 to 0:06:14 (Site N58).

TRANSECT DATA SHEET

Project	NINGALOO MARINE PARK MONITORING PROGRAM				Field Survey		MAY 1998
Site No.	N5	Site Name	Tantabiddi	Date	4/5/98	Recorder	Lapwood
Time	13.30	Video tape no.	NMPMP/bvt/04.05.98 /#1		Video operator		Fields

T1	Length (m)	50	Compass bearing (°)		Distance to T2 (m)	10.0
Transect	DGPS Lat	DGPS Long	Depth (m)	Picket type	Picket ht (cm)	
Start	21° 53.646' S	113° 57.146' E	2.9	60cm Star/Steel	0.15	

Notes:
Live coral: 13%
Dead coral: 19%
Algae: 0%
Abiotic: 67%

T2	Length (m)	50	Compass bearing (°)		Distance to T2 (m)	10.0
Transect	DGPS Lat	DGPS Long	Depth (m)	Picket type	Picket ht (cm)	
Start	21° 53.671' S	113° 57.121' E	2.9	60cm Star/Steel	0.15	

Notes:
Live coral: 8%
Dead coral: 15%
Algae: 0%
Abiotic: 77%

T3	Length (m)	50	Compass bearing (°)			
Transect	DGPS Lat	DGPS Long	Depth (m)	Picket type	Picket ht (cm)	
Start	21° 53.691' S	113° 57.100' E	2.9	60cm Star/Steel	0.15	
Finish	21° 53.710' S	113° 57.079' E	2.9	60cm Star/Steel	0.15	

Notes:
Live coral: 7%
Dead coral: 14%
Algae: 0%
Abiotic: 79%

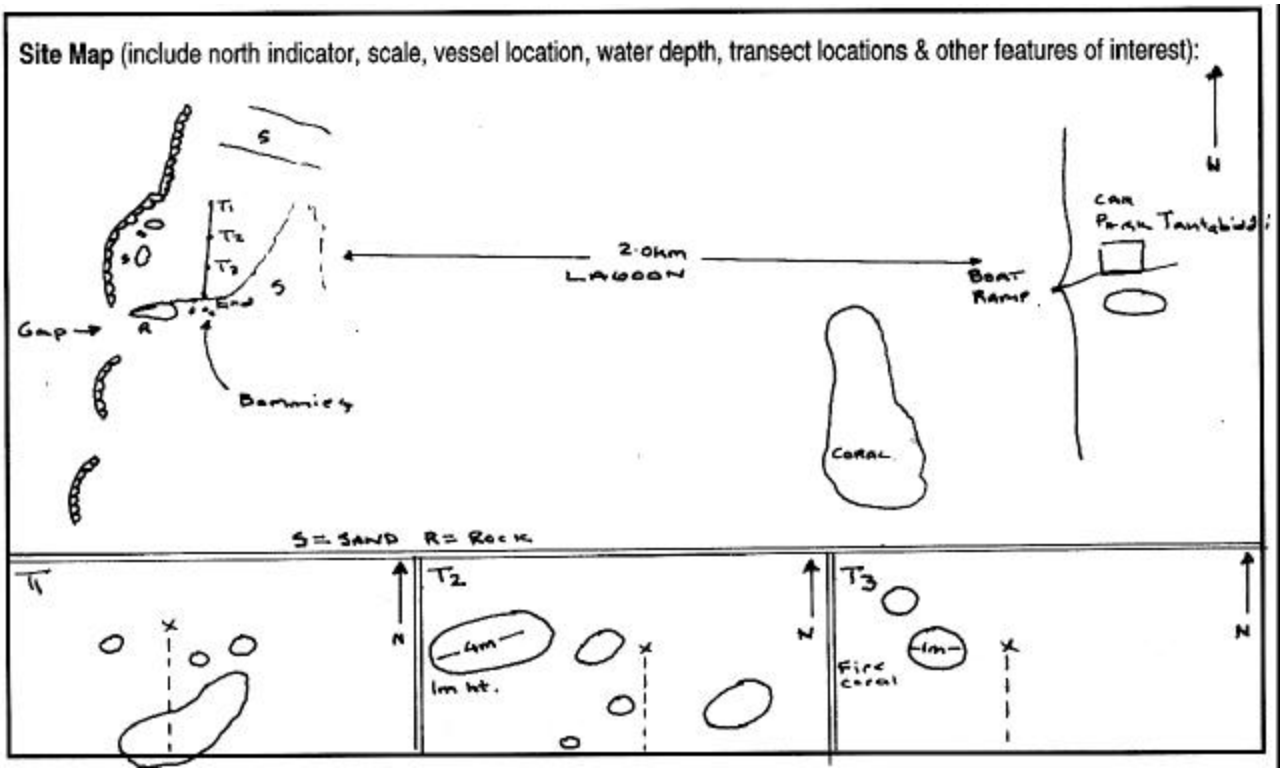
LONG-TERM MONITORING SITE DATA SHEET

Project	NINGALOO MARINE PARK MONITORING PROGRAM				**Field Survey**		MAY 1998
Site No.	N5	**Site Name**	Tantabiddi	**Date**	4/5/98	**Recorder**	Lapwood

GPS Latitude	**GPS Longitude**	**Differential**			
21° 53.646' S	113° 57.146' E	**Yes**	☒	**No**	☐

Habitat type	Back reef - coral cover approx 10%. High energy site. Large areas of rubble, scattered bombies and small-medium colonies. High energy evident by dislodged colonies, considerable fresh scarring (reccently dead).						
Location of nearest transect from GPS position		**Transect No.**	T3	**Compass bearing (°)**	180	**Distance (m)**	

Site Map (include north indicator, scale, vessel location, water depth, transect locations & other features of interest):



Notes:

HABITAT DATA SHEET

Project	NINGALOO MARINE PARK MONITORING PROGRAM				**Field Survey**		MAY 1998
Site No.	N5	**Site Name**	Tantabiddi	**Date**	4/5/98	**Recorder**	Grubba
Vessel	AIMS 4.3M NAIAD CALM 3.8M ZODIAC	**Time**	13.30	**Weather**	SW 5-8 knots		
Sea	slight swellL	**Water depth (m)**	2.5	**Water visibility (m)**	20.0		

GPS Latitude	GPS Longitude	Differential			
21° 53.646' S	113° 57.146' E	**Yes**	☒	**No**	☐

Site location	Site located immediately inside the reef crest to the west of the Tantabiddi boat ramp.

Habitat Description

Back reef - coral cover approx 10%. High energy site. Large areas of rubble, scattered bombies and small-medium colonies. High energy evident by dislodged colonies, considerable fresh scarring (reccently dead).
Live coral: 9% (mean)
Dead coral: 16% (mean)
Algae: 0% (mean)
Abiotic: 75% (mean)

Dominant Species

Seagrass	*Cymodocea* sp.
Macro-algae	Filamentous blue-green algae.
Coral	*Acropora* (tabular) (*A. digitifera* and some *A. robusta*), *Porites domicornis* (bommies), *Millepora* sp., *Favites* sp., *Platygrya* sp., *Galaxea* sp., *Gonipora* sp. and *Sarcophyton* sp.
Fish	Scarids (large - parrotfish) and Pomacentridae (angelfish)
Invertebrates	Holothuriians x 2 spp. (sea cucumber) and *Echinometra* sp.(urchin).

Other Features

Lagoon limestone pavement with macro-algae and seagrass (*Cymodocea*).

Impact or Activity

No *Drupella* sighted.

Video reference	NMPMP/bvt/04.05.98 /#1	**Aerial reference**	1994/WA 3405C /RUN4/5033
Slide reference		**Print reference**	

VIDEO DATA SHEET

Project	NINGALOO MARINE PARK MONITORING PROGRAM				**Field Survey**		MAY 1998
Site No.	N5	**Site Name**	Tantabiddi	**Date**	4/5/98	**Recorder**	Cary
Start time	13.00	**Finish time**	14.00	**Depth (m)**	2.9	**Visibility (m)**	20.0

Underwater Video System	Blaupunkt CC894 camcorder in StingRay SR-700 housing

Focus mode				**Exposure mode**				**Program mode**				**White balance mode**			
Auto	☐	Manual	☒	Auto	☒	Manual	☐	Sports	☐	High-speed	☒	Auto	☒	Outdoor	☐

Lens system				**Filters**								**Lights**			
Wide-angle	☒	Zoom-macro	☐	None	☒	Red	☐	Yellow	☐	Orange	☐	On	☐	Off	☒

Video operator	Fields	**Tape no.**	NMPMP/bvt/04.05.98 /#1	**Height above substrate (cm)**	30
Time coding for all video footage at site:		**From:**	00:00:00:00	**To:**	00:00:12:50

Transect time coding	**Start**	**Finish**	**Total time (mins/secs)**
T1	00:00:00:40	00:00:03:47	3.07
T2	00:00:04:15	00:00:07:59	3.44
T3	00:00:08:31	00:00:12:50	5.29

Notes:

Program mode: 1/250

TRANSECT DATA SHEET

Project	NINGALOO MARINE PARK MONITORING PROGRAM				Field Survey		MAY 1998
Site No.	N6	Site Name	Ned's Camp/Mesa	Date	7/5/98	Recorder	Lapwood
Time	15.30	Video tape no.	NMPMP/bvt/07.05.98 /#2		Video operator		Cary

T1	Length (m)	50	Compass bearing (°)	180	Distance to T2 (m)	10.0
Transect	DGPS Lat		DGPS Long	Depth (m)	Picket type	Picket ht (m)
Start	21° 58.466' S		113° 55.291' E	1.0	60cm Star/Steel	0.2
Finish	° ' S		° ' E			

Notes:
Live coral: 9%
Dead coral: 17%
Algae: 2%
Abiotic: 66%

T2	Length (m)	50	Compass bearing (°)	180	Distance to T2 (m)	10.0
Transect	DGPS Lat		DGPS Long	Depth (m)	Picket type	Picket ht (m)
Start	21° 58.494' S		113° 55.281' E	1.0	60cm Star/Steel	0.2
Finish	° ' S		° ' E			

Notes:
Live coral: 3%
Dead coral: 44%
Algae: 11%
Abiotic: 41%

T3	Length (m)	50	Compass bearing (°)	180		
Transect	DGPS Lat		DGPS Long	Depth (m)	Picket type	Picket ht (m)
Start	21° 58.527' S		113° 55.273' E	1.0	60cm Star/Steel	0.2
Finish	21° 58.553' S		113° 55.265' E	1.0	60cm Star/Steel	0.2

Notes:
Shallow - only camera operator on scuba, rest of team snorkled.
Laid transect line by boat - (drifted).
Live coral: 2% Dead coral: 35%
Algae: 9% Abiotic: 54%

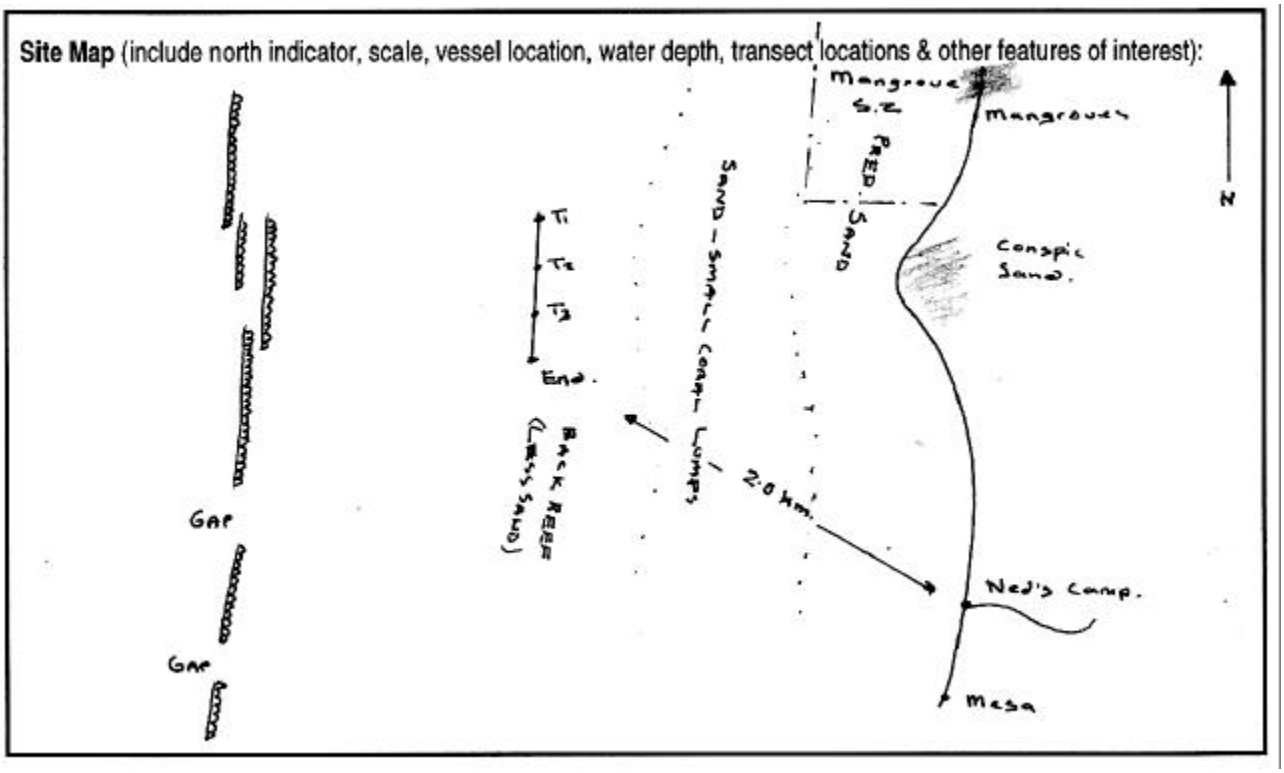
LONG-TERM MONITORING SITE DATA SHEET

Project	NINGALOO MARINE PARK MONITORING PROGRAM				**Field Survey**		MAY 1998
Site No.	N6	**Site Name**	Neds Camp/Mesa	**Date**	7/5/98	**Recorder**	Lapwood

GPS Latitude	**GPS Longitude**	**Differential**			
21° 58.466' S	113° 55.291' E	**Yes**	☒	**No**	☐

Habitat type	Back reef – possibly exposed during low tide. Sparsely scattered live *Acropora* sp. (tabular) and abundant *Acropora* sp (branching). Substrate dominated by dead (whole/broken up). *Acropora* sp. (tabular). The majority of Acropora sp (tabular) were detached and overturned.						
Location of nearest transect from GPS position		**Transect No.**	T2	**Compass bearing (°)**	180	**Distance (m)**	10.0

Site Map (include north indicator, scale, vessel location, water depth, transect locations & other features of interest):



Notes:
Drupella or storm damage ??. High abundance of juvenile coral colonies on dead coral (tabular and branching).

HABITAT DATA SHEET

Project	NINGALOO MARINE PARK MONITORING PROGRAM				**Field Survey**		MAY 1998
Site No.	N6	**Site Name**	Neds Camp/Mesa	**Date**	7/5/98	**Recorder**	Grubba
Vessel	CALM Zodiac	**Time**	15.30	**Weather**	5 knots + N.		
Sea		**Water depth (m)**	1.0	**Water visibility (m)**	8.0		

GPS Latitude	GPS Longitude	Differential			
21° 53.646' S	113° 57.146' E	**Yes**	☒	**No**	☐

Site location	Site located NW of Ned's Camp and west of Mangrove Sanctuary.

Habitat Description

Back reef – possibly exposed during low tide. Sparsely scattered live *Acropora* sp. (tabular) and abundant *Acropora* sp (branching). Substrate dominated by dead (whole/broken up). *Acropora* sp. (tabular). The majority of Acropora sp (tabular) were detached and overturned.
Live coral: 5% (mean)
Dead coral: 32% (mean)
Algae: 8% (mean)
Abiotic: 53% (mean)

Dominant Species

Seagrass	Halophila ovalis
Macro-algae	*Galaxaura* sp. and *Rhodymenia* sp. growing over dead coral.
Coral	*Echinopora* sp., *Acropora* sp., *Astrepora* sp., *Favites* sp., *Favia* sp. and *Seriatopora caliendrum*.
Fish	Pomacanthidae (angelfish), Acanthuridae (surgeonfish), Chaetodontidae (butterflyfish), Scaridae (parrotfish) and *Triaenodon obesus* x 1 (Whitetip reef shark).
Invertebrates	*Panulirus versicolor* (painted rock lobster) and *Tridachna* sp. 40cm length (clam)

Other Features

Reef dominated by 'old' dead coral mainly *Acropora* sp (tabular and digitate). Coral recruitment on dead coral.

Impact or Activity

No *Drupella* sighted.

Video reference	NMPMP/bvt/ 07.05.98 /# 2	**Aerial reference**	1994 /WA 3405C /RUN5/ 5045
Slide reference		**Print reference**	

VIDEO DATA SHEET

Project	NINGALOO MARINE PARK MONITORING PROGRAM				**Field Survey**		MAY 1998
Site No.	N6	**Site Name**	Neds Camp/Mesa	**Date**	7/5/98	**Recorder**	Cary
Start time	15.30	**Finish time**	17.30	**Depth (m)**	1.0	**Visibility (m)**	8.0

Underwater Video System	Blaupunkt CC894 camcorder in StingRay SR-700 housing											
Focus mode				**Exposure mode**				**Program mode**				**White balance mode**			
Auto	☐	Manual	☒	Auto	☒	Manual	☐	Sports	☒	High-speed	☐	Auto	☒	Outdoor	☐
Lens system				**Filters**								**Lights**			
Wide-angle	☒	Zoom-macro	☐	None	☒	Red	☐	Yellow	☐	Orange	☐	On	☐	Off	☒

Video operator	Cary	**Tape no.**	NMPMP/bvt/07.05.98 /#2	**Height above substrate (cm)**	30
Time coding for all video footage at site:		**From:**	: :40:30	**To:**	:1:18:23

Transect time coding	**Start**	**Finish**	**Total time (mins/secs)**
T1	: : :	: : :	.
T2	: :54:15	: :59:07	4.52
T3	:1:00:00	:1:04:39	4.39

Notes:

T1 was filmed three times and footage of individual coral species was taken to assist in identification.

	Start time	Finish time	Total time
1)	41.29	??.35	??.??
2)	48.40	53.10	4.30
3)	1.14.09	1.18.23	4.14

Speed – 1/250

TRANSECT DATA SHEET

Project	NINGALOO MARINE PARK MONITORING PROGRAM				Field Survey		MAY 1998
Site No.	N7	Site Name	Turquoise Bay	Date	8/5/98	Recorder	Cary
Time	10.00	Video tape no.	NMPMP/bvt/08.05.98 /#3		Video operator		Cary / Grubba

T1	Length (m)	50	Compass bearing (°)	170	Distance to T2 (m)	10.0
Transect	DGPS Lat	DGPS Long	Depth (m)	Picket type	Picket ht (m)	
Start	22° 06.570' S	113° 52.655' E	1.0	60cm Star/Steel	0.2	
Finish	° ' S	° ' E				

Notes:
Acropora (tabulate). Many *Drupella* scars (recent and old). Occasional massives.
Live coral: 19% Dead coral: 62%
Algae: 2% Abiotic: 17%

T2	Length (m)	50	Compass bearing (°)	170	Distance to T2 (m)	10.0
Transect	DGPS Lat	DGPS Long	Depth (m)	Picket type	Picket ht (m)	
Start	22° 06.602' S	113° 52.650' E	1.0	60cm Star/Steel	0.2	
Finish	° ' S	° ' E				

Notes:
Acropora (tabulate). Many *Drupella* scars (recent and old). Occasional massives.
Live coral: 20% Dead coral: 71%
Algae: 2% Abiotic: 6%

T3	Length (m)	50	Compass bearing (°)	170		
Transect	DGPS Lat	DGPS Long	Depth (m)	Picket type	Picket ht (m)	
Start	22° 06.633' S	113° 52.638' E	1.0	60cm Star/Steel	0.2	
Finish	22° 06.657' S	113° 52.631' E	1.0	60cm Star/Steel	0.2	

Notes:
Beginning and end of Transect as per Transect 1 and 2. Less coral in the middle of the transect (effect of swash zone).
Live coral: 9% Dead coral: 46%
Algae: 2% Abiotic: 43%

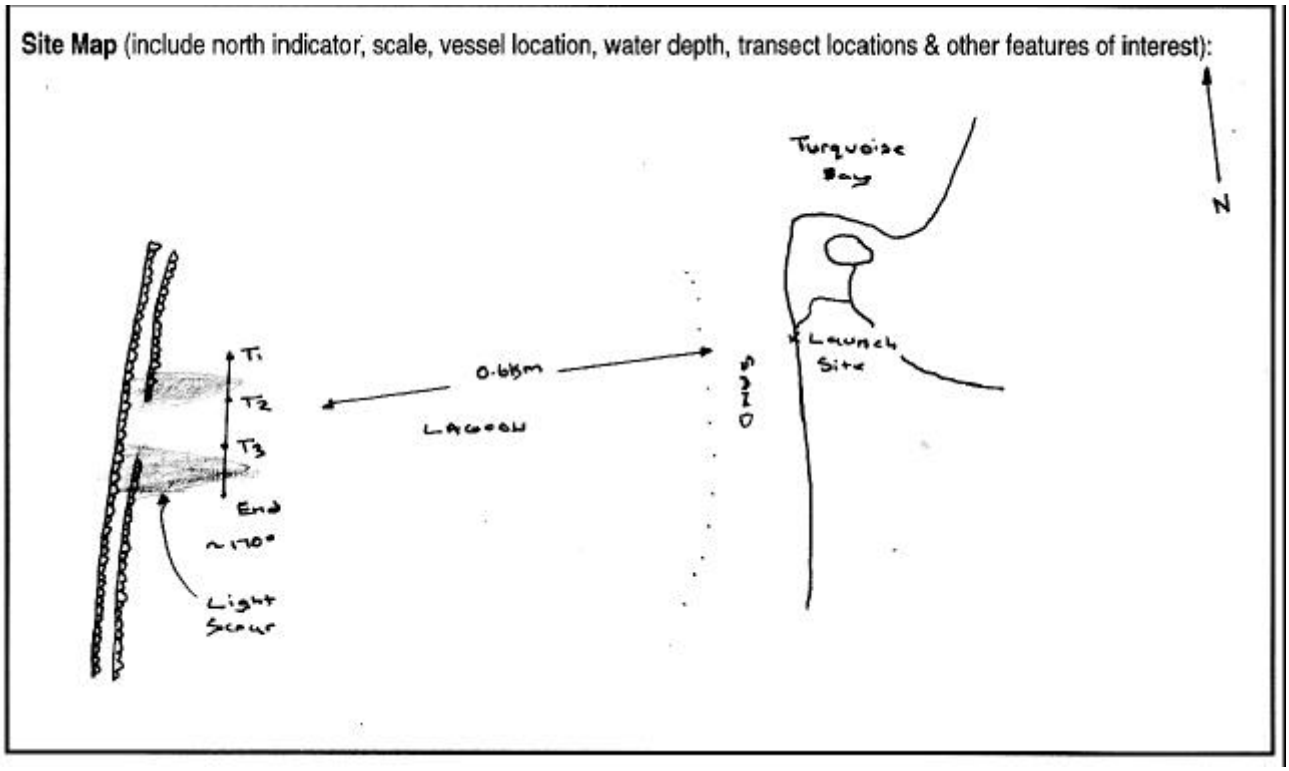
LONG-TERM MONITORING SITE DATA SHEET

Project	NINGALOO MARINE PARK MONITORING PROGRAM				**Field Survey**		MAY 1998
Site No.	N7	**Site Name**	Turquoise Bay	**Date**	8/5/98	**Recorder**	Cary

GPS Latitude	**GPS Longitude**	**Differential**			
22° 06.570' S	113° 52.655' E	**Yes**	☒	**No**	☐

Habitat type	Back reef – coral dominated by *Acropora* sp. (tabular and digitate) and large colonies of *Sinularia* sp. (soft coral). Reef broken by distinct wash zones. *Drupella* common with feeding scars abundant on coral colonies.						
Location of nearest transect from GPS position		**Transect No.**	T	**Compass bearing (°)**		**Distance (m)**	

Site Map (include north indicator, scale, vessel location, water depth, transect locations & other features of interest):



Notes:

HABITAT DATA SHEET

Project	NINGALOO MARINE PARK MONITORING PRORGRAM				**Field Survey**		MAY 1998
Site No.	N7	**Site Name**	Turquoise Bay	**Date**	8/5/98	**Recorder**	Grubba
Vessel	CALM Zodiac	**Time**	10.00	**Weather**	5 -8 knots N.		
Sea	Calm	**Water depth (m)**	1.0	**Water visibility (m)**	20.0		

GPS Latitude	GPS Longitude	Differential			
22° 06.570' S	113° 52.655' E	**Yes**	☒	**No**	☐

Site location	Site located on the back reef slightly south of the boat launch site.

Habitat Description

Back reef – coral dominated by *Acropora* sp. (tabular and digitate) and large colonies of *Sinularia* sp. (soft coral). Reef broken by distinct wash zones. *Drupella* common with feeding scars abundant on coral colonies.
Live coral: 16%
Dead coral: 60%
Algae: 2%
Abiotic: 22%

Dominant Species

Seagrass	
Macro-algae	*Dictyota* sp., *Turbinaria* sp. and *Titanophora* weberae.
Coral	*Acropora* sp. (tabular and digitate), *Porites* sp., Faviidae, Fungiidae, *Montipora* sp. *Sarrophyton* sp. (soft coral) and *Sinularia* sp. (soft coral).
Fish	Acanthuridae (surgeonfish), Scaridae (parrotfish), Lutjanidae (snapper), Pomacentridae (damselfish), Chaetodontidae (butterflyfish) and Pomacanthidae (angelfish).
Invertebrates	*Drupella*, *Holothuria* sp. (sea cucumber) and *Diadema* (sea urchin).

Other Features

Triaenodon obesus (white tip reef shark) and *Taeniura lymma* (blue spotted ray).

Impact or Activity

Drupella in medium/high abundance and feeding scars (recent and old).

Video reference	NMPMP/bvt/08.05.98 /#3	**Aerial reference**	1994 /WA 3405C /RUN5/ 5028
Slide reference		**Print reference**	

VIDEO DATA SHEET

Project	NINGALOO MARINE PARK MONITORING PROGRAM				**Field Survey**		MAY 1998
Site No.	N7	**Site Name**	Turquoise Bay	**Date**	8/5/98	**Recorder**	Moore
Start time	10.00	**Finish time**	12.00	**Depth (m)**	0.8	**Visibility (m)**	20.0

Underwater Video System	Blaupunkt CC894 camcorder in StingRay SR-700 housing											
Focus mode				**Exposure mode**				**Program mode**				**White balance mode**			
Auto	☐	Manual	☒	Auto	☒	Manual	☐	Sports	☒	High-speed	☐	Auto	☒	Outdoor	☐
Lens system				**Filters**								**Lights**			
Wide-angle	☒	Zoom-macro	☐	None	☒	Red	☐	Yellow	☐	Orange	☐	On	☐	Off	☒

Video operator	Cary/ Grubba	**Tape no.**	NMPMP/bvt/08.05.98 /#3	**Height above substrate (cm)**	30
Time coding for all video footage at site:		**From:**	: :00:00	**To:**	: :25:39

Transect time coding	**Start**	**Finish**	**Total time (mins/secs)**
T1	: :05:27	: :10:40	5.13
T2	: :11: 55	: :16:54	4.59
T3	: :18:00	: :24:14	6.14

Notes:

Drupella (abundant) and many feeding scars (recent and old)

Speed 1/250

Video footage of dead reef and recruitment with *Drupella* feeding scars - 00:00 to 05:27
Video footage of blue spotted ray - 24:14 to 25:00

TRANSECT DATA SHEET

Project	NINGALOO MARINE PARK MONITORING PROGRAM				**Field Survey**		MAY 1998
Site No.	N8	**Site Name**	Osprey Bay	**Date**	9/5/98	**Recorder**	Grubba
Time	10.30	**Video tape no.**	NMPMP/bvt/08.05.98 /#3		**Video operator**		Cary

T1	**Length (m)**	**50**	**Compass bearing (°)**	160	**Distance to T2 (m)**	10.0
Transect	**DGPS Lat**		**DGPS Long**	**Depth (m)**	**Picket type**	**Picket ht (m)**
Start	22° 14.708' S		113° 49.744' E	1.5	60cm Star/Steel	0.2
Finish	° ' S		° ' E			

Notes:
Dead coral primarily *Acropora* (tabular). Same along all three transects.
Live coral: 4% Dead coral: 77%
Algae: 3% Abiotic: 15%

T2	**Length (m)**	**50**	**Compass bearing (°)**	160	**Distance to T2 (m)**	10.0
Transect	**DGPS Lat**		**DGPS Long**	**Depth (m)**	**Picket type**	**Picket ht (m)**
Start	22° 14.735' S		113° 49.729' E	1.5	60cm Star/Steel	0.2
Finish	° ' S		° ' E			

Notes:
Wash channels scattered along the back reef. *Drupella* observed feeding on last large *Acropora* sp. (tabular). Dead *Acropora* sp. (tabular) up to 1m in diameter.
Live coral: 2% Dead coral: 80%
Algae: 1% Abiotic: 12%

T3	**Length (m)**	**50**	**Compass bearing (°)**	160		
Transect	**DGPS Lat**		**DGPS Long**	**Depth (m)**	**Picket type**	**Picket ht (m)**
Start	22° 14.764' S		113° 49.711' E	1.5	60cm Star/Steel	0.2
Finish	22° 14.786' S		113° 49.701' E	1.5	60cm Star/Steel	0.2

Notes:
Wash zone (transect 3: 19.0m to 24.0m). Large *Acropora* sp. (tabular) 1.5m in diameter. Large *Sarcophyton* sp (30cm) (soft coral) nearby.
Live coral: 1% Dead coral: 51%
Algae: 0% Abiotic: 48%

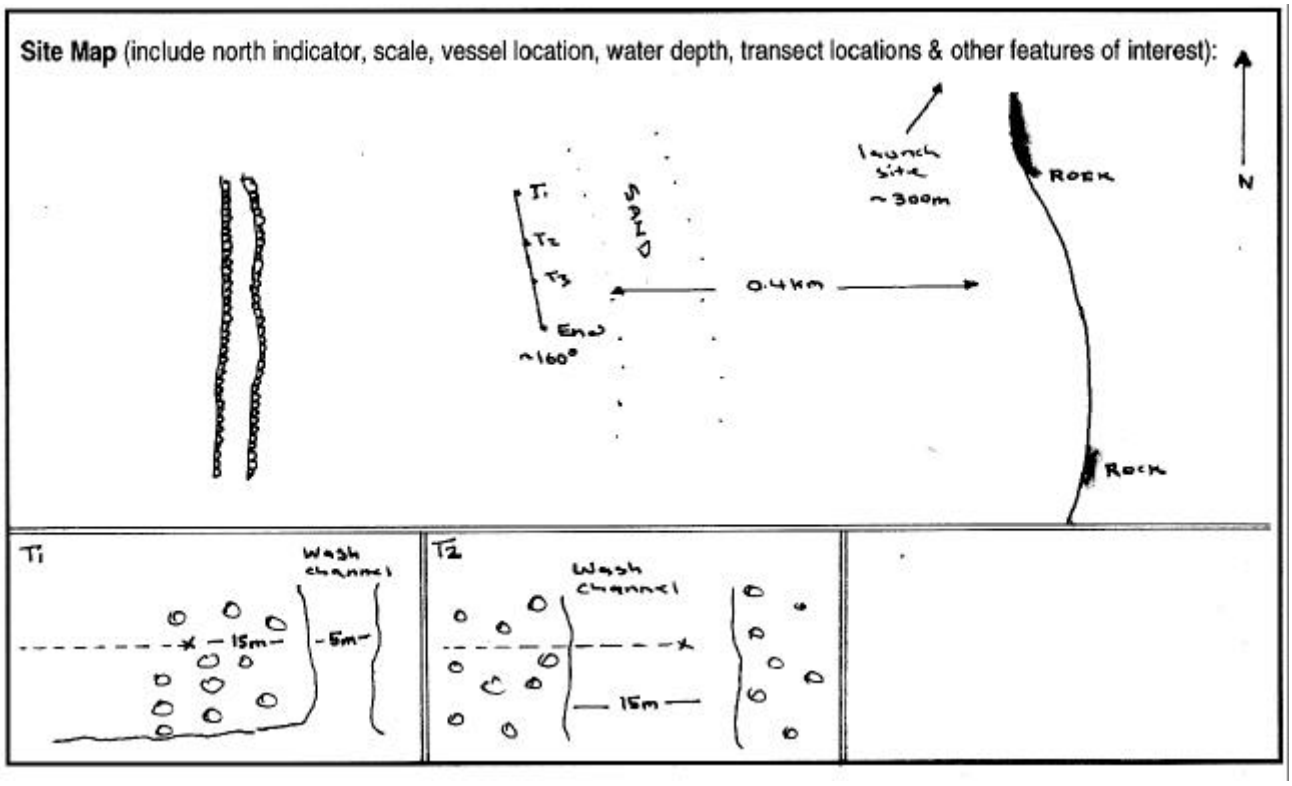
LONG-TERM MONITORING SITE DATA SHEET

Project	NINGALOO MARINE PARK MONITORING PROGRAM				**Field Survey**		MAY 1998
Site No.	N8	**Site Name**	Osprey Bay	**Date**	9/5/98	**Recorder**	Grubba

GPS Latitude	**GPS Longitude**	**Differential**			
22° 14.708' S	113° 49.744' E	**Yes**	☒	**No**	☐

Habitat type	Back reef – coral dominated by dead *Acropora* sp. (tabular). High mortality of *Acropora hyacynthus* (tabular) due to *Drupella* infestation.						
Location of nearest transect from GPS position		**Transect No.**	T	**Compass bearing (°)**		**Distance (m)**	

Site Map (include north indicator, scale, vessel location, water depth, transect locations & other features of interest):



Notes:

HABITAT DATA SHEET

Project	NINGALOO MARINE PARK MONITORING PROGRAM				**Field Survey**		MAY 1998
Site No.	N8	**Site Name**	Osprey Bay	**Date**	9/5/98	**Recorder**	Cary
Vessel	MCB zodiac	**Time**	10.30	**Weather**	north 12-15 knots		
Sea	Calm	**Water depth (m)**	1.5	**Water visibility (m)**	17.0		

GPS Latitude	**GPS Longitude**	**Differential**			
22° 14.708' S	113° 49.744' E	**Yes**	☒	**No**	☐

Site location	Site located on the back reef.

Habitat Description

Back reef – coral dominated by dead *Acropora* sp. (tabular). High mortality of *Acropora hyacynthus* (tabular) due to *Drupella* infestation.
Live coral: 2% (mean)
Dead coral: 69% (mean)
Algae: 1% (mean)
Abiotic: 25% (mean)

Dominant Species

Seagrass	
Macro-algae	*Titanophora weberae*, *Dictyota* sp., *Galaxaura marginata* and *Turbinaria* sp.
Coral	*Acropora hyacynthus* (90% dead), Occasional massives including *Favites* sp. *Favia* sp, *Porites* sp., *Pocillopora* sp. and *Sinularia* sp. (soft coral) and *Sarcophyton* sp. (soft coral).
Fish	Acanthuridae (surgeonfish), Chaetodontidae (butterflyfish), Pomacanthidae (angelfish), Labridae (wrasse), Scaridae (parrotfish), Lutjanidae – abundant (snapper) and Pomacentridae – abundant (damselfish).
Invertebrates	*Drupella* (very abundant aggregations).

Other Features

Impact or Activity

Drupella in medium/high abundance. Significant impact from *Drupella* on *A. hyacynthus* (tabular). *Drupella* aggregations on remaining live corals.

Video reference	NMPMP/bvt/09.05.98 /#3	**Aerial reference**	1994 /WA 3405C /RUN6/ 5020
Slide reference		**Print reference**	

VIDEO DATA SHEET

Project	NINGALOO MARINE PARK MONITORING PROGRAM				**Field Survey**		MAY 1998
Site No.	N8	**Site Name**	Osprey Bay	**Date**	8/5/98	**Recorder**	Cary
Start time	10.30	**Finish time**	11.30	**Depth (m)**	1.5	**Visibility (m)**	17.0

Underwater Video System	Blaupunkt CC894 camcorder in StingRay SR-700 housing											
Focus mode				**Exposure mode**				**Program mode**				**White balance mode**			
Auto	☐	Manual	☒	Auto	☒	Manual	☐	Sports	☒	High-speed	☐	Auto	☒	Outdoor	☐
Lens system				**Filters**								**Lights**			
Wide-angle	☒	Zoom-macro	☐	None	☒	Red	☐	Yellow	☐	Orange	☐	On	☐	Off	☒

Video operator	Cary/ Grubba	**Tape no.**	NMPMP/bvt/08.05.98 /#3	**Height above substrate (cm)**	30
Time coding for all video footage at site:		**From:**	: :27:55	**To:**	: :53:52

Transect time coding	**Start**	**Finish**	**Total time (mins/secs)**
T1	: :30:07	: :35:42	5.35
T2	: :38:17	: :43:55	5.58
T3	: :44:38	: :50:37	6.00

Notes:

Important note: Do not play tape past 0:53:52 as the tape was damaged by the camera
T3: 45.0m massive *Favites* sp. is alive although it looks dead from the top.

TRANSECT DATA SHEET

Project	NINGALOO MARINE PARK MONITORING PROGRAM				**Field Survey**		MAY 1998
Site No.	N21	**Site Name**	Yardie Creek	**Date**	9/5/98	**Recorder**	Grubba
Time	15.00	**Video tape no.**	NMPMP/bvt/09.05.98 /# 5		**Video operator**		Cary/Grubba

T1	**Length (m)**	**50**	**Compass bearing (°)**	170	**Distance to T2 (m)**	10.0
Transect	**DGPS Lat**		**DGPS Long**	**Depth (m)**	**Picket type**	**Picket ht (m)**
Start	22° 18.909' S		113° 47.783' E	1.0	60cm Star/Steel	0.2
Finish	° ' S		° ' E			

Notes:
Dead coral, predominantly *Acropora* sp (tabular) occurred along all three transects.
Live coral: 3% Dead coral: 87%
Algae: 0% Abiotic: 10%

T2	**Length (m)**	**50**	**Compass bearing (°)**	170	**Distance to T2 (m)**	10.0
Transect	**DGPS Lat**		**DGPS Long**	**Depth (m)**	**Picket type**	**Picket ht (m)**
Start	22° 18.929' S		113° 47.779' E	1.0	60cm Star/Steel	0.2
Finish	° ' S		° ' E			

Notes:
Live coral: 5%
Dead coral: 78%
Algae: 0%
Abiotic: 17%

T3	**Length (m)**	**50**	**Compass bearing (°)**	170		
Transect	**DGPS Lat**		**DGPS Long**	**Depth (m)**	**Picket type**	**Picket ht (m)**
Start	22° 18.961' S		113° 47.770' E	1.0	60cm Star/Steel	0.2
Finish	22° 18.987' S		113° 47.761' E	1.0	60cm Star/Steel	0.2

Notes:
Live coral: 6%
Dead coral: 89%
Algae: 1%
Abiotic: 6%

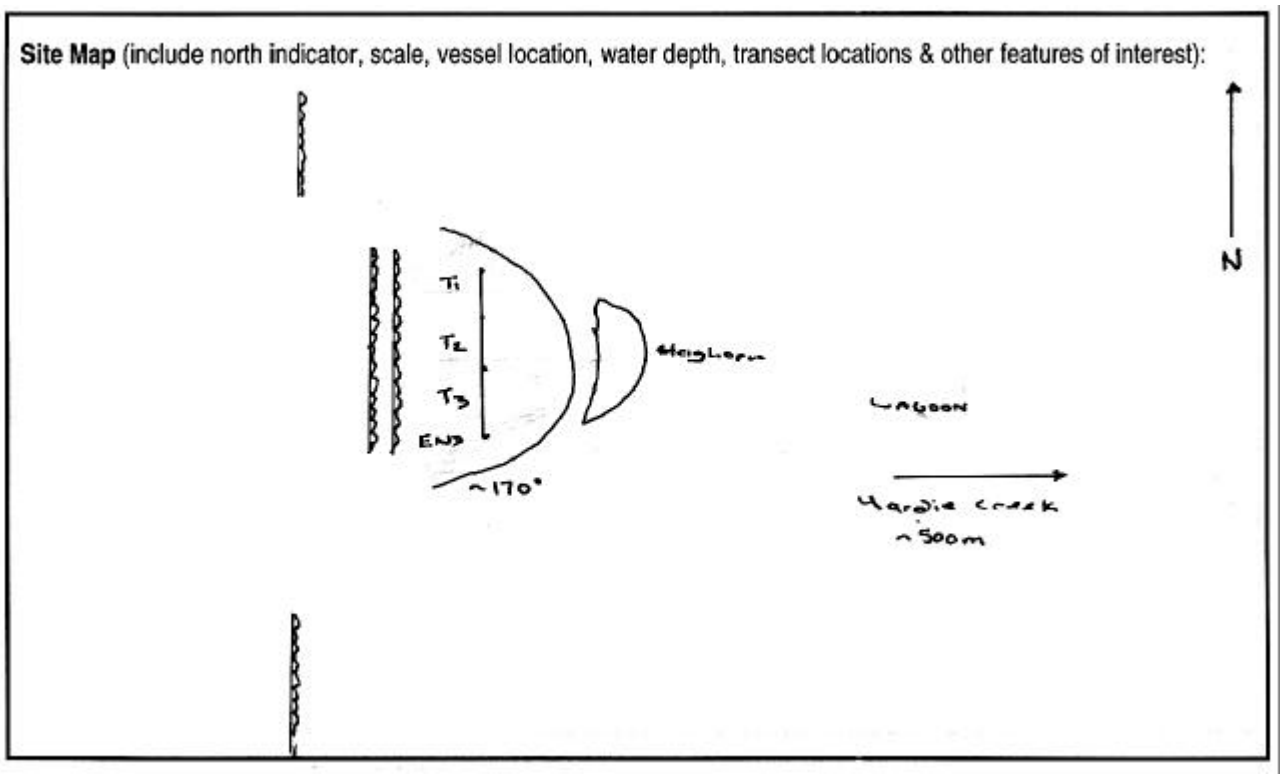
LONG-TERM MONITORING SITE DATA SHEET

Project	NINGALOO MARIN E PARK MONITORING PROGRAM				**Field Survey**		MAY 1998
Site No.	N21	**Site Name**	Yardie Creek	**Date**	9/5/98	**Recorder**	Grubba

GPS Latitude	**GPS Longitude**	**Differential**			
22° 18.909' S	113° 47.783' E	**Yes**	☒	**No**	☐

Habitat type	Back reef with extensive dead coral, *Acropora hyacynthus* (tabular). Possibly died 10+ years ago. High level of recruitment of *Acropora* spp. 3 – 30cm colonies. Some recruitment of massive and encrusting corals.						
Location of nearest transect from GPS position		**Transect No.**	T	**Compass bearing (°)**	170	**Distance (m)**	

Site Map (include north indicator, scale, vessel location, water depth, transect locations & other features of interest):



Notes:
Acropora sp. plates fused.

HABITAT DATA SHEET

Project	NINGALOO MARINE PARK MONITORING PROGRAM				**Field Survey**		MAY 1998
Site No.	N21	**Site Name**	Yardie Creek	**Date**	9/5/98	**Recorder**	Cary
Vessel	CB Zodiac		**Time**	15.00	**Weather**		
Sea	Slight sea		**Water depth (m)**	1.0	**Water visibility (m)**		15.0

GPS Latitude	**GPS Longitude**	**Differential**			
22° 18.909' S	113° 47.783' E	**Yes**	☒	**No**	☐

Site location	Site located on the back reef to the north of the boat launch site at Yardie Creek.

Habitat Description

Back reef with extensive dead coral, *Acropora hyacynthus* (tabular). Possibly died 10+ years ago. High level of recruitment of *Acropora* spp. 3 – 30cm colonies. Some recruitment of massive and encrusting corals.
Live coral: 4% (mean)
Dead coral: 85% (mean)
Algae: 0% (mean)
Abiotic: 11% (mean)

Dominant Species

Seagrass	
Macro-algae	*Dictyota* sp., *Galaxaura marinata*, and *Titanophora weberae*.
Coral	*Acropora* sp. (dominant, recruits, 3 – 30cm), *Merulina* sp. *Favites* sp., *Favia* sp. *Lobophylia* sp., *Montipora*, *Platygyra* sp., *Galaxea* sp., *Fungia* sp., *Millipora* sp., Sinularia sp. (soft coral), and Sarcophyton sp. (soft coral).
Fish	Chaetodontidae (butterflyfish), Pomacanthidae (angelfish), Pomacentridae (damselfish) and Scaridae (parrotfish).
Invertebrates	*Linkia* sp. (star fish), *Fromia* sp. (star fish), *Echinometra* sp. (sea urchin), *Holothuria* sp. (sea cucumber) and *Drupella*.

Other Features

Impact or Activity

Drupella in medium/high abundance. Extensive death of tabular corals which may have been caused by natural events such as extreme low tide (pers comm Luke Smith and Exmouth residents) or *Drupella* infestation.

Video reference	NMPMP/bvt/09.05.98 /# 5	**Aerial reference**	1994 /WA 3434C /RUN7/ 5013
Slide reference		**Print reference**	

VIDEO DATA SHEET

Project	NINGALOO MARINE PARK MONITORING PROGRAM				**Field Survey**		MAY 1998
Site No.	N21	**Site Name**	Yardie Creek	**Date**	13/5/98	**Recorder**	Cary
Start time	11.00	**Finish time**	12.00	**Depth (m)**	2.0	**Visibility (m)**	15.0

Underwater Video System	Blaupunkt CC894 camcorder in StingRay SR-700 housing											
Focus mode				**Exposure mode**				**Program mode**				**White balance mode**			
Auto	☒	Manual	☐	Auto	☒	Manual	☐	Sports	☒	High-speed	☐	Auto	☒	Outdoor	☐
Lens system				**Filters**								**Lights**			
Wide-angle	☒	Zoom-macro	☐	None	☒	Red	☐	Yellow	☐	Orange	☐	On	☐	Off	☒

Video operator	Grubba	**Tape no.**	NMPMP/bvt/13.05.98 /#5	**Height above substrate (cm)**	30
Time coding for all video footage at site:		**From:**	00:00:00:00	**To:**	00:00:20:22

Transect time coding	**Start**	**Finish**	**Total time (mins/secs)**
T1	00:00:00:16	00:00:06:10	6.34
T2	00:00:07:00	00:00:13:11	5.11
T3	00:00:14:10	00:00:20:00	5.90

Notes:

This site was filmed at a latter date due to technical difficulties with the camera.

TRANSECT DATA SHEET

Project	NINGALOO MARINE PARK MONITORING PROGRAM				Field Survey		MAY 1998
Site No.	N9	Site Name	Bunderra	Date	14/5/98	Recorder	Grubba
Time	15.00	Video tape no.	NMPMP/bvt/14.05.98 /#5		Video operator		Grubba

T1	Length (m)	50	Compass bearing (°)	180	Distance to T2 (m)	10.0
Transect	DGPS Lat		DGPS Long	Depth (m)	Picket type	Picket ht (m)
Start	22° 23.491' S		113° 44.804' E	1.5-2.0	60cm Star/Steel	0.2
Finish	° ' S		° ' E			

Notes:
Live coral: 27%
Dead coral: 43%
Algae: 3%
Abiotic: 26%

T2	Length (m)	50	Compass bearing (°)	180	Distance to T2 (m)	10.0
Transect	DGPS Lat		DGPS Long	Depth (m)	Picket type	Picket ht (m)
Start	22° 23.521' S		113° 44.801' E	1.5-2.0	60cm Star/Steel	0.2
Finish	° ' S		° ' E			

Notes:
Live coral: 17%
Dead coral: 61%
Algae: 6%
Abiotic: 14%

T3	Length (m)	50	Compass bearing (°)	180		
Transect	DGPS Lat		DGPS Long	Depth (m)	Picket type	Picket ht (m)
Start	22° 23.550' S		113° 44.800' E	1.5-2.0	60cm Star/Steel	0.2
Finish	22° 23.576' S		113° 44.797' E	1.5-2.0	60cm Star/Steel	0.2

Notes:
Live coral: 20%
Dead coral: 39%
Algae: 0%
Abiotic: 41%

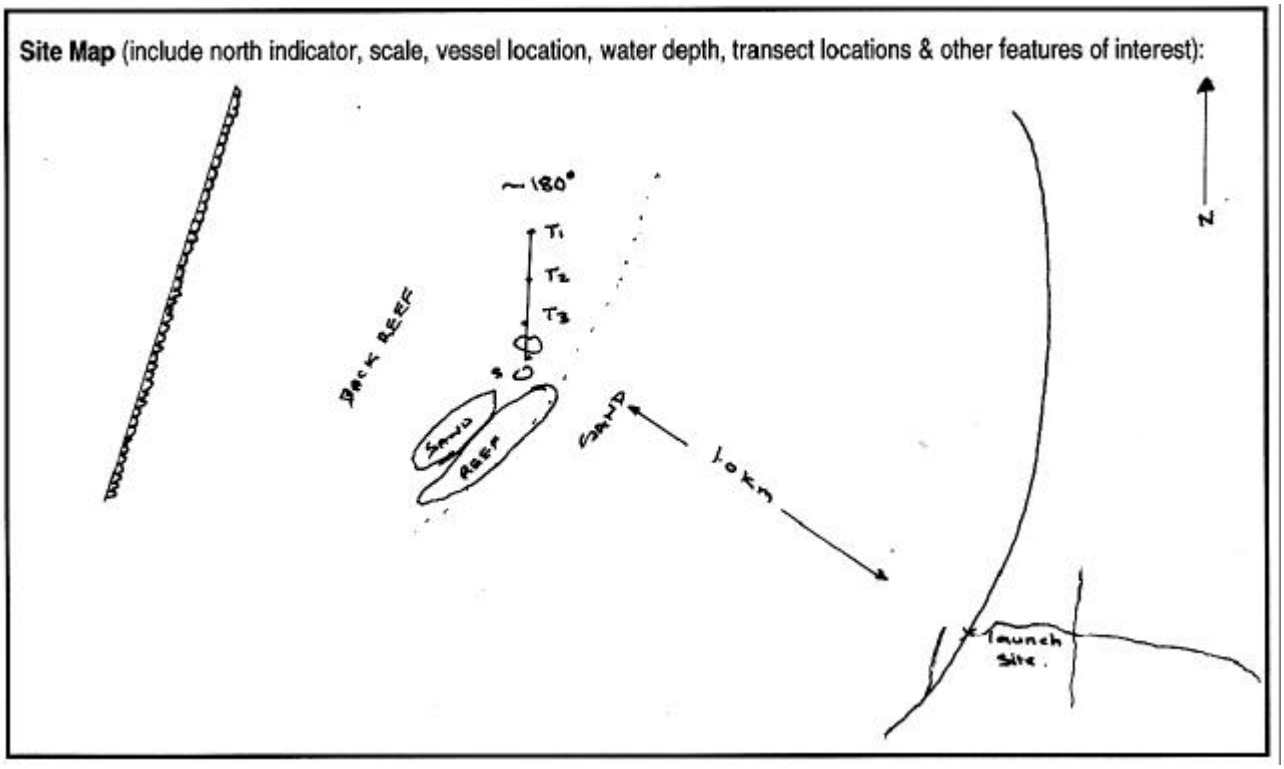
LONG-TERM MONITORING SITE DATA SHEET

Project	NINGALOO MARINE PARK MONITORING PROGRAM				**Field Survey**		MAY 1998
Site No.	N9	**Site Name**	Bunderra	**Date**	14/5/98	**Recorder**	Lapwood

GPS Latitude	**GPS Longitude**	**Differential**			
22° 23.491' S	113° 44.804' E	**Yes**	☒	**No**	☐

Habitat type	Back reef – sandy rubble substrate with high coral diversity of *Acropora* sp (tabular, digitate and branching) and many species of massive.						
Location of nearest transect from GPS position		**Transect No.**	T	**Compass bearing (°)**		**Distance (m)**	

Site Map (include north indicator, scale, vessel location, water depth, transect locations & other features of interest):



Notes:

HABITAT DATA SHEET

Project	NINGALOO MARINE PARK MONITORING PROGRAM				**Field Survey**		MAY 1998
Site No.	N9	**Site Name**	Bunderra	**Date**	14/5/98	**Recorder**	Grubba
Vessel	CALM Zodiac	**Time**	15.00	**Weather**			
Sea	Slight swell	**Water depth (m)**	1.0-2.0	**Water visibility (m)**	10.0		

GPS Latitude	**GPS Longitude**	**Differential**			
22° 23.491' S	113° 44.804' E	**Yes**	☒	**No**	☐

Site location	The boat was launched approximately 10.4 km south of Yardie Creek.

Habitat Description

Back reef – sandy rubble substrate with high coral diversity of *Acropora* sp (tabular, digitate and branching) and many species of massive.
Live coral: 22% (mean)
Dead coral: 48% (mean)
Algae: 3% (mean)
Abiotic: 27% (mean)

Dominant Species

Seagrass	
Macro-algae	*Galaxaura marginata*, *Turbinaria* sp., Filamentous blue-green algae and *Dictyota* sp.
Coral	Dominated by *Acropora digitifera*, *A. floridae* and occasional *Montipora* sp., *Fungia* sp., *Favites* sp., and *Sinularia* sp. (soft coral).
Fish	Pomacentridae (damselfish) and Pomcanthidae (angelfish).
Invertebrates	Holothurian (sea cucumber).

Other Features

The site was interspersed with large sandy patches, one patch of soft coral dominated approximately 3m of the substrate along the transect. There were few large mobile fishes.

Impact or Activity

Drupella in low density.

Video reference	NMPMP/bvt/14.05.98 /#5	**Aerial reference**	1994 /WA 3405C /RUN7/ 5009
Slide reference		**Print reference**	

VIDEO DATA SHEET

Project	NINGALOO MARINE PARK MONITORING PROGRAM				**Field Survey**		MAY 1998
Site No.	N9	**Site Name**	Bunderra	**Date**	14/5/98	**Recorder**	Cary
Start time	15.00	**Finish time**	16.30	**Depth (m)**	2.0	**Visibility (m)**	10.0

Underwater Video System	Blaupunkt CC894 camcorder in StingRay SR-700 housing											
Focus mode				**Exposure mode**				**Program mode**				**White balance mode**			
Auto	☒	Manual	☐	Auto	☒	Manual	☐	Sports	☒	High-speed	☐	Auto	☒	Outdoor	☐
Lens system				**Filters**								**Lights**			
Wide-angle	☒	Zoom-macro	☐	None	☒	Red	☐	Yellow	☐	Orange	☐	On	☐	Off	☒

Video operator	Grubba	**Tape no.**	NMPMP/bvt/14.05.98 /#5	**Height above substrate (cm)**	30
Time coding for all video footage at site:		**From:**	00:00:40:31	**To:**	00:01:11:19

Transect time coding	**Start**	**Finish**	**Total time (mins/secs)**
T1	00:00:42:29	00:00:48:55	6.26
T2	00:00:49:52	00:00:56:49	6.57
T3	00:00:57:46	00:01:04:59	7.13

Notes:

T3 was re-filmed by Myers as a trial: 1:06:16 – 1:11:19.

TRANSECT DATA SHEET

Project	NINGALOO MARINE PARK MONITORING PROGRAM				Field Survey		MAY 1998
Site No.	N10	Site Name	Lefroy Bay	Date	14/5/98	Recorder	Grubba
Time	10.20	Video tape no.	NMPMP/bvt/14.05.98 /#5		Video operator		Grubba

T1	Length (m)	50	Compass bearing (°)	20	Distance to T2 (m)	10.0
Transect	DGPS Lat		DGPS Long	Depth (m)	Picket type	Picket ht (m)
Start	22° 30.290' S		113° 41.913' E	1.5-2.0	60cm Star/Steel	0.2
Finish	° ' S		° ' E			

Notes:
Live coral: 15%
Dead coral: 60%
Algae: 4%
Abiotic: 23%

T2	Length (m)	50	Compass bearing (°)	20	Distance to T2 (m)	10.0
Transect	DGPS Lat		DGPS Long	Depth (m)	Picket type	Picket ht (m)
Start	22° 30.322' S		113° 41.909' E	1.5-2.0	60cm Star/Steel	0.2
Finish	° ' S		° ' E			

Notes:
Live coral: 25%
Dead coral: 50%
Algae: 8%
Abiotic: 18%

T3	Length (m)	50	Compass bearing (°)	20		
Transect	DGPS Lat		DGPS Long	Depth (m)	Picket type	Picket ht (m)
Start	22° 30.346' S		113° 41.894' E	1.5-2.0	60cm Star/Steel	0.2
Finish	22° 30.377' S		113° 41.899' E	1.5-2.0	60cm Star/Steel	0.2

Notes:
Live coral: 8%
Dead coral: 81%
Algae: 5%
Abiotic: 24%

LONG-TERM MONITORING SITE DATA SHEET

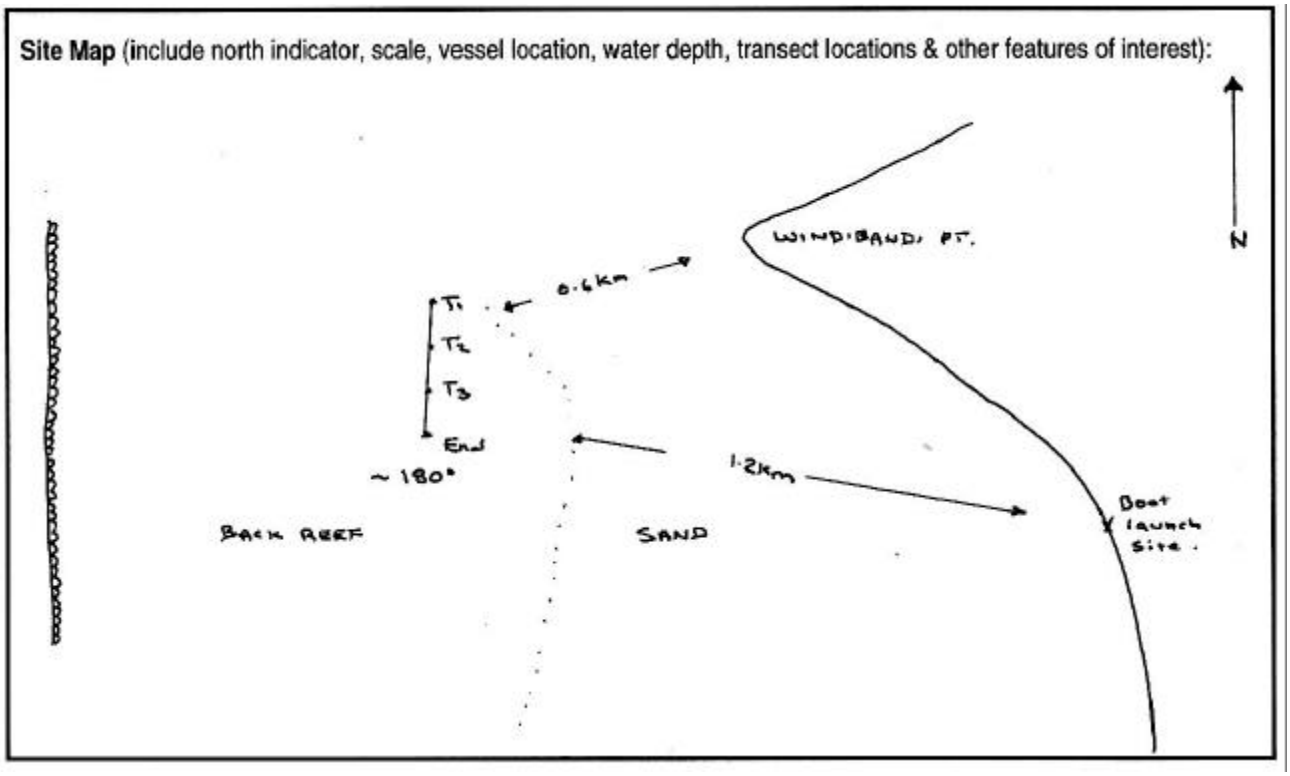
Project	NINGALOO MARINE PARK MONITORING PROGRAM				Field Survey		MAY 1998
Site No.	N10	Site Name	Lefroy Bay	Date	14/5/98	Recorder	Lapwood

GPS Latitude	GPS Longitude	Differential			
22° 30.290' S	113° 41.913' E	Yes	☒	No	☐

Habitat type	Back reef - sandy rubble substrate, relatively high diversity of small colonies and some larger Faviidae.

Location of nearest transect from GPS position	Transect No.	T	Compass bearing (°)	180	Distance (m)	

Site Map (include north indicator, scale, vessel location, water depth, transect locations & other features of interest):



Notes:

HABITAT DATA SHEET

Project	NINGALOO MARINE PARK MONITORING PROGRAM				**Field Survey**		MAY 1998
Site No.	N10	**Site Name**	Lefroy Bay	**Date**	14/5/98	**Recorder**	Grubba
Vessel	CALM Zodiac	**Time**	10.05	**Weather**			
Sea		**Water depth (m)**	1.0-2.0	**Water visibility (m)**	8.0-10.0		

GPS Latitude	GPS Longitude	Differential			
22° 30.290' S	113° 41.913' E	**Yes**	☒	**No**	☐

Site location	Site located in Lefroy Bay on back reef approximately 24km south of Yardie Creek and 2 km south of Winderabandi.

Habitat Description

Back reef - sandy rubble substrate, relatively high diversity of small colonies and some larger Faviidae.
Live coral: 16% (mean)
Dead coral: 64% (mean)
Algae: 6% (mean)
Abiotic: 22% (mean)

Dominant Species

Seagrass	
Macro-algae	*Galaxaura marginata*, *Dictyota* sp. and Filamentous blue-green algae.
Coral	*Acropora* sp. (digitate, large massives and few tabular), *Favites* sp., *Astreopora* sp., and *Sinularia* sp. (soft coral).
Fish	Pomacentridae (damselfish) and Labridae (juv. parrotfish).
Invertebrates	Holothurians (several spp. sea cucumbers) and *Tridacna* sp. (large clam).

Other Features

Approximately 27-30m of transect 1 is covered by *Sinularia* sp. (soft coral).

Impact or Activity

High proportion of old dead *Acropora* sp (tabular). Drupella in low density in transect 2.

Video reference	NMPMP/bvt/14.05.98 /#5	**Aerial reference**	1994 /WA 3434C /RUN11/ 5120
Slide reference		**Print reference**	

VIDEO DATA SHEET

Project	NINGALOO MARINE PARK MONITORING PROGRAM				**Field Survey**		MAY 1998
Site No.	N10	**Site Name**	Lefroy Bay	**Date**	14/5/98	**Recorder**	Cary
Start time	10.30	**Finish time**	12.30	**Depth (m)**	1.5	**Visibility (m)**	10.0

Underwater Video System	Blaupunkt CC894 camcorder in StingRay SR-700 housing											
Focus mode				**Exposure mode**				**Program mode**				**White balance mode**			
Auto	☒	Manual	☐	Auto	☒	Manual	☐	Sports	☒	High-speed	☐	Auto	☒	Outdoor	☐
Lens system				**Filters**								**Lights**			
Wide-angle	☒	Zoom-macro	☐	None	☒	Red	☐	Yellow	☐	Orange	☐	On	☐	Off	☒

Video operator	Grubba	**Tape no.**	NMPMP/bvt/14.05.98 /#5	**Height above substrate (cm)**	30
Time coding for all video footage at site:		**From:**	00:00:20:00	**To:**	00:0:40:31

Transect time coding	**Start**	**Finish**	**Total time (mins/secs)**
T1	00:00:20:53	00:00:26:34	6.21
T2	00:00:27:11	00:00:33:07	6.36
T3	00:00:33:54	00:00:40:55	7.01

Notes:

TRANSECT DATA SHEET

Project	NINGALOO MARINE PARK MONITORING PROGRAM				**Field Survey**		MAY 1998
Site No.	N25	**Site Name**	Pt. Billy	**Date**	15/5/98	**Recorder**	Lapwood
Time	15.00	**Video tape no.**	NMPMP/bvt/15.05.98 /#7		**Video operator**		Grubba/Cary

T1	**Length (m)**	**50**	**Compass bearing (°)**	210	**Distance to T2 (m)**	10.0
Transect	**DGPS Lat**		**DGPS Long**	**Depth (m)**	**Picket type**	**Picket ht (m)**
Start	22° 33.106' S		113° 39.407' E	1.5	60cm Star/Steel	0.15
Finish	° ' S		° ' E			

Notes:
Depth: 0.5-1.5m
Large coral bommies, large depth variation.
Live coral: 20% Dead coral: 78%
Algae: 0% Abiotic: 0%

T2	**Length (m)**	**50**	**Compass bearing (°)**	210	**Distance to T2 (m)**	10.0
Transect	**DGPS Lat**		**DGPS Long**	**Depth (m)**	**Picket type**	**Picket ht (m)**
Start	22° 33.138' S		113° 39.412' E	1.0	60cm Star/Steel	0.15
Finish	° ' S		° ' E			

Notes:
Flat substrate dominated by *Acropora* sp. (tabular and digitate)
Depth: 0.5-1.0m
Live coral: 10% Dead coral: 76%
Algae: 0% Abiotic: 14%

T3	**Length (m)**	**50**	**Compass bearing (°)**	210		
Transect	**DGPS Lat**		**DGPS Long**	**Depth (m)**	**Picket type**	**Picket ht (m)**
Start	22°33.160' S		113° 39.416' E	1.0	60cm Star/Steel	0.15
Finish	22° 33.192' S		113° 39.388' E	1.0	60cm Star/Steel	0.15

Notes:
Wash zone dominated by *Acropora* sp.
Depth: 0.5-1.0m
Live coral: 2% Dead coral: 69%
Algae: 0% Abiotic: 27%

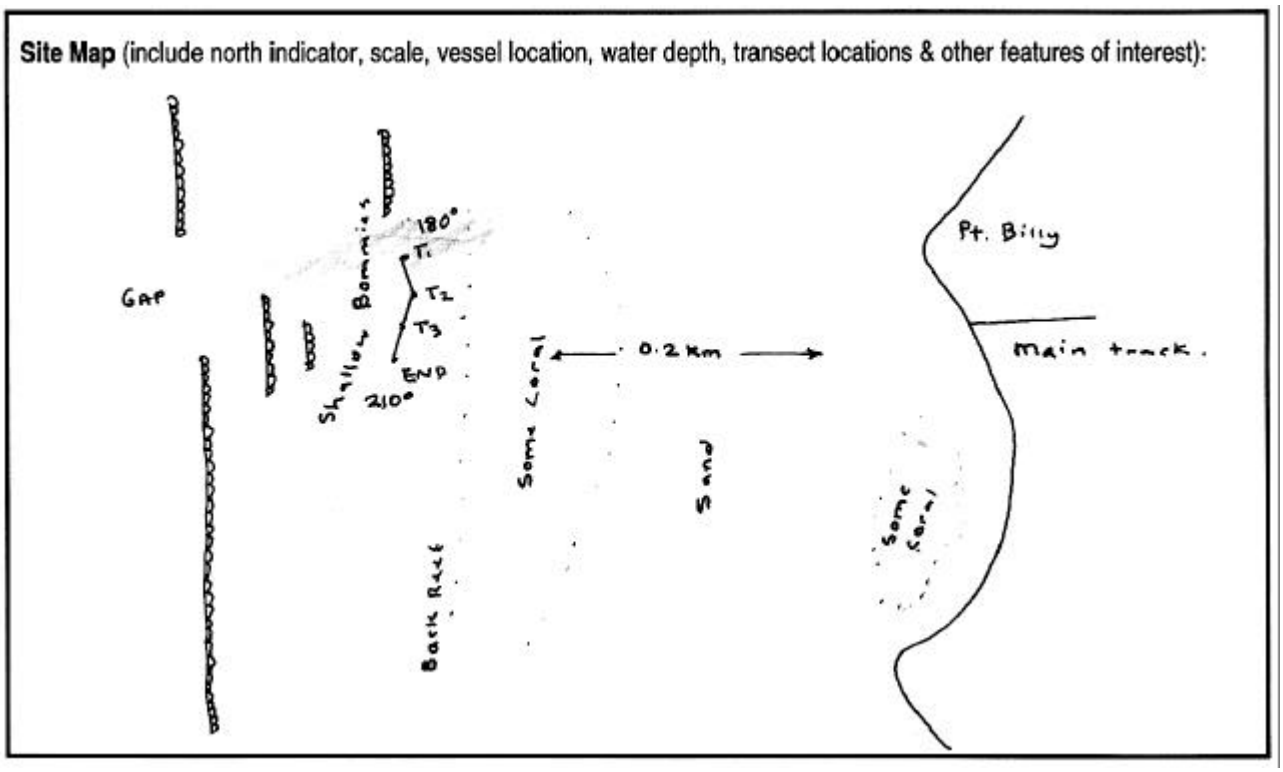
LONG-TERM MONITORING SITE DATA SHEET

Project	NINGALOO MARINE PARK MONITORING PROGRAM				**Field Survey**		MAY 1998
Site No.	N25	**Site Name**	Pt. Billy	**Date**	15/5/98	**Recorder**	Lapwood

GPS Latitude	**GPS Longitude**	**Differential**			
22° 33.106' S	113° 39.407' E	**Yes**	☒	**No**	☐

Habitat type	There are three different habitat types: T1: Channel through back reef with large bommies T2: Back reef - coral dominated by *Acropora* sp. (tabular) T3: Back reef – wash zone with coral rubble and *Acropora* sp.						
Location of nearest transect from GPS position		**Transect No.**	T	**Compass bearing (°)**		**Distance (m)**	

Site Map (include north indicator, scale, vessel location, water depth, transect locations & other features of interest):



Notes:
Transect run along the compass bearing of 210°.
SCUBA was not required at this site.

HABITAT DATA SHEET

Project	NINGALOO MARINE PARK MONITORING PROGRAM				**Field Survey**		MAY 1998
Site No.	N25	**Site Name**	Pt. Billy	**Date**	15/5/98	**Recorder**	Cary
Vessel	CALM Zodiac	**Time**	15.00	**Weather**			
Sea		**Water depth (m)**	0.5-1.0	**Water visibility (m)**	15.0		

GPS Latitude	**GPS Longitude**	**Differential**			
22 ° 33.105 ' S	113 ° 39.407 ' E	**Yes**	☒	**No**	☐

Site location	Site located off Pt. Billy. The transect starts near the channel and runs approximately south.

Habitat Description

There are three different habitat types:
T1: Channel through back reef with large bommies
T2: Back reef - coral dominated by *Acropora* sp. (tabular)
T3: Back reef – wash zone with coral rubble and *Acropora* sp.
Live coral: 11% (mean)
Dead coral: 74% (mean)
Algae: 0% (mean)
Abiotic: 14% (mean)

Dominant Species

Seagrass	
Macro-algae	Filamentous blue-green algae, *Dictyota* sp. and *Turbinaria* sp.
Coral	*Acropora* sp. (tabular and massives) dominated transect 1. Some *Millepora* sp., *Lobophyllia* sp., *Favid* sp., *Favites* sp. and *Galaxea* sp.
Fish	Acanthridae (surgeonfish), Pomacentridae (damselfish) and Labridae (wrasse).
Invertebrates	

Other Features

Impact or Activity

Drupella in low density in Transect 3.

Video reference	NMPMP/bvt/15.05.98 /#7	**Aerial reference**	1994 /WA 3434C /RUN /
Slide reference		**Print reference**	

VIDEO DATA SHEET

Project	NINGALOO MARINE PARK MONITORING PROGRAM				**Field Survey**		MAY 1998
Site No.	N25	**Site Name**	Pt. Billy	**Date**	15/5/98	**Recorder**	Grubba/Cary
Start time	15.00	**Finish time**	15.30	**Depth (m)**	1.0	**Visibility (m)**	15.0

Underwater Video System	Blaupunkt CC894 camcorder in StingRay SR-700 housing											
Focus mode				**Exposure mode**				**Program mode**				**White balance mode**			
Auto	☒	Manual	☐	Auto	☒	Manual	☐	Sports	☒	High-speed	☐	Auto	☒	Outdoor	☐
Lens system				**Filters**								**Lights**			
Wide-angle	☒	Zoom-macro	☐	None	☒	Red	☐	Yellow	☐	Orange	☐	On	☒	Off	☐

Video operator	Grubba/cary	**Tape no.**	NMPMP/bvt/15.05.98 /#7	**Height above substrate (cm)**	30
Time coding for all video footage at site:		**From:**	00:00:21:00	**To:**	00:00:36:59

Transect time coding	**Start**	**Finish**	**Total time (mins/secs)**
T1	00:00:23:39	00:00:27:41	4.02
T2	00:00:28:05	00:00:30:57	2.52
T3	00:00:31:26	00:00:34:56	3.30

Notes:

Transect 1 was filmed briefly but was aborted due to strong currents. Transect 1 was re-filmed at a faster rate due to low batteries.

TRANSECT DATA SHEET

Project	NINGALOO MARINE PARK MONITORING PROGRAM				Field Survey		MAY 1998
Site No.	N11	Site Name	Pt. Cloates	Date	15/5/98	Recorder	Lapwood
Time	11.00	Video tape no.	NMPMP/bvt/15.05.98 /#6		Video operator		Grubba/Myers

T1	Length (m)	50	Compass bearing (°)	356	Distance to T2 (m)	10.0
Transect	DGPS Lat	DGPS Long	Depth (m)	Picket type	Picket ht (m)	
Start	22° 41.358' S	113° 38.634' E	1.8	90cm Star/Steel	0.15	
Finish	° ' S	° ' E				

Notes:
Live coral: 23%
Dead coral: 44%
Algae: 11%
Abiotic: 23%

T2	Length (m)	50	Compass bearing (°)	356	Distance to T2 (m)	10.0
Transect	DGPS Lat	DGPS Long	Depth (m)	Picket type	Picket ht (m)	
Start	22° 41.389' S	113° 38.632' E	1.8	90cm Star/Steel	0.15	
Finish	° ' S	° ' E				

Notes:
Live coral: 16%
Dead coral: 56%
Algae: 2%
Abiotic: 26%

T3	Length (m)	50	Compass bearing (°)	356		
Transect	DGPS Lat	DGPS Long	Depth (m)	Picket type	Picket ht (m)	
Start	22° 41.418' S	113° 38.629' E	1.8	90cm Star/Steel	0.15	
Finish	22° 41.448' S	113° 38.629' E	1.8	90cm Star/Steel	0.15	

Notes:
Live coral: 16%
Dead coral: 62%
Algae: 3%
Abiotic: 18%

LONG-TERM MONITORING SITE DATA SHEET

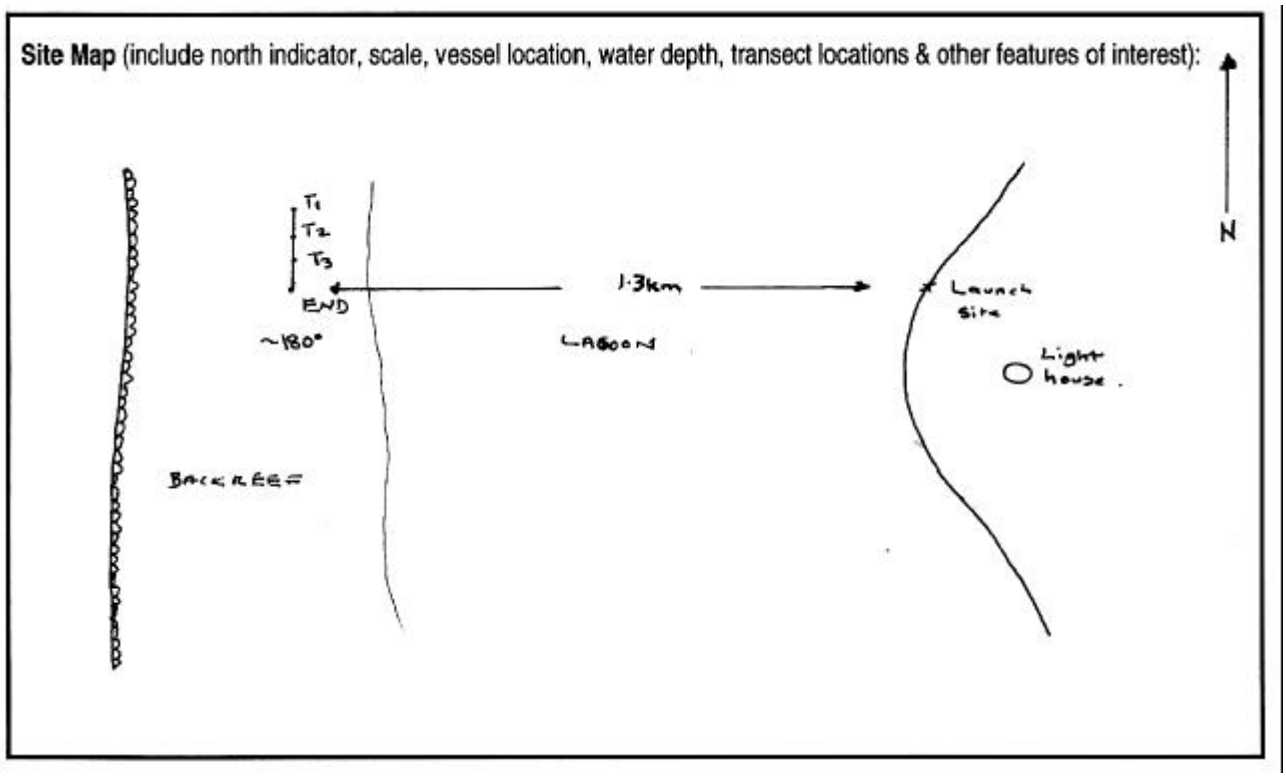
Project	NINGALOO MARINE PARK MONITORING PROGRAM				Field Survey		MAY 1998
Site No.	N11	Site Name	Pt. Cloates	Date	15/5/98	Recorder	Lapwood

GPS Latitude	GPS Longitude	Differential			
22° 41.358 ' S	113° 38.634 ' E	Yes	☒	No	☐

Habitat type	Back reef – coral dominated by *Acropora* sp. (tabular).

Location of nearest transect from GPS position	Transect No.	T	Compass bearing (°)		Distance (m)	

Site Map (include north indicator, scale, vessel location, water depth, transect locations & other features of interest):



Notes:

HABITAT DATA SHEET

Project	NINGALOO MARINE PARK MONITORING PROGRAM				**Field Survey**		MAY 1998
Site No.	N11	**Site Name**	Pt. Cloates	**Date**	15/5/98	**Recorder**	Cary
Vessel	CALM Zodiac	**Time**	11.00	**Weather**	NE 12 knots		
Sea		**Water depth (m)**	1.8	**Water visibility (m)**	10.0		

GPS Latitude	GPS Longitude	Differential			
22° 41.358 ' S	113° 38.634 ' E	**Yes**	☒	**No**	☐

Site location	Site located just outside Pt. Cloates Sanctuary. The boat was launched from the beach adjacent to the Ningaloo Station homestead.

Habitat Description

Back reef – coral dominated by *Acropora* sp. (tabular).
Live coral: 19% (mean)
Dead coral: 54% (mean)
Algae: 5% (mean)
Abiotic: 23% (mean)

Dominant Species

Seagrass	
Macro-algae	*Dictyota* sp., *Turbinaria* sp. and Filamentous blue-green algae.
Coral	Dominated by *Acropora* sp. (tabular and digitate). Some *Pocillopora* sp., *Favites* sp., *Lobophyllia* sp., *Gonipora* sp., *Favia* sp., *Acropora* sp. (branching) and *Platygyra* sp.
Fish	Pomacentridae (damselfish), Labridae (wrasse), Scaridae (parrotfish) and Acanthuridae (surgeonfish).
Invertebrates	Holothurians (sea cucumbers).

Other Features

The site could not be located in the same area as Osbourne's *Drupella* sites as they were inaccessible due to adverse sea conditions (swell). Site located outside of sanctuary due to low coral cover in the sanctuary. The back reef – lagoon was dominated by limestone pavement covered with macro algae (if not sand).

Impact or Activity

T1 – *Drupella* in low density at 1.5m, 19.0m and 36.0m
T3 – *Drupella* in low density at 1.5m, 19.0m and 36.0m

Video reference	NMPMP/bvt/15.05.98 /#6	**Aerial reference**	1994 /WA 3434C /RUN12/ 5132
Slide reference		**Print reference**	

VIDEO DATA SHEET

Project	NINGALOO MARINE PARK MONITORING PROGRAM				**Field Survey**		MAY 1998
Site No.	N11	**Site Name**	Pt. Cloates	**Date**	15/5/98	**Recorder**	Cary
Start time	11.00	**Finish time**	12.00	**Depth (m)**	1.8	**Visibility (m)**	10.0

Underwater Video System	Blaupunkt CC894 camcorder in StingRay SR-700 housing

Focus mode				**Exposure mode**				**Program mode**				**White balance mode**			
Auto	☐	Manual	☒	Auto	☒	Manual	☐	Sports	☐	High-speed	☒	Auto	☒	Outdoor	☐

Lens system				**Filters**								**Lights**			
Wide-angle	☒	Zoom-macro	☐	None	☒	Red	☐	Yellow	☐	Orange	☐	On	☒	Off	☐

Video operator	Grubba/myers	**Tape no.**	NMPMP/bvt/15.05.98 /#6	**Height above substrate (cm)**	30
Time coding for all video footage at site:		**From:**	00:00:00:08	**To:**	00:00:24:59

Transect time coding	**Start**	**Finish**	**Total time (mins/secs)**
T1	00:00:00:29	00:00:05:16	5.07
T2	00:00:06:04	00:00:10:38	4.34
T3	00:00:14:15	00:00:19:39	5.24

Notes:

Transect 3 was filmed three times. The first time filming was aborted at 14.0m. The second and third filming were good:
2nd 14:15 to 19:39
3rd 20:13 to 24:59

TRANSECT DATA SHEET

Project	NINGALOO MARINE PARK MONITORING PROGRAM				Field Survey		MAY 1998
Site No.	N12	Site Name	Dugong Sanctuary	Date	17/5/98	Recorder	Lapwood
Time	12.00	Video tape no.	NMPMP/bvt/17.05.98 /#6		Video operator		Myers

T1	Length (m)	50	Compass bearing (°)	180	Distance to T2 (m)	10.0
Transect	DGPS Lat	DGPS Long	Depth (m)	Picket type	Picket ht (m)	
Start	22° 51.839' S	113° 45.521' E	2.5	90cm Star/Steel	0.15	
Finish	° ' S	° ' E				

Notes:
Live coral: 17%
Dead coral: 71%
Algae: 2%
Abiotic: 9%

T2	Length (m)	50	Compass bearing (°)	180	Distance to T2 (m)	10.0
Transect	DGPS Lat	DGPS Long	Depth (m)	Picket type	Picket ht (m)	
Start	22° 51.870' S	113° 45.518' E	2.5	90cm Star/Steel	0.15	
Finish	° ' S	° ' E				

Notes:
Live coral: 23%
Dead coral: 66%
Algae: 1%
Abiotic: 10%

T3	Length (m)	50	Compass bearing (°)	180		
Transect	DGPS Lat	DGPS Long	Depth (m)	Picket type	Picket ht (m)	
Start	22° 51.901' S	113° 45.515' E	2.5	90cm Star/Steel	0.15	
Finish	22° 51.924' S	113° 45.511' E	2.5	90cm Star/Steel	0.15	

Notes:
Live coral: 31%
Dead coral: 63%
Algae: 1%
Abiotic: 5%

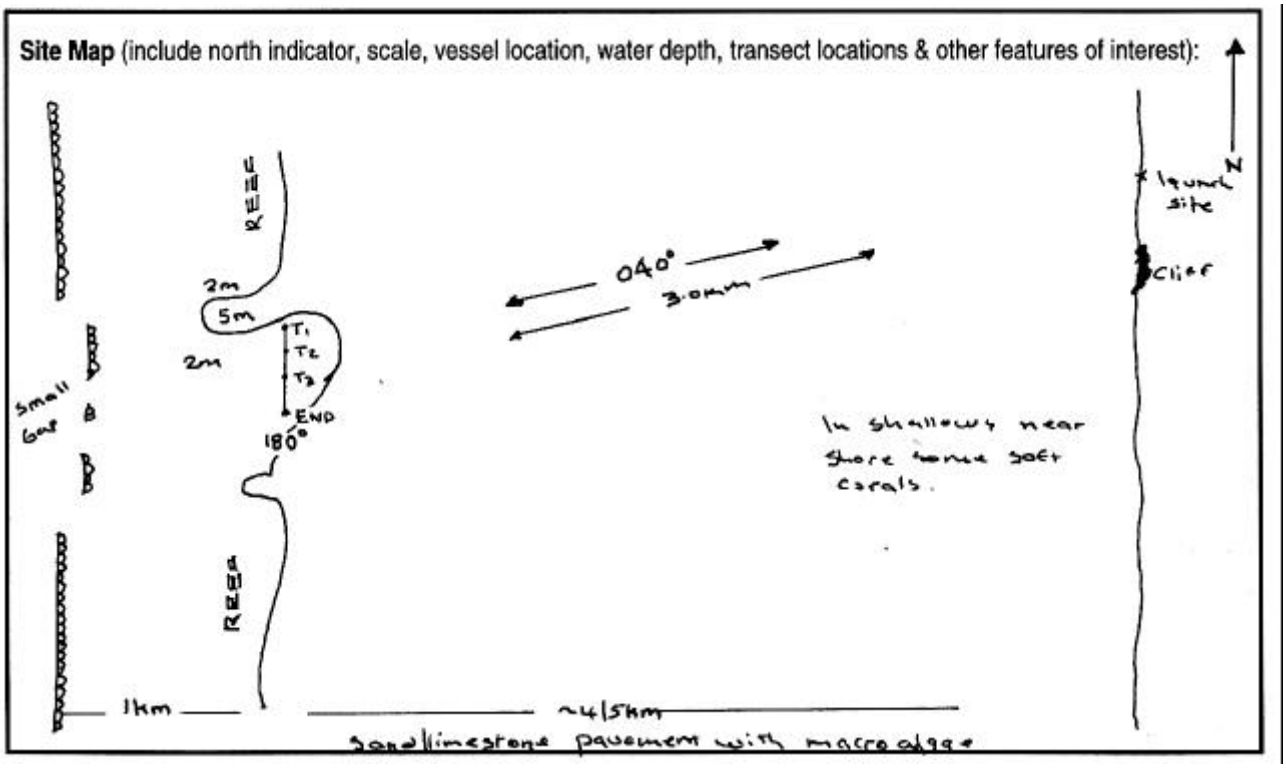
LONG-TERM MONITORING SITE DATA SHEET

Project	NINGALOO MARINE PARK MONITORING PROGRAM				**Field Survey**		MAY 1998
Site No.	N12	**Site Name**	Dugong Snactuary	**Date**	17/5/98	**Recorder**	Lapwood

GPS Latitude	**GPS Longitude**	**Differential**			
22° 51.839' S	113° 45.521' E	**Yes**	☒	**No**	☐

Habitat type	Back reef was not typical due to the large number of gaps through the reef. *Acropora* sp. (tabular and digitate) dominated but there were also many massives.						
Location of nearest transect from GPS position		**Transect No.**	T1	**Compass bearing (°)**	180	**Distance (m)**	10.0

Site Map (include north indicator, scale, vessel location, water depth, transect locations & other features of interest):



Notes:
Boat launched 12km north of the southern boundary of Dugong Sanctuary. Dugong Sanctuary covers approximately 18km of coastline.

HABITAT DATA SHEET

Project	NINGALOO MARINE PARK MONITORING PROGRAM				**Field Survey**		MAY 1998
Site No.	N12	**Site Name**	Dugong Sanctuary	**Date**	17/5/98	**Recorder**	Cary
Vessel	CALM Zodiac	**Time**	12.00	**Weather**	5 Knots		
Sea		**Water depth (m)**	2.5	**Water visibility (m)**	15.0		

GPS Latitude	GPS Longitude	Differential			
22° 51.839 ' S	113 ° 45.521 ' E	**Yes**	☒	**No**	☐

Site location	Site located on the back reef 5km from the coast and 12km north of the southern boundary of Dugong Sanctuary.

Habitat Description

Back reef was not typical due to the large number of gaps through the reef. *Acropora* sp. (tabular and digitate) dominated but there were also many massives.
Live coral: 24% (mean)
Dead coral: 67% (mean)
Algae: 1% (mean)
Abiotic: 8% (mean)

Dominant Species

Seagrass	
Macro-algae	
Coral	Dominated by *Acropora* sp. (tabular and digitate), *A. hyacinthus* and occasional *Favites* sp., *Lobophyllia* sp. *Platygyra* sp., *Goniastrea* sp., *Leptora* sp. and *Seriatopora* sp.
Fish	Chaetodontidae (butterflyfish), Pocanthidae (angelfish) and occasional large fish species.
Invertebrates	Holothurians (sea cucumbers), Nudibranchs, *Linckia laevigata* (sea star), *Formia indica* (sea star), urchins and *Drupella*.

Other Features

Coral reef occurs up to 800m east of the reef crest. Lagoon dominated by limestone pavement covered in macro algae (mainly sargassum) occurs from the shoreline to 4km offshore.

Impact or Activity

Drupella in medium/high density on *Acropora* sp. *Drupella* abundance higher than other back reef sites south of Yardie Creek (upto this point of the survey) but abundance is lower than sites to the north of Yardie Creek.

Video reference	NMPMP/bvt/ 17.05.98 /# 6	**Aerial reference**	1994 /WA 3434C /RUN12/ 5191
Slide reference		**Print reference**	

VIDEO DATA SHEET

Project	NINGALOO MARINE PARK MONITORING PROGRAM				**Field Survey**		MAY 1998
Site No.	N12	**Site Name**	Dugong Sanctuary	**Date**	17/5/98	**Recorder**	Myers
Start time	12.00	**Finish time**	12.30	**Depth (m)**	2.5	**Visibility (m)**	15.0

Underwater Video System	Blaupunkt CC894 camcorder in StingRay SR-700 housing											
Focus mode				**Exposure mode**				**Program mode**				**White balance mode**			
Auto	☒	Manual	☐	Auto	☒	Manual	☐	Sports	☒	High-speed	☐	Auto	☒	Outdoor	☐
Lens system				**Filters**								**Lights**			
Wide-angle	☒	Zoom-macro	☐	None	☒	Red	☐	Yellow	☐	Orange	☐	On	☐	Off	☒

Video operator	Myers	**Tape no.**	NMPMP/bvt/17.05.98 /#6	**Height above substrate (cm)**	30
Time coding for all video footage at site:		**From:**	00:00:24:59	**To:**	00:00:40:51

Transect time coding	**Start**	**Finish**	**Total time (mins/secs)**
T1	00:00:25:51	00:00:30:11	4.20
T2	00:00:30:55	00:00:35:17	5.62
T3	00:00:36:14	00:00:40:51	4.37

Notes:

This site was filmed twice—also on tape #7 starting at 36:59—57:47

TRANSECT DATA SHEET

Project	NINGALOO MARINE PARK MONITORING PROGRAM				Field Survey		MAY 1998
Site No.	N13	Site Name	Bruboodijoo Pt.	Date	20/5/98	Recorder	Daly
Time	12.30	Video tape no.	NMPMP/bvt/ 20.05.98 /# 9		Video operator		Myers

T1	Length (m)	50	Compass bearing (°)		Distance to T2 (m)		10.0
Transect	DGPS Lat		DGPS Long		Depth (m)	Picket type	Picket ht (m)
Start	22° 56.728' S		113° 46.645' E		1.0	90cm Star/Steel	0.15
Finish	° ' S		° ' E				

Notes:
Live coral: 7%
Dead coral: 79%
Algae: 1%
Abiotic: 0%

T2	Length (m)	50	Compass bearing (°)		Distance to T2 (m)		10
Transect	DGPS Lat		DGPS Long		Depth (m)	Picket type	Picket ht (m)
Start	22° 56.763' S		113° 46.645' E		1.0	90cm Star/Steel	0.15
Finish	° ' S		° ' E				

Notes:
Live coral: 8%
Dead coral: 76%
Algae: 12%
Abiotic: 4%

T3	Length (m)	50	Compass bearing (°)				
Transect	DGPS Lat		DGPS Long		Depth (m)	Picket type	Picket ht (m)
Start	22° 56.796' S		113° 46.643' E		1.0	90cm Star/Steel	0.15
Finish	22° 56.821' S		113° 46.640' E		1.0	90cm Star/Steel	0.15

Notes:
Live coral: 17%
Dead coral: 69%
Algae: 7%
Abiotic: 7%

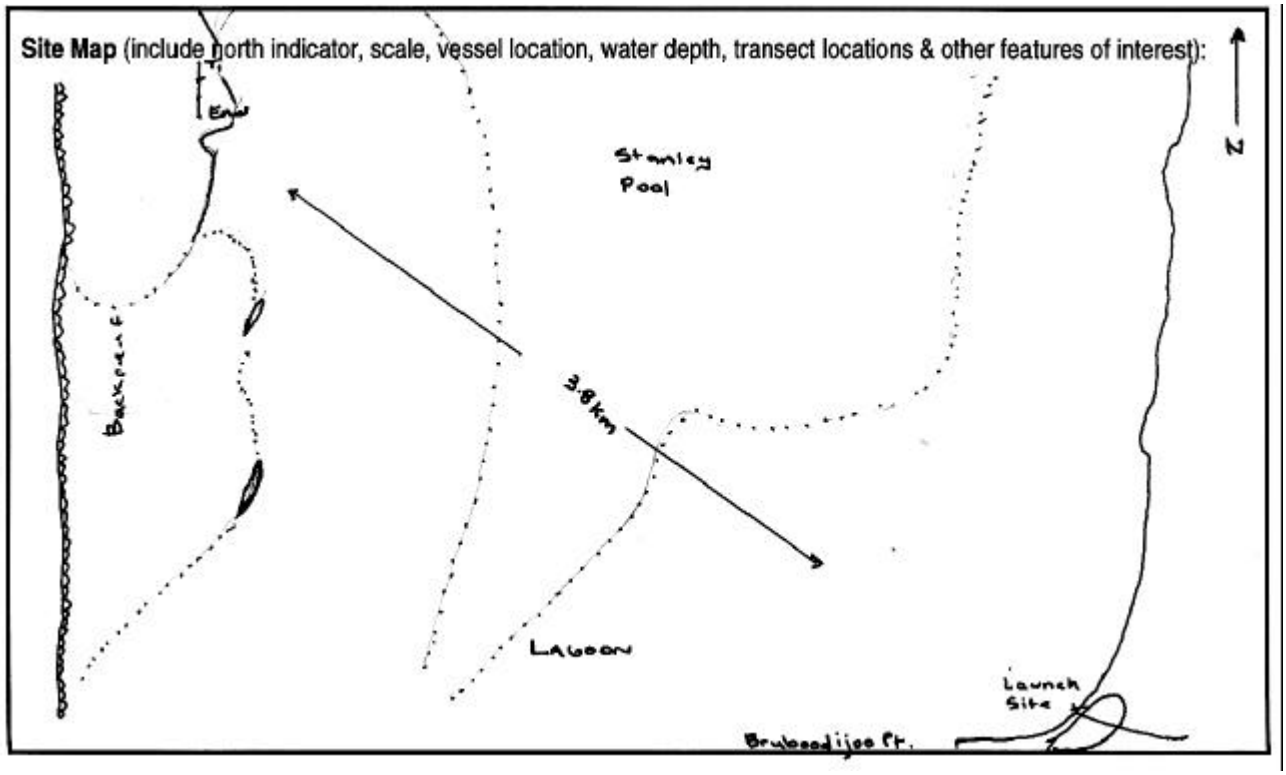
LONG-TERM MONITORING SITE DATA SHEET

Project	NINGALOO MARINE PARK MONITORING PROGRAM				**Field Survey**		MAY 1998
Site No.	N13	**Site Name**	Bruboodijoo Pt.	**Date**	20/5/98	**Recorder**	Daly

GPS Latitude	**GPS Longitude**	**Differential**			
22° 56.728 ' S	113° 46.645 ' E	**Yes**	☒	**No**	☐

Habitat type	Back reef - dominated by dead standing (over 90%) *Acropora* sp. (tabular). Patches in between plates are sand/rubble and *Acropora* sp. (branching). The site is subject to strong water movement from the reef crest. *Acropora* sp. mortality is possibly due to *Drupella* infestations in the past and present.						
Location of nearest transect from GPS position		**Transect No.**	T1	**Compass bearing (°)**		**Distance (m)**	

Site Map (include north indicator, scale, vessel location, water depth, transect locations & other features of interest):



Notes:

HABITAT DATA SHEET

Project	NINGALOO MARINE PARK MONITORING PROGRAM				**Field Survey**		MAY 1998
Site No.	N13	**Site Name**	Bruboodijoo Pt.	**Date**	20/5/98	**Recorder**	Grubba
Vessel	CALM Zodiac	**Time**	12.30	**Weather**	10-15 knots SE		
Sea	Calm with strong current	**Water depth (m)**	1.0	**Water visibility (m)**	18.0		

GPS Latitude	**GPS Longitude**	**Differential**			
22° 56.728' S	113° 46.645' E	**Yes**	☒	**No**	☐

Site location	Site located on back reef north of Bruboodijoo Pt. The boat was launched from 9 mile camp which is approximately nine miles north of Coral Bay.

Habitat Description

Back reef - dominated by dead standing (over 90%) *Acropora* sp. (tabular). Patches in between plates are sand/rubble and *Acropora* sp. (branching). The site is subject to strong water movement from the reef crest. *Acropora* sp. mortality is possibly due to *Drupella* infestations in the past and present.
Live coral: 11% (mean)
Dead coral: 75% (mean)
Algae: 7% (mean)
Abiotic: 4% (mean)

Dominant Species

Seagrass	
Macro-algae	Filamentous blue – green algae, *Dictyota* sp., *Turbinaria* sp. and *Zellura tawallina*.
Coral	Dominated by *Acropora* sp. (tabular), occasional *Acropora* sp. (branching and digitate), *Monitpora* sp. *Fungia* sp., Favids, *Hydnophora* sp., *Lobophyllia* sp. and *Sinularia* sp. (soft coral).
Fish	Labridae (juv. Wrasse), Scaridae (medium sized parrotfish), Pomacentridae (damselfish), Pomacanthidae (angelfish), Chaetodontidae (butterflyfish) and large schools of Acanthuridae (surgeonfish).
Invertebrates	*Tridacna gigas* (giant clam), hermit crabs using *Drupella* shells and a very high abundance of *Drupella*.

Other Features

Site similar to Yardie Creek (N21) except more extensive dead *Acropora* sp. (tabular).

Impact or Activity

Drupella in medium/high density. Severe impacts possibly due to *Drupella* (worst since N1 – N14). Approximately 90% of *Acropora* sp (tabular) are dead including some plates up to 1.5m in diameter. Approximately 10% of live *Acropora* sp have *Drupella* feeding scars. *Drupella* also feeding on *Acropora* sp. (branching).

Video reference	NMPMP/bvt/ 20.05.98 /# 9	**Aerial reference**	1994 /WA 3434C /RUN14/ 5186
Slide reference		**Print reference**	

VIDEO DATA SHEET

Project	NINGALOO MARINE PARK MONITORING PROGRAM				**Field Survey**		MAY 1998
Site No.	N13	**Site Name**	Bruboodijoo Pt.	**Date**	20/5/98	**Recorder**	Myers
Start time	12.30	**Finish time**	14.30	**Depth (m)**	2.0	**Visibility (m)**	15.0

Underwater Video System	Blaupunkt CC894 camcorder in StingRay SR-700 housing											
Focus mode				**Exposure mode**				**Program mode**				**White balance mode**			
Auto	☒	Manual	☐	Auto	☒	Manual	☐	Sports	☒	High-speed	☐	Auto	☒	Outdoor	☐
Lens system				**Filters**								**Lights**			
Wide-angle	☒	Zoom-macro	☐	None	☒	Red	☐	Yellow	☐	Orange	☐	On	☐	Off	☒

Video operator	Myers	**Tape no.**	NMPMP/bvt/20.05.98 /#9	**Height above substrate (cm)**	30
Time coding for all video footage at site:		**From:**	00:00:21:06	**To:**	00:00:47:01

Transect time coding	**Start**	**Finish**	**Total time (mins/secs)**
T1	00:00:21:56	00:00:28:28	5.32
T2	00:00:29:02	00:00:34:59	5.57
T3	00:00:35:41	00:00:42:13	6.32

Notes:
General footage at the beginning and end of each transect showing corals and *Drupella* damage. The camera was not positioned correctly in the underwater housing and therefore the housing can be seen in the footage. Strong currents at the site made it difficult to film and the hand of the camera operator is seen occasionally, but the transect line always remains in view.

TRANSECT DATA SHEET

Project	NINGALOO MARINE PARK MONITORING PROGRAM				Field Survey		MAY 1998
Site No.	N22	Site Name	Coral Bay North	Date	21/5/98	Recorder	Grubba
Time	12.00	Video tape no.	NMPMP/bvt/21.05.98 /#8		Video operator		Myers

T1	Length (m)	50	Compass bearing (°)		Distance to T2 (m)	10.0
Transect	DGPS Lat	DGPS Long	Depth (m)	Picket type	Picket ht (m)	
Start	23° 05.942' S	113° 44.397' E	1.0	90cm Star/Steel	0.15	
Finish	° ' S	° ' E				

Notes:
Live coral: 8%
Dead coral: 84%
Algae: 0%
Abiotic: 8%

T2	Length (m)	50	Compass bearing (°)		Distance to T2 (m)	10.0
Transect	DGPS Lat	DGPS Long	Depth (m)	Picket type	Picket ht (m)	
Start	23° 05.978' S	113° 44.390' E	1.0	90cm Star/Steel	0.15	
Finish	° ' S	° ' E				

Notes:
Live coral: 5%
Dead coral: 89%
Algae: 5%
Abiotic: 1%

T3	Length (m)	50	Compass bearing (°)			
Transect	DGPS Lat	DGPS Long	Depth (m)	Picket type	Picket ht (m)	
Start	23° 05.990' S	113° 44.394' E	2.0	90cm Star/Steel	0.15	
Finish	23° 06.034' S	113° 44.390' E	2.0	90cm Star/Steel	0.15	

Notes:
Live coral: 14%
Dead coral: 66%
Algae: 3%
Abiotic: 16%

LONG-TERM MONITORING SITE DATA SHEET

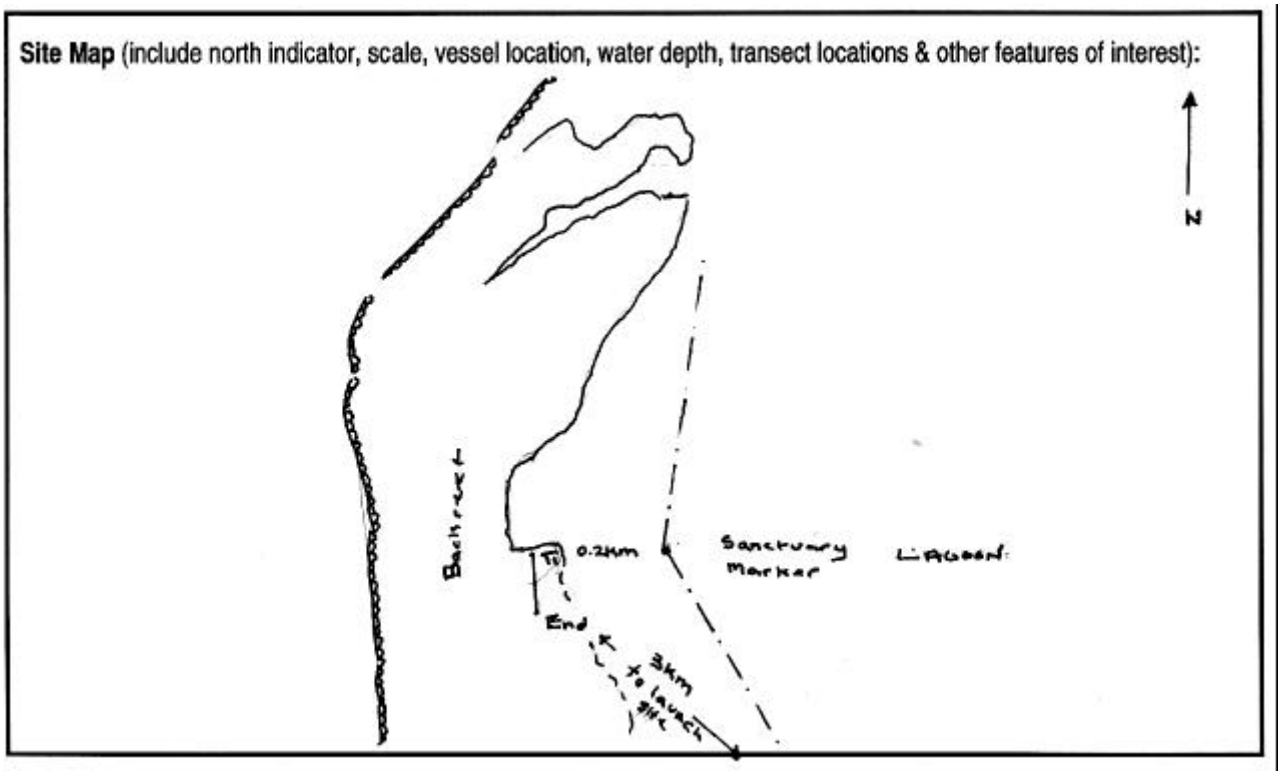
Project	NINGALOO MARINE PARK MONITORING PROGRAM				**Field Survey**		MAY 1998
Site No.	N22	**Site Name**	Coral Bay North	**Date**	21/5/98	**Recorder**	Daly

GPS Latitude	**GPS Longitude**	**Differential**			
23 ° 05.942 ' S	113 ° 44.397 ' E	**Yes**	☒	**No**	☐

Habitat type	Back reef – coral dominated by old dead *Acropora* sp. (tabular) up to 1.0m in diameter. There is approximately 5% live coral cover. Recruitment of *Acropora* sp and *Favites* sp. Areas of sand and rubble present and storm damage. Few *Drupella* and feeding scars were observed. High diversity of fish life. Some seagrass (*Halophila ovalis*) were present.

Location of nearest transect from GPS position	**Transect No.**	T	**Compass bearing (°)**		**Distance (m)**	

Site Map (include north indicator, scale, vessel location, water depth, transect locations & other features of interest):



Notes:

HABITAT DATA SHEET

Project	NINGALOO MARINE PARK MONITORING PROGRAM				**Field Survey**		MAY 1998
Site No.	N22	**Site Name**	Coral Bay North	**Date**	21/5/98	**Recorder**	Myers
Vessel	CALM Zodiac	**Time**	12.00	**Weather**	S 15 knots		
Sea		**Water depth (m)**	2.5	**Water visibility (m)**	15.0		

GPS Latitude	GPS Longitude	Differential			
23° 05.942' S	113° 44.397' E	**Yes**	☒	**No**	☐

Site location	Site located on back reef east of the sanctuary buoy that marks the bend in the Coral Bay Sanctuary zone.

Habitat Description

Back reef – coral dominated by old dead *Acropora* sp. (tabular) up to 1.0m in diameter. There is approximately 5% live coral cover. Recruitment of *Acropora* sp and *Favites* sp. Areas of sand and rubble present and storm damage. Few *Drupella* and feeding scars were observed. High diversity of fish life. Some seagrass (*Halophila ovalis*) were present.
Live coral: 9% (mean)
Dead coral: 80% (mean)
Algae: 3% (mean)
Abiotic: 8% (mean)

Dominant Species

Seagrass	Sparse Halophila ovalis.
Macro-algae	*Turbinaria* sp., *Dictyota* sp., Filamentous blue – green algae, *Valonia ventricosa*.
Coral	Dominated by *Acropora* sp (tabular and digitate), occasional *Platygyra* sp., *Favites* sp., *Monitpora* sp. *Sinularia* sp. (soft coral) and *Lobophyton* sp. (soft coral).
Fish	Dominated by Labridae (wrasse), Pomacentridae (damselfish), Pomacantridae (angelfish) and some schools of Chaetodontidae (butterflyfish), occasional Monacanthidae (leatherjacket), *Amphiprion* sp. (Anemonefish) and Scaridae (parrotfish).
Invertebrates	Holothurians (sea cucumber), *Echinometra* sp. (sea urchin), *Linckia* sp (sea star), *Formia indica* (sea star), Anemone and *Tridacna gigas* (giant clam).

Other Features

Impact or Activity

High energy site, with some evidence of storm damage and minimal *Drupella* impacts observed. *Drupella* in low density.

Video reference	NMPMP/bvt/21.05.98 /#8	**Aerial reference**	1994 /WA 3434C /RUN16/ 5165
Slide reference		**Print reference**	

VIDEO DATA SHEET

Project	NINGALOO MARINE PARK MONITORING PROGRAM				**Field Survey**		MAY 1998
Site No.	N22	**Site Name**	Coral Bay North	**Date**	21/5/98	**Recorder**	Myers
Start time	11.30	**Finish time**	13.00	**Depth (m)**	2.5	**Visibility (m)**	15.0

Underwater Video System	Blaupunkt CC894 camcorder in StingRay SR-700 housing											
Focus mode				**Exposure mode**				**Program mode**				**White balance mode**			
Auto	☒	Manual	☐	Auto	☒	Manual	☐	Sports	☒	High-speed	☐	Auto	☒	Outdoor	☐
Lens system				**Filters**								**Lights**			
Wide-angle	☒	Zoom-macro	☐	None	☒	Red	☐	Yellow	☐	Orange	☐	On	☐	Off	☒

Video operator	Myers	**Tape no.**	NMPMP/bvt/21.05.98 /#8	**Height above substrate (cm)**	30
Time coding for all video footage at site:		**From:**	00:00:22:04	**To:**	00:00:40:32

Transect time coding	**Start**	**Finish**	**Total time (mins/secs)**
T1	00:00:23:22	00:00:28:16	4.54
T2	00:00:29:51	00:00:34:39	4.48
T3	00:00:34:59	00:00:40:32	5.33

Notes:

The following species *Pectina paeonia* was identified on Transect 3 (footage 35:43).

TRANSECT DATA SHEET

Project	NINGALOO MARINE PARK MONITORING PROGRAM				Field Survey		MAY 1998
Site No.	N14	Site Name	Coral Bay/Bill's Bay	Date	19/5/98	Recorder	Grubba
Time	10.20	Video tape no.	NMPMP/bvt/19.05.98 /#8		Video operator		Myers

T1	Length (m)	50	Compass bearing (°)	180	Distance to T2 (m)	10.0
Transect	DGPS Lat	DGPS Long	Depth (m)	Picket type	Picket ht (m)	
Start	23° 08.881' S	113° 44.965' E	1.5-2.0	90cm Star/Steel	0.15	
Finish	° ' S	° ' E				

Notes:
Started transect in sand on north edge of bommie. Glass bottom boat mooring 150m to the north.
Live coral: 13% Dead coral: 7%
Algae: 0% Abiotic: 26%

T2	Length (m)	50	Compass bearing (°)	180	Distance to T2 (m)	10.0
Transect	DGPS Lat	DGPS Long	Depth (m)	Picket type	Picket ht (m)	
Start	23° 08.911' S	113° 44.971' E	1.5-2.0	90cm Star/Steel	0.15	
Finish	° ' S	° ' E				

Notes:
Live coral: 11%
Dead coral: 56%
Algae: 1%
Abiotic: 31%

T3	Length (m)	50	Compass bearing (°)	180		
Transect	DGPS Lat	DGPS Long	Depth (m)	Picket type	Picket ht (m)	
Start	23° 08.945' S	113° 44.982' E	1.5-2.0	90cm Star/Steel	0.15	
Finish	23° 08.960' S	113° 44.980' E	1.5-2.0	90cm Star/Steel	0.15	

Notes:
Transect 3 was re-positioned to avoid sand. The original end of the transect was 23° 08.959' S and 113° 44.989' E.

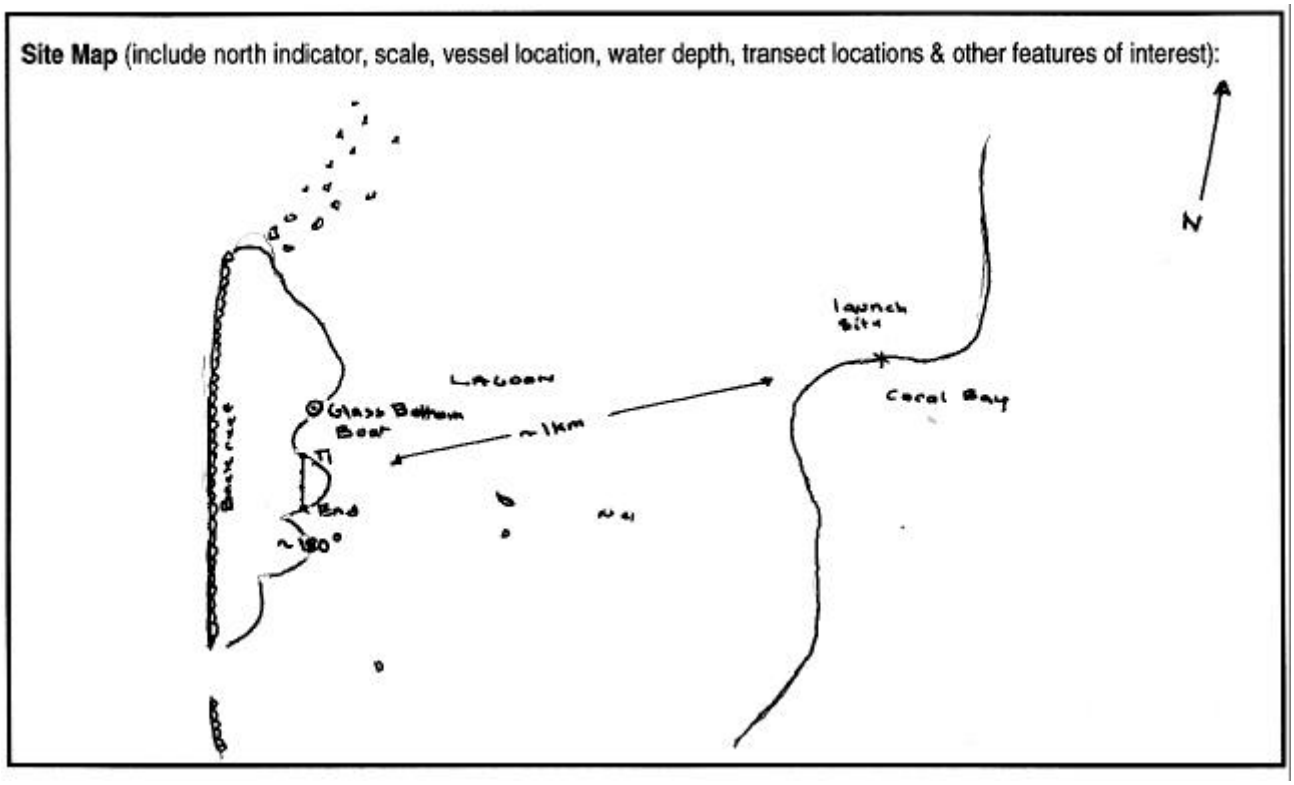
LONG-TERM MONITORING SITE DATA SHEET

Project	NINGALOO MARINE PARK MONITORING PROGRAM				Field Survey		MAY 1998
Site No.	N14	Site Name	Coral Bay/Bill's Bay	Date	19/5/98	Recorder	Daly

GPS Latitude	GPS Longitude	Differential			
23° 08.881 ' S	113° 44.965 ' E	Yes	☒	No	☐

Habitat type	Back reef – coral dominated by *Acropora* sp. (massives, sub-massives and digitate) and dead *Acropora* sp. (tabular, digitate and branching_. Transect passes through some sandy patches. Some large colonies of massive corals. Transect 2 passed through a rubble zone.					
Location of nearest transect from GPS position	Transect No.	T1	Compass bearing (°)		Distance (m)	10

Site Map (include north indicator, scale, vessel location, water depth, transect locations & other features of interest):



Notes:

HABITAT DATA SHEET

Project	NINGALOO MARINE PARK MONITORING PROGRAM				**Field Survey**		MAY 1998
Site No.	N14	**Site Name**	Coral bay/Bill's Bay	**Date**	19/5/98	**Recorder**	Grubba
Vessel	CALM Zodiac	**Time**	10.30	**Weather**	5 knots SE		
Sea	Calm	**Water depth (m)**	2.0	**Water visibility (m)**	18.0		

GPS Latitude	GPS Longitude	Differential			
23° 08.881' S	113° 44.965' E	**Yes**	☒	**No**	☐

Site location	Site is located on the back reef directly out from the Coral Bay township and is approximately 150m south of the glass bottom boat mooring.

Habitat Description

Back reef – coral dominated by *Acropora* sp. (massives, sub-massives and digitate) and dead *Acropora* sp. (tabular, digitate and branching_. Transect passes through some sandy patches. Some large colonies of massive corals. Transect 2 passed through a rubble zone.
Live coral: 13% (mean)
Dead coral: 42% (mean)
Algae: 1%
Abiotic: 26% (mean)

Dominant Species

Seagrass	
Macro-algae	*Dictyota* sp., *Galazaura marginata*, Filamentous blue – green algae.
Coral	*Acropora* sp. (digitate), *A. grandis*, *Monitpora* sp. *Favites* sp., *Platygyra* sp. *Echinopora* sp., *Fungia* sp. *Merulina* sp. and *Sinularia* sp. (soft coral).
Fish	Pomacentridae (damselfish), Scaridae (med sized parrotfish) and Acanthuridae (surgeonfish).
Invertebrates	*Tridacna* sp. (clams), sea stars and Holothurians (sea cucumber).

Other Features

No visible *Drupella* or feeding scars. *Acropora* sp. is not a dominant coral at this site.

Impact or Activity

Medium to high energy site. There is sand scouring (beginning of transect 1). There is evidence of storm damage. A temporary glass bottom boat – snorkelling mooring is located approximately 150m north of the site. No *Drupella* sighted.

Video reference	NMPMP/bvt/19.05.98 /#8	**Aerial reference**	1994 /WA 3434C /RUN16/ 5169
Slide reference		**Print reference**	

VIDEO DATA SHEET

Project	NINGALOO MARINE PARK MONITORING PROGRAM				**Field Survey**		MAY 1998
Site No.	N14	**Site Name**	Coral Bay/Bill's Bay	**Date**	19/5/98	**Recorder**	Myers
Start time	12.00	**Finish time**	14.00	**Depth (m)**	2.0	**Visibility (m)**	18.0

Underwater Video System	Blaupunkt CC894 camcorder in StingRay SR-700 housing											
Focus mode				**Exposure mode**				**Program mode**				**White balance mode**			
Auto	☒	Manual	☐	Auto	☒	Manual	☐	Sports	☒	High-speed	☐	Auto	☒	Outdoor	☐
Lens system				**Filters**								**Lights**			
Wide-angle	☒	Zoom-macro	☐	None	☒	Red	☐	Yellow	☐	Orange	☐	On	☐	Off	☒

Video operator	Myers	**Tape no.**	NMPMP/bvt/19.05.98 /#8	**Height above substrate (cm)**	30
Time coding for all video footage at site:		**From:**	00:00:00:00	**To:**	00:00:22:04

Transect time coding	**Start**	**Finish**	**Total time (mins/secs)**
T1	00:00:00:42	00:00:05:16	4.44
T2	00:00:06:12	00:00:10:41	4.29
T3	00:00:16:53	00:00:22:05	4.58

Notes:

Transect 3 was filmed twice. Ignore the first film (11:27 to 16:23) as the transect was moved to avoid high sand cover.

TRANSECT DATA SHEET

Project	NINGALOO MARINE PARK MONITORING PROGRAM				Field Survey		MAY 1998
Site No.	N24	Site Name	Pelican Pt.	Date	22/5/98	Recorder	Parker
Time	12.00	Video tape no.	NMPMP/bvt/22.05.98 /# 8		Video operator		Myers

T1	Length (m)	50	Compass bearing (°)		Distance to T2 (m)	10.0
Transect	DGPS Lat	DGPS Long	Depth (m)	Picket type	Picket ht (m)	
Start	23° 20.023' S	113° 46.671' E	1.5	90cm Star/Steel	0.15	
Finish	° ' S	° ' E				

Notes:
Live coral: 30%
Dead coral: 60%
Algae: 2%
Abiotic: 4%

T2	Length (m)	50	Compass bearing (°)		Distance to T2 (m)	10.0
Transect	DGPS Lat	DGPS Long	Depth (m)	Picket type	Picket ht (m)	
Start	23° 20.055' S	113° 46.668' E	1.5	90cm Star/Steel	0.15	
Finish	° ' S	° ' E				

Notes:
Live coral: 65%
Dead coral: 31%
Algae: 0%
Abiotic: 4%

T3	Length (m)	50	Compass bearing (°)			
Transect	DGPS Lat	DGPS Long	Depth (m)	Picket type	Picket ht (m)	
Start	23° 20.085' S	113° 46.670' E	1.5	90cm Star/Steel	0.15	
Finish	23° 20.109' S	113° 46.672' E	1.5	90cm Star/Steel	0.15	

Notes:
Live coral: 62%
Dead coral: 41%
Algae: 0%
Abiotic: 6%

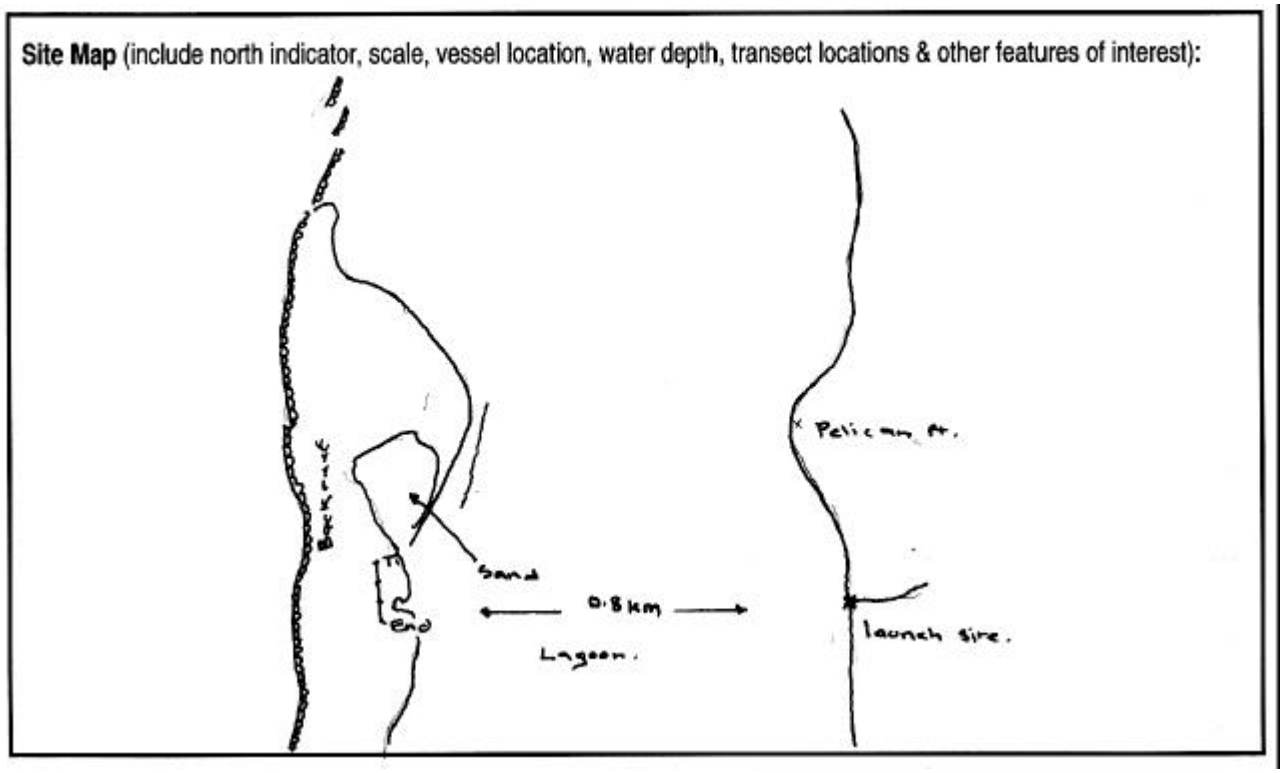
LONG-TERM MONITORING SITE DATA SHEET

Project	NINGALOO MARINE PARK MONITORING PROGRAM				Field Survey		MAY 1998
Site No.	N24	Site Name	Pelican Pt.	Date	22/5/98	Recorder	Daly

GPS Latitude	GPS Longitude	Differential			
23 ° 20.023 ' S	113 ° 46.671 ' E	Yes	☒	No	☐

Habitat type	Back reef - coral dominated by between 60-70% cover of live *Acropora* sp (tabular) with plates reaching 0.5 2.0+ m in diameter. Some areas of sand and some damaged and overturned plates. Evidence of coral recruitment.					
Location of nearest transect from GPS position	Transect No.	T	Compass bearing (°)		Distance (m)	

Site Map (include north indicator, scale, vessel location, water depth, transect locations & other features of interest):



Notes:

HABITAT DATA SHEET

Project	NINGALOO MARINE PARK MONITORING PROGRAM				**Field Survey**		MAY 1998
Site No.	N24	**Site Name**	Pelican Pt.	**Date**	22/5/98	**Recorder**	Myers
Vessel	CALM Zodiac	**Time**	12.00	**Weather**			
Sea		**Water depth (m)**	1.5	**Water visibility (m)**	10.0		

GPS Latitude	GPS Longitude	Differential			
23° 20.023' S	113° 46.671' E	**Yes**	☒	**No**	☐

Site location	Site located on the back reef.

Habitat Description

Back reef - coral dominated by between 60-70% cover of live *Acropora* sp (tabular) with plates reaching 0.5 2.0+ m in diameter. Some areas of sand and some damaged and overturned plates. Evidence of coral recruitment.
Live coral: 53% (mean)
Dead coral: 41% (mean)
Algae: 1% (mean)
Abiotic: 5% (mean)

Dominant Species

Seagrass	
Macro-algae	*Dictyota* sp., *Turbinaria* sp., Filamentous blue –green algae and coralline red algae.
Coral	*Acropora* sp. (tabular and digitate), occasional *Acropora* sp. (branching), Fungidae, *Montipora* sp. (encrusting) and *Sinularia* sp. (soft coral).
Fish	Dominated by Pomacentridae (damselfish), Pomacanthidae (angelfish), schools of Labridae (wrasse) and Scarids (med sized parrotfish), occasional Monacanthidae (leatherjacket) and Fistularia commersonii (flutemouth).
Invertebrates	*Formia indica* (sea star), Holothurian (sea cucumber), sea urchins, and *Tridacna* sp. (clam).

Other Features

Impact or Activity

Some storm damage was observed. *Drupella* in medium/high density but feeding scars minimal.

Video reference	NMPMP/bvt/ 22.05.98 /# 8	**Aerial reference**	1994 /WA 3434C /RUN17/ 5126
Slide reference		**Print reference**	

VIDEO DATA SHEET

Project	NINGALOO MARINE PARK MONITORING PROGRAM				**Field Survey**		MAY 1998
Site No.	N24	**Site Name**	Pelican Pt.	**Date**	22/5/98	**Recorder**	Myers
Start time	12.00	**Finish time**	13.10	**Depth (m)**	2.0	**Visibility (m)**	10.0

Underwater Video System	Blaupunkt CC894 camcorder in StingRay SR-700 housing											
Focus mode				**Exposure mode**				**Program mode**				**White balance mode**			
Auto	☒	Manual	☐	Auto	☒	Manual	☐	Sports	☒	High-speed	☐	Auto	☒	Outdoor	☐
Lens system				**Filters**								**Lights**			
Wide-angle	☒	Zoom-macro	☐	None	☒	Red	☐	Yellow	☐	Orange	☐	On	☐	Off	☒

Video operator	Myers	**Tape no.**	NMPMP/bvt/22.05.98 /#8	**Height above substrate (cm)**	30
Time coding for all video footage at site:		**From:**	00:00:40:32	**To:**	00:01:02:13

Transect time coding	**Start**	**Finish**	**Total time (mins/secs)**
T1	00:00:41:07	00:00:47:25	6.16
T2	00:00:48:21	00:00:54:25	6.04
T3	00:00:55:14	00:01:00:58	5.44

Notes:

General reef footage showing *Drupella* and coral recruitment. (1:00:58 to 1:02:13).

TRANSECT DATA SHEET

Project	NINGALOO MARINE PARK MONITORING PROGRAM				Field Survey		MAY 1998
Site No.	N17	Site Name	Cape Farquhar	Date	23/5/98	Recorder	Parker
Time	13.00	Video tape no.	NMPMP/bvt/23.05.98 /#10		Video operator		Myers

T1	Length (m)	50	Compass bearing (°)		Distance to T2 (m)	10.0
Transect	DGPS Lat	DGPS Long	Depth (m)	Picket type	Picket ht (m)	
Start	23° 37.410' S	113° 36.887' E	0.5-1.0	90cm Star/Steel	0.15	
Finish	° ' S	° ' E				

Notes:
Live coral: 70%
Dead coral: 21%
Algae: 0%
Abiotic: 9%

T2	Length (m)	50	Compass bearing (°)		Distance to T2 (m)	10.0
Transect	DGPS Lat	DGPS Long	Depth (m)	Picket type	Picket ht (m)	
Start	23° 37.434' S	113° 36.867' E	0.5-1.0	90cm Star/Steel	0.15	
Finish	° ' S	° ' E				

Notes:
Live coral: 71%
Dead coral: 26%
Algae: 0%
Abiotic: 3%

T3	Length (m)	50	Compass bearing (°)			
Transect	DGPS Lat	DGPS Long	Depth (m)	Picket type	Picket ht (m)	
Start	23° 37.458' S	113° 36.859' E	0.5-1.0	90cm Star/Steel	0.15	
Finish	23° 37.481' S	113° 36.830' E	0.5-1.0	90cm Star/Steel	0.15	

Notes:
Live coral: 58%
Dead coral: 35%
Algae: 0%
Abiotic: 7%

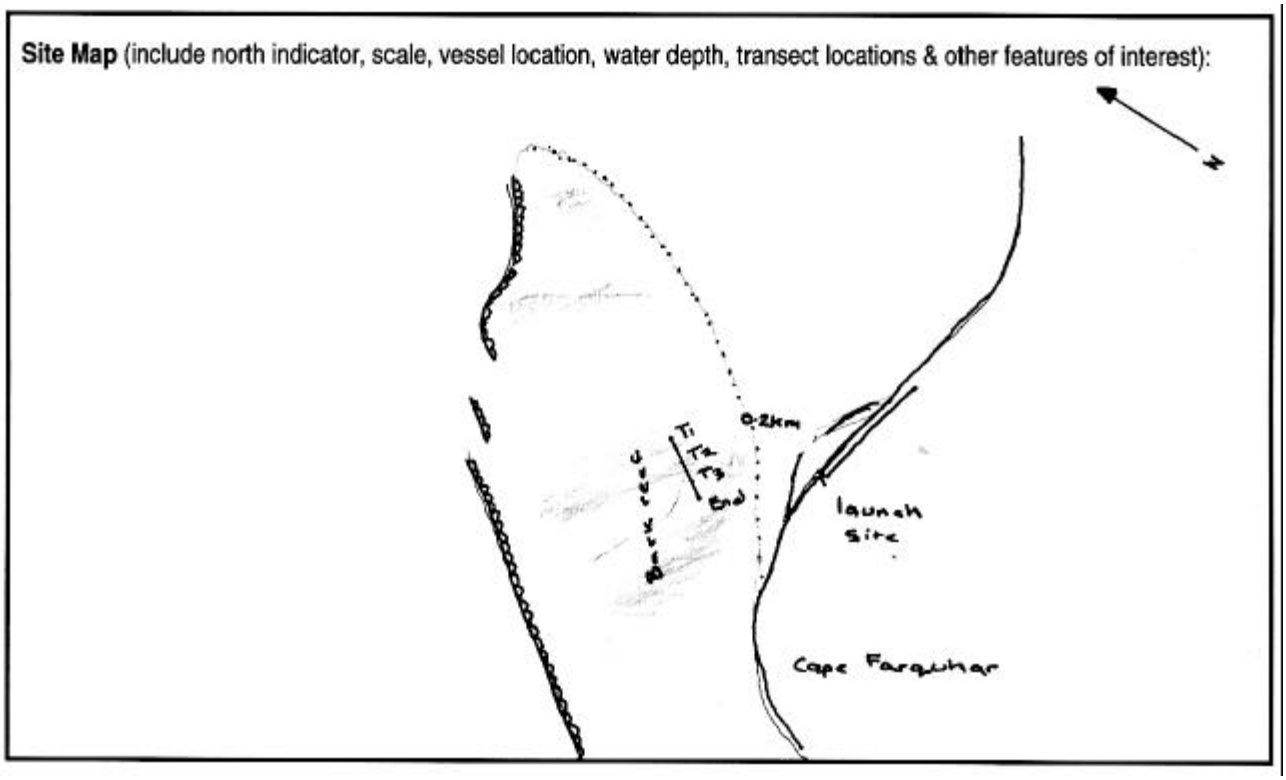
LONG-TERM MONITORING SITE DATA SHEET

Project	NINGALOO MARINE PARK MONITORING PROGRAM				**Field Survey**		MAY 1998
Site No.	N17	**Site Name**	Cape Farquhar	**Date**	23/5/98	**Recorder**	Daly

GPS Latitude	**GPS Longitude**	**Differential**			
23° 37.410 ' S	113° 36.887 ' E	**Yes**	☒	**No**	☐

Habitat type	Back reef – partial lagoon type corals dominated by *Acropora* sp. (tabular and branching) with plates approximately 1m in diameter. High coral diversity with several species of *Acropora* sp., *Favites* sp., *Fungi* sp., *Montipora* sp. and soft corals. No *Drupella* or feeding scars was evident.						
Location of nearest transect from GPS position		**Transect No.**	T	**Compass bearing (°)**		**Distance (m)**	

Site Map (include north indicator, scale, vessel location, water depth, transect locations & other features of interest):



Notes:

HABITAT DATA SHEET

Project	NINGALOO MARINE PARK MONITORING PROGRAM				**Field Survey**		MAY 1998
Site No.	N17	**Site Name**	Cape Farquhar	**Date**	23/5/98	**Recorder**	Myers
Vessel	CALM Zodiac		**Time**	13.00	**Weather**		
Sea	Calm, very strong current		**Water depth (m)**	1.0	**Water visibility (m)**		10.0-15.0

GPS Latitude	**GPS Longitude**	**Differential**			
23° 37.410 ' S	113° 36.887 ' E	**Yes**	☒	**No**	☐

Site location	Site located on back reef – partial lagoon north of cape and directly out from the launch site.

Habitat Description

Back reef – partial lagoon type corals dominated by *Acropora* sp. (tabular and branching) with plates approximately 1m in diameter. High coral diversity with several species of *Acropora* sp., *Favites* sp., *Fungi* sp., *Montipora* sp. and soft corals. No *Drupella* or feeding scars was evident.
Live coral: 66% (mean)
Dead coral: 27% (mean)
Algae: 0% (mean)
Abiotic: 6% (mean)

Dominant Species

Seagrass	
Macro-algae	*Dictyota* sp., Filamentous blue – green algae, coralline algae and *Turbinaria* sp.
Coral	*Acropora* sp. (digitate, tabular and branching), *Favites* sp., *Platygyra* sp. *Montipora* sp. (encrusting) and *Sinularia* sp. (soft coral).
Fish	Pomacanthidae (angelfish), Pomacentridae (damselfish) and Chaetodontidae (butterflyfish).
Invertebrates	*Formia indica* (sea star), *Linckia laevigata* (sea star), Holothurian (sea cucumber), *Echinometra* sp. (sea urchin) and *Tridacna* sp. (clams).

Other Features

Impact or Activity

The site is remote with poor accessibility and has low human impacts. No *Drupella* sighted.

Video reference	NMPMP/bvt/23.05.98 /#10	**Aerial reference**	1994 /WA 3434C /RUN19/ 5150
Slide reference		**Print reference**	

VIDEO DATA SHEET

Project	NINGALOO MARINE PARK MONITORING PROGRAM				**Field Survey**		MAY 1998
Site No.	N17	**Site Name**	Cape Farquhar	**Date**	23/5/98	**Recorder**	Myers
Start time	13.30	**Finish time**	15.00	**Depth (m)**	1.0	**Visibility (m)**	10.0

Underwater Video System	Blaupunkt CC894 camcorder in StingRay SR-700 housing											
Focus mode				**Exposure mode**				**Program mode**				**White balance mode**			
Auto	☒	Manual	☐	Auto	☒	Manual	☐	Sports	☒	High-speed	☐	Auto	☒	Outdoor	☐
Lens system				**Filters**								**Lights**			
Wide-angle	☒	Zoom-macro	☐	None	☒	Red	☐	Yellow	☐	Orange	☐	On	☐	Off	☒

Video operator	Myers	**Tape no.**	NMPMP/bvt/23.05.98 /#10	**Height above substrate (cm)**	30
Time coding for all video footage at site:		**From:**	00:00:00:00	**To:**	00:00:17:44

Transect time coding	**Start**	**Finish**	**Total time (mins/secs)**
T1	00:00:00:47	00:00:05:59	5.12
T2	00:00:06:36	00:00:11:27	5.09
T3	00:00:12:00	00:00:16:57	4.57

Notes:

The site is very shallow in places and is intertidal. There are strong currents which hampered the filming of transects. There was a pause in the filming of Transect 1 at 4:30, but the transect line remians in view. Footage was taken of the beach and area at the beginning and of each transect. General footage of the site's reef diversity (although out of focus) is located on tape #9 47:04 to 49:56.

TRANSECT DATA SHEET

Project	NINGALOO MARINE PARK MONITORING PROGRAM				Field Survey		MAY 1998
Site No.	N18	Site Name	Gnarraloo Bay	Date	28/5/98	Recorder	Myers
Time	9:30	Video tape no.	NMPMP/bvt/28.05.98 /#10		Video operator		Myers

T1	Length (m)	50	Compass bearing (°)	340	Distance to T2 (m)	10.0
Transect	DGPS Lat	DGPS Long	Depth (m)	Picket type	Picket ht (m)	
Start	23° 45.750' S	113° 32.500' E	2.0	90cm Star/Steel	0.15	
Finish	° ' S	° ' E				

Notes:
Transect begins on southern edge of large formation of *Acropora* sp (branching). To the north of the formation is sand.
Live coral: 67% Dead coral: 25%
Algae: 0% Abiotic: 0%

T2	Length (m)	50	Compass bearing (°)	340	Distance to T2 (m)	10.0
Transect	DGPS Lat	DGPS Long	Depth (m)	Picket type	Picket ht (m)	
Start	23° 45.776' S	113° 32.484' E	2.0	90cm Star/Steel	0.15	
Finish	° ' S	° ' E				

Notes:
Live coral: 78%
Dead coral: 13%
Algae: 0%
Abiotic: 8%

T3	Length (m)	50	Compass bearing (°)	340		
Transect	DGPS Lat	DGPS Long	Depth (m)	Picket type	Picket ht (m)	
Start	23° 45.806' S	113° 32.471' E	2.0	90cm Star/Steel	0.15	
Finish	23° 45.831' S	113° 32.462' E	2.0	90cm Star/Steel	0.15	

Notes:
Live coral: 78%
Dead coral: 16%
Algae: 0%
Abiotic: 6%

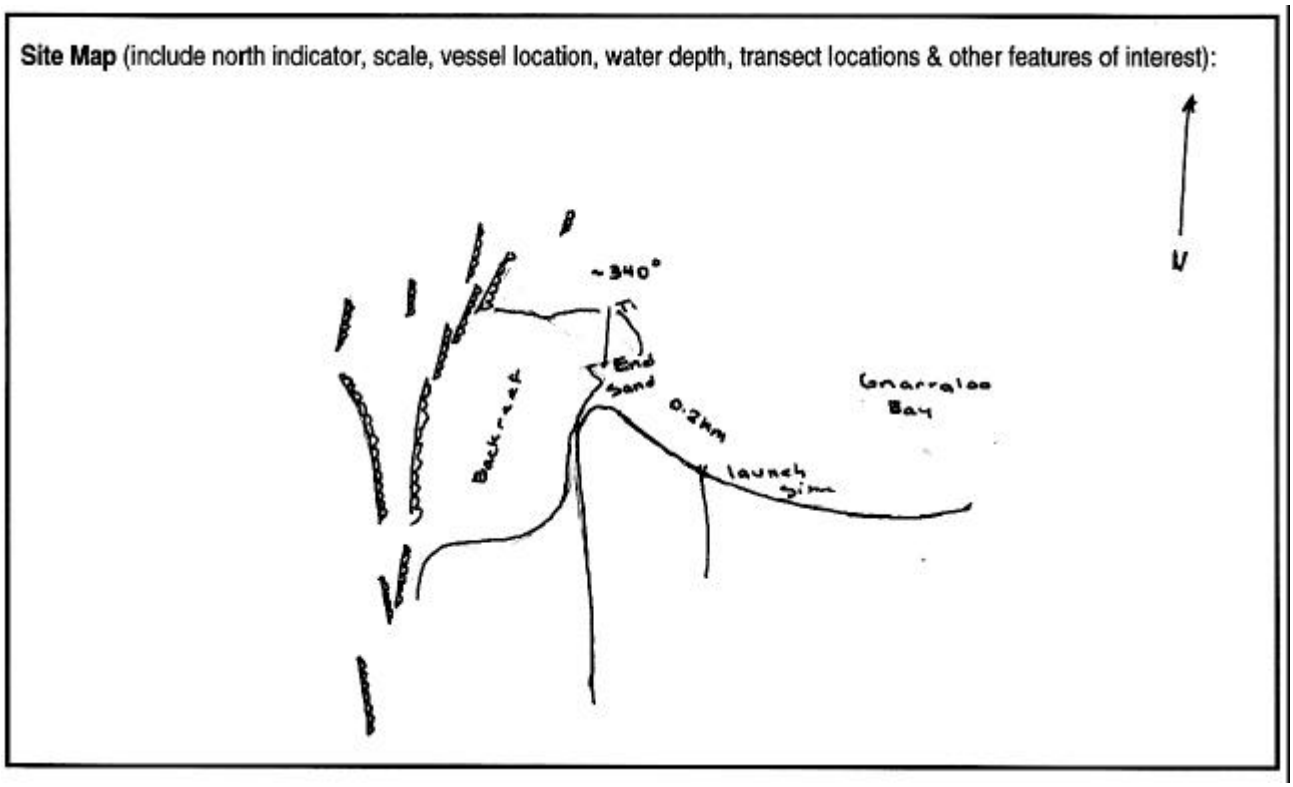
LONG-TERM MONITORING SITE DATA SHEET

Project	NINGALOO MARINE PARK MONITORING PROGRAM				**Field Survey**		MAY 1998
Site No.	N18	**Site Name**	Gnarraloo Bay	**Date**	28/5/98	**Recorder**	Daly

GPS Latitude	**GPS Longitude**	**Differential**			
23° 45.758 ' S	113° 32.500 ' E	**Yes**	☒	**No**	☐

Habitat type	Back reef – partial lagoon. High cover of *Acropora* sp (tabular and branching) with plates 1-2m in diameter. Large bommies – patches of *Favites* sp. and *Lobophylia* sp. Some areas of sand and rubble.						
Location of nearest transect from GPS position		**Transect No.**	T	**Compass bearing (°)**		**Distance (m)**	

Site Map (include north indicator, scale, vessel location, water depth, transect locations & other features of interest):



Notes:

HABITAT DATA SHEET

Project	NINGALOO MARINE PARK MONITORING PROGRAM				**Field Survey**		MAY 1998
Site No.	N18	**Site Name**	Gnarraloo Bay	**Date**	28/5/98	**Recorder**	Myers
Vessel	CALM Zodiac		**Time**	9.30	**Weather**		
Sea			**Water depth (m)**	2.0-4.0	**Water visibility (m)**		6.0

GPS Latitude	GPS Longitude	Differential			
23° 45.750' S	113° 32.500' E	**Yes**	☒	**No**	☐

Site location	Site located directly out from sand spit extending from the southern corner of the bay.

Habitat Description

Back reef – partial lagoon. High cover of *Acropora* sp (tabular and branching) with plates 1-2m in diameter. Large bommies – patches of *Favites* sp. and *Lobophylia* sp. Some areas of sand and rubble.
Live coral: 75% (mean)
Dead coral: 18% (mean)
Algae: 0% (mean)
Abiotic: 5% (mean)

Dominant Species

Seagrass	*Halophila ovalis*.
Macro-algae	*Dictyota* sp., Filamentous blue – green algae, and *Turbinaria* sp.
Coral	Dominated by *Acropora* sp. (tabular and branching). Some *Favites* sp., *Lobophylia* sp., *Montipora* sp., *Echinopora* sp., *Porites* sp., *Pocillopora* sp. and *Sacophyton* sp. (soft coral).
Fish	Pomacentridae (damselfish), Pomcanthidae (angelfish), Labridae (parrotfish) and some Amphiprion sp. (Anemonefish) near Anemone patches.
Invertebrates	Holothurians (sea cucumbers), *Tridacna* sp. (clams) and patches of anemone.

Other Features

Impact or Activity

High energy site will evidence of old coral and some large rubble zones, with few plates overturned. No *Drupella* sighted.

Video reference	NMPMP/bvt/28.05.98 /#10	**Aerial reference**	1994 /WA 3434C /RUN21/ 5162
Slide reference		**Print reference**	

VIDEO DATA SHEET

Project	NINGALOO MARINE PARK MONITORING PROGRAM				**Field Survey**		MAY 1998
Site No.	N18	**Site Name**	Gnarraloo Bay	**Date**	28/5/98	**Recorder**	Myers
Start time	9.00	**Finish time**	11.30	**Depth (m)**	4.0-5.0	**Visibility (m)**	8.0

Underwater Video System	Blaupunkt CC894 camcorder in StingRay SR-700 housing

Focus mode				**Exposure mode**				**Program mode**				**White balance mode**			
Auto	☒	Manual	☐	Auto	☒	Manual	☐	Sports	☐	High-speed	☒	Auto	☒	Outdoor	☐

Lens system				**Filters**								**Lights**			
Wide-angle	☒	Zoom-macro	☐	None	☒	Red	☐	Yellow	☐	Orange	☐	On	☐	Off	☒

Video operator	Myers	**Tape no.**	NMPMP/bvt/ 28.05.98 /# 10	**Height above substrate (cm)**	30
Time coding for all video footage at site:		**From:**	: : 17 : 45	**To:**	: : 40 : 22

Transect time coding	**Start**	**Finish**	**Total time (mins/secs)**
T1	: : 19 : 00	: : 23 : 39	4. 39
T2	: : 24 : 12	: : 28 : 52	4. 40
T3	: : 35 : 28	: : 40 : 20	5. 32

Notes:

APPENDIX 4: Line Intercept Transect data

N19: Bundegi Sanctuary – Transect 1

Field Code	Length 1	Length 2	% Cover
R	0.00	1.10	2.20
ACRD	1.10	1.30	0.40
R	1.30	4.20	5.80
S	4.20	4.40	0.40
R	4.40	4.60	0.40
DCA	4.60	4.65	0.10
R	4.65	4.90	0.50
ACRD	4.90	5.05	0.30
DCA	5.05	5.15	0.20
ACRD	5.15	5.25	0.20
DCA	5.25	5.30	0.10
ACRD	5.30	6.10	1.60
DCA	6.10	6.50	0.80
RCK	6.50	6.90	0.80
R	6.90	7.20	0.60
ACRB	7.20	7.30	0.20
DCA	7.30	8.10	1.60
ACRB	8.10	9.10	2.00
S	9.10	9.15	0.10
R	9.15	9.30	0.30
DCA	9.30	9.90	1.20
ACRT	9.90	9.95	0.10
DCA	9.95	10.00	0.10
ACRT	10.00	10.10	0.20
DCA	10.10	10.20	0.20
ACRD	10.20	10.25	0.10
ACRB	10.25	10.50	0.50
DCA	10.50	10.60	0.20
MA	10.60	10.80	0.40
DCA	10.80	11.40	1.20
R	11.40	11.60	0.40
ACRB	11.60	13.50	3.80
S	13.50	13.55	0.10
ACRB	13.55	13.75	0.40
DCA	13.75	14.35	1.20
ACRT	14.35	14.50	0.30
RCK	14.50	15.15	1.30
HOL	15.15	15.18	0.06
RCK	15.18	15.30	0.24
ACRT	15.30	15.40	0.20
ACRT	15.40	15.90	1.00
RCK	15.90	16.35	0.90
ACRB	16.35	16.50	0.30
ACRT	16.50	16.90	0.80
DCA	16.90	17.00	0.20
ACRT	17.00	17.30	0.60
R	17.30	17.50	0.40
ACRT	17.50	17.85	0.70
ACRB	17.85	17.95	0.20
RCK	17.95	18.10	0.30
ACRB	18.10	18.20	0.20
R	18.20	18.40	0.40
DCA	18.40	18.90	1.00
ACRD	18.90	19.00	0.20
R	19.00	19.20	0.40
ACRD	19.20	19.30	0.20
RCK	19.30	19.50	0.40
DCA	19.50	19.80	0.60
ACRB	19.80	20.70	1.80
R	20.70	22.20	3.00
ACRD	22.20	22.70	1.00
RCK	22.70	23.00	0.60
RCK	23.00	23.20	0.40
S	23.20	23.30	0.20
RCK	23.30	23.35	0.10
RCK	23.35	24.40	2.10
DCA	24.40	24.45	0.10
R	24.45	24.90	0.90
DCA	24.90	25.00	0.20
ACRD	25.00	25.15	0.30
DCA	25.15	26.30	2.30
R	26.30	26.60	0.60
RCK	26.60	26.70	0.20
R	26.70	27.40	1.40
RCK	27.40	30.10	5.40
DCA	30.10	30.40	0.60
R	30.40	30.55	0.30
S	30.55	30.70	0.30
RCK	30.70	30.80	0.20
S	30.80	31.00	0.40
RK	31.00	32.90	3.80
S	32.90	33.10	0.40
RK	33.10	33.50	0.80
DCA	33.50	33.70	0.40
ACRD	33.70	33.85	0.30
DCA	33.85	34.00	0.30
R	34.00	34.30	0.60
ACRB	34.30	34.55	0.50
RCK	34.55	35.10	1.10
ACRD	35.10	35.15	0.10
S	35.15	35.30	0.30
R	35.30	35.70	0.80
S	35.70	35.90	0.40
R	35.90	36.00	0.20
R	36.00	36.90	1.80
ACRB	36.90	37.00	0.20
DCA	37.00	37.40	0.80
ACRD	37.40	37.50	0.20
DCA	37.50	38.00	1.00
ACRB	38.00	38.25	0.50
RCK	38.25	38.40	0.30
DCA	38.40	38.80	0.80
ACRD	38.80	39.00	0.40
ACRS	39.00	39.10	0.20
DCA	39.10	40.00	1.80
S	40.00	40.30	0.60
ACRB	40.30	40.45	0.30
DCA	40.45	40.50	0.10
ACRB	40.50	40.70	0.40
R	40.70	41.10	0.80
ACRB	41.10	41.30	0.40

R	41.30	41.80	1.00
ACRD	41.80	42.00	0.40
DCA	42.00	42.90	1.80
RCK	42.90	44.30	2.80
ACRB	44.30	44.50	0.40
ACRT	44.50	44.70	0.40
DCA	44.70	44.80	0.20
ACRT	44.80	45.10	0.60
DCA	45.10	45.30	0.40
R	45.30	46.10	1.60
RCK	46.10	46.20	0.20
ACRB	46.20	46.25	0.10
DCA	46.25	47.00	1.50
R	47.00	47.50	1.00
RCK	47.50	47.90	0.80
ACRB	47.90	48.15	0.50
S	48.15	48.30	0.30
RK	48.30	49.50	2.40
ACRD	49.50	49.80	0.60
DCA	49.80	50.00	0.40

N19: Bundegi Sanctuary – Transect 2

Field Code	Length 1	Length 2	% Cover
R	0.00	0.80	1.60
RCK	0.80	1.00	0.40
S	1.00	1.20	0.40
RCK	1.20	1.90	1.40
ACRT	1.90	2.55	1.30
S	2.55	3.00	0.90
R	3.00	4.20	2.40
DCA	4.20	4.30	0.20
ACRB	4.30	4.32	0.04
DCA	4.32	5.00	1.36
RCK	5.00	5.15	0.30
ACRB	5.15	5.20	0.10
R	5.20	5.30	0.20
DCA	5.30	6.00	1.40
R	6.00	6.10	0.20
ACRB	6.10	6.15	0.10
R	6.15	6.60	0.90
ACRB	6.60	7.10	1.00
DCA	7.10	7.20	0.20
ACRB	7.20	7.40	0.40
DCA	7.40	7.50	0.20
ACRB	7.50	7.60	0.20
DCA	7.60	8.00	0.80
ACRB	8.00	8.40	0.80
ACRD	8.40	8.45	0.10
DCA	8.45	8.55	0.20
ACRT	8.55	9.00	0.90
R	9.00	11.20	4.40
DCA	11.20	11.60	0.80
S	11.60	11.70	0.20
ACRT	11.70	12.50	1.60
R	12.50	13.10	1.20
ACRB	13.10	13.15	0.10
DCA	13.15	14.00	1.70
ACRB	14.00	14.05	0.10
ACRS	14.05	14.20	0.30
DCA	14.20	15.30	2.20
R	15.30	16.30	2.00
S	16.30	16.50	0.40
R	16.50	16.90	0.80
RCK	16.90	17.10	0.40
R	17.10	19.90	5.60
RCK	19.90	20.00	0.20
ACRD	20.00	20.50	1.00
DCA	20.50	20.60	0.20
R	20.60	21.40	1.60
DCA	21.40	21.70	0.60
MA	21.70	21.80	0.20
S	21.80	22.00	0.40
DCA	22.00	23.05	2.10
RCK	23.05	23.75	1.40
DCA	23.75	24.00	0.50
ACRD	24.00	24.25	0.50
DCA	24.25	25.10	1.70
RCK	25.10	26.90	3.60
S	26.90	27.00	0.20
DCA	27.00	28.70	3.40
R	28.70	30.00	2.60
DCA	30.00	30.10	0.20
ACRE	30.10	30.50	0.80
S	30.50	30.90	0.80
R	30.90	31.10	0.40
S	31.10	31.20	0.20
RCK	31.20	32.20	2.00
RCK	32.20	34.00	3.60
S	34.00	35.00	2.00
PORM	35.00	35.50	1.00
DCA	35.50	35.90	0.80
R	35.90	36.70	1.60
RCK	36.70	37.30	1.20
S	37.30	37.40	0.20
DCA	37.40	38.25	1.70
R	38.25	39.00	1.50
DCA	39.00	39.30	0.60
ACRB	39.30	40.00	1.40
DCA	40.00	40.50	1.00
S	40.50	40.60	0.20
ACRT	40.60	40.90	0.60
R	40.90	41.50	1.20
DCA	41.50	41.70	0.40
ACRT	41.70	42.00	0.60
R	42.00	42.10	0.20
ACRT	42.10	42.90	1.60
R	42.90	43.60	1.40
DCA	43.60	44.20	1.20
R	44.20	44.50	0.60
S	44.50	44.75	0.50
ACRT	44.75	44.80	0.10
DCA	44.80	45.00	0.40
ACRT	45.00	45.40	0.80
RCK	45.40	47.20	3.60
R	47.20	47.30	0.20
S	47.30	47.45	0.30
DCA	47.45	48.30	1.70
RCK	48.30	50.00	3.40

N19: Bundegi Sanctuary – Transect 3

Field Code	Length 1	Length 2	% Cover
S	0.00	0.30	0.60
DCA	0.30	0.95	1.30
ACRB	0.95	0.97	0.04
DCA	0.97	1.10	0.26
ACRD	1.10	1.20	0.20
ACRB	1.20	1.30	0.20
DCA	1.30	2.00	1.40
R	2.00	3.10	2.20
DCA	3.10	4.00	1.80
S	4.00	4.10	0.20
R	4.10	4.15	0.10
R	4.15	4.20	0.10
DCA	4.20	4.80	1.20
POCS	4.80	5.00	0.40
DCA	5.00	5.10	0.20
ACRB	5.10	6.00	1.80
ACRT	6.00	6.45	0.90
DCA	6.45	6.55	0.20
ACRD	6.55	7.05	1.00
DCA	7.05	8.30	2.50
R	8.30	8.90	1.20
ACRT	8.90	9.05	0.30
DC2	9.05	9.10	0.10
DCA	9.10	15.85	13.50
ACRT	15.85	16.40	1.10
ACRB	16.40	16.55	0.30
ACRT	16.55	16.90	0.70
DCA	16.90	17.05	0.30
ACRT	17.05	17.60	1.10
ACB	17.60	17.70	0.20
ACRD	17.70	17.80	0.20
DCA	17.80	18.00	0.40
ACRT	18.00	18.05	0.10
DCA	18.05	18.15	0.20
ACRB	18.15	18.25	0.20
DCA	18.25	19.70	2.90
R	19.70	20.30	1.20
UP	20.30	20.35	0.10
ACRB	20.35	20.90	1.10
ACRD	20.90	21.00	0.20
R	21.00	21.95	1.90
ACRB	21.95	22.00	0.10
DCA	22.00	22.30	0.60
ACRD	22.30	22.60	0.60
DCA	22.60	22.75	0.30
ACRB	22.75	23.00	0.50
ACRT	23.00	23.10	0.20
DCA	23.10	24.40	2.60
S	24.40	24.50	0.20
DCA	24.50	25.05	1.10
ACRB	25.05	25.15	0.20
DCA	25.15	26.30	2.30
ACRT	26.30	26.80	1.00
ACRB	26.80	27.30	1.00
ACRS	27.30	27.40	0.20
DCA	27.40	27.50	0.20
ACRB	27.50	27.60	0.20
R	27.60	27.90	0.60
ACRB	27.90	28.40	1.00
S	28.40	28.70	0.60
DCA	28.70	30.80	4.20
ACRB	30.80	30.90	0.20
DCA	30.90	32.60	3.40
ACRT	32.60	32.70	0.20
DCA	32.70	35.90	6.40
R	35.90	36.00	0.20
ACRB	36.00	36.10	0.20
DCA	36.10	38.28	4.36
ACRB	38.28	38.30	0.04
DCA	38.30	38.80	1.00
ACRB	38.80	39.00	0.40
DCA	39.00	39.88	1.76
ACRB	39.88	39.90	0.04
DCA	39.90	40.00	0.20
DCA	40.00	40.75	1.50
ACRD	40.75	41.30	1.10
R	41.30	41.75	0.90
ACRT	41.75	41.85	0.20
DCA	41.85	44.10	4.50
ACRB	44.10	44.20	0.20
DCA	44.20	44.60	0.80
ACRD	44.60	44.70	0.20
DCA	44.70	45.40	1.40
S	45.40	45.50	0.20
R	45.50	46.00	1.00
DCA	46.00	46.20	0.40
ACRB	46.20	46.80	1.20
DCA	46.80	47.85	2.10
ACRF	47.85	48.00	0.30
RCK	48.00	48.90	1.80
S	48.90	49.00	0.20
RCK	49.00	50.00	2.00

N1: Bundegi – Transect 1

Field Code	Length 1	Length 2	% Cover
MA	0.00	0.60	1.20
R	0.60	1.20	1.20
DCA	1.20	1.40	0.40
R	1.40	1.80	0.80
ACRD	1.80	2.55	1.50
DCA	2.55	2.65	0.20
ACRD	2.65	3.35	1.40
MA	3.35	3.40	0.10
DCA	3.40	3.50	0.20
ACRD	3.50	3.60	0.20
ACRD	3.60	4.00	0.80
DCA	4.00	4.10	0.20
ACRD	4.10	4.40	0.60
DCA	4.40	4.60	0.40
ACRD	4.60	4.75	0.30
DCA	4.75	4.95	0.40
ACRD	4.95	5.15	0.40
DCA	5.15	5.20	0.10
ACRD	5.20	5.35	0.30
DCA	5.35	5.60	0.50
ACRD	5.60	5.70	0.20
DCA	5.70	6.30	1.20
ACRD	6.30	6.45	0.30
DCA	6.45	6.50	0.10
ACRD	6.50	7.02	1.04
DCA	7.02	7.65	1.26
ACRD	7.65	7.75	0.20
DCA	7.75	7.80	0.10
ACRD	7.80	7.90	0.20
DCA	7.90	8.45	1.10
ACRD	8.45	9.05	1.20
DCA	9.05	9.60	1.10
ACRD	9.60	9.55	-0.10
DCA	9.55	9.90	0.70
ACRD	9.90	10.10	0.40
DCA	10.10	10.20	0.20
ACRD	10.20	11.95	3.50
DCA	11.95	12.35	0.80
ACRD	12.35	12.45	0.20
DCA	12.45	12.80	0.70
ACRD	12.80	13.15	0.70
DCA	13.15	14.20	2.10
ACRD	14.20	14.25	0.10
DCA	14.25	14.40	0.30
ACRD	14.40	14.65	0.50
DCA	14.65	14.70	0.10
ACRD	14.70	14.80	0.20
DCA	14.80	15.50	1.40
MA	15.50	15.55	0.10
DCA	15.55	15.60	0.10
ACRD	15.60	17.20	3.20
BC	17.20	17.25	0.10
ACRD	17.25	17.40	0.30
DCA	17.40	17.65	0.50
ACRD	17.65	17.75	0.20
ACRD	17.75	17.95	0.40
DCA	17.95	17.97	0.04
ACRD	17.97	18.00	0.06
DCA	18.00	18.20	0.40
ACRD	18.20	18.30	0.20
DCA	18.30	18.50	0.40
ACRD	18.50	18.60	0.20
DCA	18.60	18.85	0.50
ACRD	18.85	18.90	0.10
DCA	18.90	19.00	0.20
ACRD	19.00	19.20	0.40
DCA	19.20	19.30	0.20
ACRD	19.30	19.45	0.30
DCA	19.45	19.50	0.10
ACRD	19.50	21.10	3.20
DCA	21.10	21.30	0.40
ACRD	21.30	21.60	0.60
DCA	21.60	21.70	0.20
ACRD	21.70	21.82	0.24
DCA	21.82	21.85	0.06
ACRD	21.85	22.10	0.50
MA	22.10	22.40	0.60
ACRD	22.40	22.45	0.10
DCA	22.45	22.50	0.10
ACRD	22.50	23.10	1.20
SI	23.10	23.25	0.30
ACRD	23.25	23.30	0.10
DCA	23.30	23.45	0.30
ACRD	23.45	23.50	0.10
DCA	23.50	23.55	0.10
ACRD	23.55	23.95	0.80
DCA	23.95	24.10	0.30
ACRD	24.10	24.40	0.60
DCA	24.40	24.50	0.20
ACRD	24.50	24.90	0.80
DCA	24.90	25.10	0.40
ACRD	25.10	25.50	0.80
DCA	25.50	25.55	0.10
ACRD	25.55	26.10	1.10
SI	26.10	26.25	0.30
ACRD	26.25	26.30	0.10
DCA	26.30	26.35	0.10
ACRD	26.35	26.40	0.10
R	26.40	26.80	0.80
ACRD	26.80	26.90	0.20
R	26.90	27.80	1.80
DCA	27.80	28.05	0.50
ACRD	28.05	28.10	0.10
DCA	28.10	28.27	0.34
POCS	28.27	28.30	0.06
DCA	28.30	29.60	2.60
ACRB	29.60	29.70	0.20
R	29.70	31.10	2.80
SI	31.10	31.60	1.00
R	31.60	33.00	2.80
POCS	33.00	33.25	0.50
DCA	33.25	33.30	0.10
POCS	33.30	33.60	0.60
DCA	33.60	34.00	0.80

Field Code	Length 1	Length 2	% Cover
ACRD	34.00	34.10	0.20
ACRB	34.10	34.12	0.04
DCA	34.12	36.44	4.64
ACRE	36.44	36.50	0.12
POCS	36.50	36.70	0.40
ACRB	36.70	36.75	0.10
DCA	36.75	38.00	2.50
DCA	38.00	38.40	0.80
ACRE	38.40	38.60	0.40
DCA	38.60	39.30	1.40
ACRD	39.30	39.40	0.20
SI	39.40	39.80	0.80
ACRB	39.80	40.20	0.80
DCA	40.20	41.20	2.00
SI	41.20	41.30	0.20
MA	41.30	42.15	1.70
SI	42.15	42.20	0.10
DCA	42.20	42.70	1.00
POCS	42.70	43.20	1.00
MA	43.20	43.40	0.40
DCA	43.40	50.00	13.20

N1: Bundegi – Transect 2

Field Code	Length 1	Length 2	% Cover
MA	0.00	0.20	0.40
SI	0.20	0.30	0.20
MA	0.30	0.40	0.20
SI	0.40	0.45	0.10
MA	0.45	0.55	0.20
POCS	0.55	0.90	0.70
MA	0.90	1.00	0.20
FIL	1.00	1.10	0.20
DCA	1.10	2.50	2.80
MA	2.50	3.30	1.60
DCA	3.30	4.80	3.00
POCS	4.80	5.00	0.40
DCA	5.00	7.45	4.90
ACRB	7.45	7.50	0.10
DCA	7.50	8.00	1.00
MA	8.00	8.20	0.40
DCA	8.20	9.00	1.60
FIL	9.00	9.20	0.40
DCA	9.20	10.90	3.40
ACRB	10.90	11.12	0.44
DCA	11.12	12.30	2.36
ACRB	12.30	12.32	0.04
DCA	12.32	13.00	1.36
ACRD	13.00	13.05	0.10
MA	13.05	13.40	0.70
DCA	13.40	14.95	3.10
ACRD	14.95	15.00	0.10
FIL	15.00	15.10	0.20
ACRD	15.10	15.20	0.20
ACRE	15.20	15.30	0.20
MA	15.30	17.00	3.40
ACRB	17.00	19.20	4.40
DCA	19.20	20.20	2.00
SI	20.20	20.30	0.20
ACRB	20.30	20.45	0.30
DCA	20.45	20.50	0.10
ACRB	20.50	21.20	1.40
DCA	21.20	21.50	0.60
ACRB	21.50	21.52	0.04
DCA	21.52	24.00	4.96
R	24.00	24.70	1.40
SI	24.70	24.90	0.40
DCA	24.90	27.00	4.20
ACRB	27.00	27.10	0.20
R	27.10	29.10	4.00
SI	29.10	29.30	0.40
DCA	29.30	29.40	0.20
ACRF	29.40	30.10	1.40
R	30.10	30.80	1.40
DCA	30.80	31.00	0.40
R	31.00	31.80	1.60
DCA	31.80	32.50	1.40
R	32.50	34.10	3.20
ACRF	34.10	34.20	0.20
SI	34.20	34.70	1.00
ACRF	34.70	34.85	0.30
DCA	34.85	35.80	1.90
R	35.80	36.00	0.40
DCA	36.00	36.10	0.20
ACRS	36.10	36.20	0.20
SI	36.20	36.30	0.20
DCA	36.30	37.00	1.40
SI	37.00	37.20	0.40
R	37.20	37.25	0.10
SI	37.25	38.20	1.90
DCA	38.20	48.00	19.60
MA	48.00	49.10	2.20
DCA	49.10	50.00	1.80

N1: Bundegi – Transect 3

Field Code	Length 1	Length 2	% Cover
SI	0.00	0.50	1.00
R	0.50	1.20	1.40
DCA	1.20	1.50	0.60
MA	1.50	1.60	0.20
SI	1.60	2.05	0.90
DCA	2.05	4.30	4.50
ACRB	4.30	4.40	0.20
DCA	4.40	5.20	1.60
ACRF	5.20	5.30	0.20
DCA	5.30	7.70	4.80
R	7.70	8.20	1.00
SI	8.20	8.90	1.40
SI	8.90	9.90	2.00
R	9.90	10.10	0.40
DCA	10.10	10.20	0.20
ACRE	10.20	10.30	0.20
DCA	10.30	10.70	0.80
SI	10.70	11.30	1.20
R	11.30	11.40	0.20
SI	11.40	11.50	0.20
ACRB	11.50	11.70	0.40
R	11.70	12.50	1.60
SI	12.50	13.30	1.60
ACRS	13.30	13.70	0.80
MA	13.70	13.80	0.20
SI	13.80	15.15	2.70
DCA	15.15	16.00	1.70
SI	16.00	16.20	0.40
DCA	16.20	18.05	3.70
SI	18.05	18.20	0.30
DCA	18.20	18.40	0.40
SI	18.40	18.50	0.20
DCA	18.50	19.90	2.80
FAVS	19.90	20.00	0.20
DCA	20.00	22.50	5.00
SI	22.50	22.60	0.20
DCA	22.60	22.70	0.20
SI	22.70	23.30	1.20
MA	23.30	23.40	0.20
SI	23.40	23.45	0.10
MA	23.45	23.50	0.10
DCA	23.50	24.40	1.80
ACRE	24.40	24.50	0.20
DCA	24.50	25.10	1.20
ACRE	25.10	25.15	0.10
DCA	25.15	25.70	1.10
ACRE	25.70	25.80	0.20
SI	25.80	26.00	0.40
MA	26.00	26.10	0.20
MA	26.10	26.50	0.80
SI	26.50	28.10	3.20
ACRF	28.10	28.70	1.20
DCA	28.70	28.90	0.40
ACRF	28.90	29.00	0.20
DCA	29.00	29.10	0.20
ACRF	29.10	30.30	2.40
SI	30.30	30.40	0.20
DCA	30.40	30.70	0.60
SI	30.70	31.50	1.60
DCA	31.50	31.70	0.40
SI	31.70	31.90	0.40
R	31.90	32.00	0.20
SI	32.00	32.60	1.20
ACRF	32.60	32.72	0.24
SI	32.72	33.00	0.56
ACRF	33.00	33.30	0.60
R	33.30	34.85	3.10
ACRF	34.85	35.10	0.50
MA	35.10	35.70	1.20
R	35.70	36.20	1.00
SI	36.20	36.30	0.20
ACRF	36.30	36.50	0.40
DCA	36.50	37.00	1.00
ACRF	37.00	37.70	1.40
R	37.70	38.00	0.60
MA	38.00	38.10	0.20
SI	38.10	38.50	0.80
MA	38.50	38.55	0.10
SI	38.55	38.70	0.30
SI	38.70	38.80	0.20
DCA	38.80	40.00	2.40
ACRF	40.00	40.10	0.20
DCA	40.10	40.20	0.20
ACRF	40.20	41.35	2.30
DCA	41.35	41.80	0.90
ACRF	41.80	41.90	0.20
DCA	41.90	42.50	1.20
ACRF	42.50	42.60	0.20
DCA	42.60	43.20	1.20
ACRF	43.20	43.40	0.40
DCA	43.40	45.70	4.60
SI	45.70	45.80	0.20
ACRD	45.80	45.90	0.20
DCA	45.90	46.20	0.60
ACRF	46.20	46.40	0.40
DCA	46.40	47.50	2.20
ACRF	47.50	47.70	0.40
ACRF	47.70	47.75	0.10
DCA	47.75	48.60	1.70
ACRF	48.60	48.80	0.40
DCA	48.80	50.00	2.40

N2: Mildura Wreck – Transect 1

Field Code	Length 1	Length 2	% Cover
RCK	0.00	1.30	2.60
MA	1.30	1.32	0.04
RCK	1.32	1.80	0.96
U	1.80	1.90	0.20
RCK	1.90	2.30	0.80
SI	2.30	2.40	0.20
RCK	2.40	3.10	1.40
SP	3.10	3.40	0.60
RCK	3.40	3.60	0.40
MA	3.60	3.65	0.10
RCK	3.65	5.00	2.70
MA	5.00	5.10	0.20
RCK	5.10	6.75	3.30
MA	6.75	6.80	0.10
RCK	6.80	7.20	0.80
ACRS	7.20	7.22	0.04
RCK	7.22	8.25	2.06
SC	8.25	8.35	0.20
RCK	8.35	9.70	2.70
U	9.70	9.75	0.10
RCK	9.75	10.10	0.70
SGH	10.10	10.20	0.20
RCK	10.20	11.50	2.60
U	11.50	11.55	0.10
RCK	11.55	12.80	2.50
MA	12.80	12.90	0.20
RCK	12.90	14.10	2.40
SGH	14.10	14.15	0.10
RCK	14.15	15.10	1.90
SGH	15.10	15.20	0.20
RCK	15.20	16.20	2.00
MA	16.20	16.30	0.20
RCK	16.30	16.80	1.00
FAVE	16.80	16.90	0.20
MA	16.90	17.00	0.20
RCK	17.00	18.00	2.00
FAVE	18.00	18.20	0.40
U	18.20	18.30	0.20
RCK	18.30	18.35	0.10
SP	18.35	18.45	0.20
MA	18.45	18.50	0.10
RCK	18.50	22.70	8.40
FAVE	22.70	23.00	0.60
MA	23.00	23.05	0.10
RCK	23.05	23.20	0.30
PORM	23.20	23.50	0.60
SP	23.50	24.50	2.00
RCK	24.50	24.65	0.30
MA	24.65	24.85	0.40
RCK	24.85	25.15	0.60
MA	25.15	25.20	0.10
RCK	25.20	25.40	0.40
MA	25.40	25.45	0.10
RCK	25.45	25.50	0.10
MA	25.50	26.95	2.90
RCK	26.95	27.40	0.90
MA	27.40	27.50	0.20
SGH	27.50	29.00	3.00
MA	29.00	29.90	1.80
RCK	29.90	30.50	1.20
U	30.50	30.55	0.10
RCK	30.55	31.00	0.90
MA	31.00	31.30	0.60
RCK	31.30	31.40	0.20
ACRD	31.40	31.50	0.20
RCK	31.50	31.95	0.90
MA	31.95	32.00	0.10
RCK	32.00	32.40	0.80
MA	32.40	32.90	1.00
RCK	32.90	33.00	0.20
RCK	33.00	33.40	0.80
MA	33.40	34.20	1.60
RCK	34.20	35.00	1.60
MA	35.00	35.10	0.20
RCK	35.10	35.30	0.40
MA	35.30	35.50	0.40
FAVM	35.50	35.70	0.40
MA	35.70	35.80	0.20
RCK	35.80	36.20	0.80
MA	36.20	36.30	0.20
RCK	36.30	37.20	1.80
SP	37.20	37.35	0.30
MA	37.35	37.76	0.82
RCK	37.76	38.20	0.88
FAVS	38.20	38.50	0.60
RCK	38.50	40.90	4.80
MA	40.90	41.00	0.20
RCK	41.00	41.75	1.50
MA	41.75	41.90	0.30
RCK	41.90	42.80	1.80
SGH	42.80	43.00	0.40
SP	43.00	43.10	0.20
RCK	43.10	44.85	3.50
FAVS	44.85	44.95	0.20
RK	44.95	45.70	1.50
MA	45.70	46.00	0.60
MU	46.00	46.30	0.60
RCK	46.30	46.70	0.80
MA	46.70	46.80	0.20
RCK	46.80	50.00	6.40

N2: Mildura Wreck – Transect 2

Field Code	Length 1	Length 2	% Cover
RCK	0.00	0.40	0.80
MA	0.40	0.60	0.40
RCK	0.60	1.70	2.20
MA	1.70	2.00	0.60
RCK	2.00	2.30	0.60
MA	2.30	2.40	0.20
RCK	2.40	3.80	2.80
MA	3.80	4.20	0.80
ACRD	4.20	4.30	0.20
MA	4.30	6.10	3.60
RCK	6.10	6.80	1.40
ACRD	6.80	6.90	0.20
RCK	6.90	7.30	0.80
MA	7.30	7.80	1.00
RCK	7.80	8.30	1.00
MA	8.30	8.50	0.40
MA	8.50	9.10	1.20
RCK	9.10	9.80	1.40
MA	9.80	10.40	1.20
RCK	10.40	11.30	1.80
MA	11.30	11.40	0.20
RCK	11.40	12.00	1.20
MA	12.00	12.10	0.20
RCK	12.10	12.60	1.00
MA	12.60	12.80	0.40
RCK	12.80	13.40	1.20
MA	13.40	13.50	0.20
RCK	13.50	13.90	0.80
MA	13.90	14.50	1.20
RCK	14.50	15.90	2.80
MA	15.90	16.00	0.20
RCK	16.00	16.80	1.60
RCK	16.80	17.00	0.40
RCK	17.00	18.20	2.40
MA	18.20	18.25	0.10
RCK	18.25	27.40	18.30
OT	27.40	27.50	0.20
RCK	27.50	30.50	6.00
MA	30.50	30.60	0.20
RCK	30.60	31.20	1.20
MA	31.20	31.40	0.40
RCK	31.40	32.50	2.20
FAVE	32.50	32.70	0.40
RCK	32.70	37.50	9.60
MA	37.50	38.50	2.00
RCK	38.50	40.25	3.50
MA	40.25	40.75	1.00
U	40.75	40.85	0.20
RCK	40.85	42.00	2.30
MA	42.00	42.10	0.20
RCK	42.10	43.00	1.80
U	43.00	43.10	0.20
RCK	43.10	46.10	6.00
FAVE	46.10	46.30	0.40
MA	46.30	47.10	1.60
MA	47.10	49.60	5.00

Field Code	Length 1	Length 2	% Cover
RCK	49.60	50.00	0.80

N2: Mildura Wreck – Transect 3

Field Code	Length 1	Length 2	% Cover
MA	0.00	3.25	6.50
FAVE	3.25	3.30	0.10
MA	3.30	5.20	3.80
RCK	5.20	5.30	0.20
MA	5.30	6.90	3.20
RCK	6.90	7.10	0.40
MA	7.10	10.00	5.80
S	10.00	10.20	0.40
RCK	10.20	10.90	1.40
MA	10.90	13.20	4.60
RCK	13.20	13.30	0.20
MA	13.30	14.80	3.00
RCK	14.80	15.00	0.40
MA	15.00	19.70	9.40
RCK	19.70	20.00	0.60
MA	20.00	21.50	3.00
RCK	21.50	21.80	0.60
SC	21.80	22.00	0.40
MA	22.00	23.05	2.10
RCK	23.05	23.25	0.40
FAVS	23.25	23.40	0.30
MA	23.40	27.00	7.20
RCK	27.00	28.00	2.00
RCK	28.00	29.00	2.00
MA	29.00	31.60	5.20
RCK	31.60	32.30	1.40
MA	32.30	33.30	2.00
RCK	33.30	34.00	1.40
MA	34.00	39.40	10.80
RCK	39.40	40.00	1.20
MA	40.00	46.50	13.00
RCK	46.50	48.00	3.00
RCK	48.00	49.50	3.00
MA	49.50	50.00	1.00

N3: Vlamingh Head – Transect 1

Field Code	Length 1	Length 2	% Cover
RCK	0.00	3.00	6.00
S	3.00	3.10	0.20
RCK	3.10	12.10	18.00
S	12.10	13.10	2.00
RCK	13.10	13.25	0.30
S	13.25	13.90	1.30
S	13.90	16.00	4.20
RCK	16.00	17.00	2.00
S	17.00	17.10	0.20
RCK	17.10	27.50	20.80
S	27.50	29.30	3.60
RCK	29.30	29.90	1.20
S	29.90	34.50	9.20
FAVS	34.50	34.55	0.10
S	34.55	35.00	0.90
RCK	35.00	35.65	1.30
ACRD	35.65	35.70	0.10
RCK	35.70	39.20	7.00
ACRD	39.20	39.30	0.20
DCA	39.30	39.35	0.10
S	39.35	39.50	0.30
RCK	39.50	39.80	0.60
FAVE	39.80	39.85	0.10
RCK	39.85	41.90	4.10
U	41.90	42.00	0.20
RCK	42.00	43.20	2.40
DCA	43.20	43.50	0.60
RCK	43.50	46.10	5.20
ACRD	46.10	46.20	0.20
RCK	46.20	46.50	0.60
ACRD	46.50	46.65	0.30
RCK	46.65	48.20	3.10
U	48.20	48.25	0.10
RCK	48.25	49.00	1.50
FAVS	49.00	49.05	0.10
RCK	49.05	49.70	1.30
S	49.70	50.00	0.60

N3: Vlamingh Head – Transect 2

Field Code	Length 1	Length 2	% Cover
RCK	0.00	10.00	20.00
SC	10.00	10.10	0.20
RCK	10.10	14.20	8.20
ACRD	14.20	14.40	0.40
RCK	14.40	14.60	0.40
SP	14.60	14.70	0.20
RCK	14.70	20.20	11.00
U	20.20	20.30	0.20
RCK	20.30	22.50	4.40
SP	22.50	22.60	0.20
RCK	22.60	33.25	21.30
FAVS	33.25	33.30	0.10
RCK	33.30	35.90	5.20
FAVS	35.90	36.05	0.30
RCK	36.05	36.90	1.70
FAVS	36.90	37.05	0.30
RCK	37.05	39.55	5.00
FAVS	39.55	39.60	0.10
RCK	39.60	40.05	0.90
FAVS	40.05	40.15	0.20
RCK	40.15	41.95	3.60
SC	41.95	42.05	0.20
RCK	42.05	48.70	13.30
OT	48.70	48.75	0.10
RCK	48.75	50.00	2.50

N3: Vlamingh Head – Transect 3

Field Code	Length 1	Length 2	% Cover
RCK	0.00	2.70	5.40
U	2.70	2.75	0.10
RCK	2.75	4.20	2.90
SC	4.20	4.25	0.10
RCK	4.25	10.10	11.70
ACRD	10.10	10.25	0.30
RCK	10.25	11.10	1.70
ACRD	11.10	11.15	0.10
RCK	11.15	13.25	4.20
ACRD	13.25	13.40	0.30
RCK	13.40	28.35	29.90
ACRS	28.35	28.40	0.10
RCK	28.40	29.75	2.70
ACRD	29.75	29.85	0.20
RCK	29.85	30.50	1.30
SC	30.50	30.70	0.40
RCK	30.70	32.50	3.60
ACRD	32.50	32.60	0.20
RCK	32.60	33.00	0.80
S	33.00	35.90	5.80
RCK	35.90	37.75	3.70
FAVE	37.75	38.00	0.50
RCK	38.00	40.00	4.00
U	40.00	40.05	0.10
RCK	40.05	40.95	1.80
ACRE	40.95	41.05	0.20
RCK	41.05	41.95	1.80
SP	41.95	42.20	0.50
RCK	42.20	48.20	12.00
SC	48.20	48.30	0.20
RCK	48.30	50.00	3.40

N20: Jurabi Pt. Head – Transect 1

Field Code	Length 1	Length 2	% Cover
DCA	0.00	2.00	4.00
ACRE	2.00	2.10	0.20
DCA	2.10	2.40	0.60
FAVE	2.40	2.60	0.40
DCA	2.60	3.40	1.60
ACRD	3.40	3.50	0.20
MIL	3.50	3.70	0.40
ACRD	3.70	4.10	0.80
ACRE	4.10	4.50	0.80
DCA	4.50	4.90	0.80
SC	4.90	5.10	0.40
DCA	5.10	5.20	0.20
MIL	5.20	5.30	0.20
DCA	5.30	5.90	1.20
SC	5.90	6.20	0.60
RCK	6.20	7.00	1.60
DCA	7.00	7.30	0.60
DCA	7.30	7.60	0.60
DCA	7.60	8.80	2.40
ACRD	8.80	8.90	0.20
DCA	8.90	9.90	2.00
ACRE	9.90	10.20	0.60
DCA	10.20	13.20	6.00
MIL	13.20	13.30	0.20
DCA	13.30	13.40	0.20
SC	13.40	13.60	0.40
SC	13.60	14.00	0.80
DCA	14.00	14.20	0.40
SC	14.20	14.70	1.00
DCA	14.70	15.60	1.80
MIL	15.60	15.70	0.20
ACRD	15.70	16.00	0.60
DCA	16.00	16.20	0.40
RCK	16.20	16.90	1.40
ACRE	16.90	17.00	0.20
DCA	17.00	18.70	3.40
SC	18.70	18.80	0.20
DCA	18.80	24.20	10.80
FAVE	24.20	24.40	0.40
DCA	24.40	25.30	1.80
RCK	25.30	26.60	2.60
ACRE	26.60	26.70	0.20
RCK	26.70	28.20	3.00
FAVE	28.20	28.22	0.04
DCA	28.22	31.20	5.96
ACRD	31.20	31.30	0.20
DCA	31.30	32.00	1.40
SC	32.00	32.30	0.60
DCA	32.30	34.60	4.60
SC	34.60	34.70	0.20
DCA	34.70	35.90	2.40
ACRD	35.90	36.00	0.20
DCA	36.00	37.80	3.60
SC	37.80	37.85	0.10
DCA	37.85	39.00	2.30
ACRD	39.00	39.10	0.20
DCA	39.10	41.30	4.40
SC	41.30	41.40	0.20
DCA	41.40	42.50	2.20
POCS	42.50	42.60	0.20
DCA	42.60	45.00	4.80
MIL	45.00	45.30	0.60
SC	45.30	45.50	0.40
DCA	45.50	47.00	3.00
FAVS	47.00	47.20	0.40
DCA	47.20	47.60	0.80
POCS	47.60	47.70	0.20
DCA	47.70	49.90	4.40
ACRD	49.90	50.00	0.20

N20: Jurabi Pt. Head – Transect 2

Field Code	Length 1	Length 2	% Cover
DCA	0.00	4.20	8.40
SC	4.20	5.00	1.60
DCA	5.00	5.10	0.20
R	5.10	6.00	1.80
DCA	6.00	6.80	1.60
FAVE	6.80	6.90	0.20
DCA	6.90	7.30	0.80
FAVS	7.30	7.50	0.40
DCA	7.50	9.10	3.20
ACRD	9.10	9.20	0.20
POCS	9.20	9.30	0.20
DCA	9.30	9.60	0.60
POCS	9.60	9.70	0.20
SC	9.70	9.90	0.40
ACRD	9.90	10.00	0.20
DCA	10.00	10.20	0.40
ACRD	10.20	10.40	0.40
DCA	10.40	13.00	5.20
ACRT	13.00	13.30	0.60
DCA	13.30	13.70	0.80
ACRD	13.70	14.00	0.60
DCA	14.00	14.40	0.80
SC	14.40	14.60	0.40
DCA	14.60	15.30	1.40
FAVS	15.30	15.40	0.20
DCA	15.40	15.90	1.00
SC	15.90	16.10	0.40
DCA	16.10	17.00	1.80
FAVS	17.00	17.50	1.00
DCA	17.50	18.00	1.00
FAVE	18.00	18.60	1.20
ACRD	18.60	19.00	0.80
DCA	19.00	19.30	0.60
ACRD	19.30	19.50	0.40
DCA	19.50	21.00	3.00
SC	21.00	21.10	0.20
DCA	21.10	22.10	2.00
ACRD	22.10	22.20	0.20
DCA	22.20	23.00	1.60
ACRD	23.00	23.20	0.40
DCA	23.20	23.75	1.10
ACRD	23.75	23.85	0.20
DCA	23.85	25.80	3.90
ACRD	25.80	26.00	0.40
ACRD	26.00	26.20	0.40
DCA	26.20	27.30	2.20
ACRD	27.30	27.40	0.20
DCA	27.40	28.80	2.80
ACRD	28.80	29.90	2.20
DCA	29.90	30.30	0.80
FAVE	30.30	30.60	0.60
ACRD	30.60	30.70	0.20
DCA	30.70	31.70	2.00
ACRD	31.70	32.00	0.60
ACRD	32.00	32.30	0.60
DCA	32.30	33.20	1.80
RCK	33.20	35.20	4.00
ACRD	35.20	35.30	0.20
DCA	35.30	36.70	2.80
ACRD	36.70	37.00	0.60
DCA	37.00	38.80	3.60
FAVM	38.80	39.00	0.40
DCA	39.00	39.10	0.20
ACRD	39.10	39.20	0.20
SC	39.20	39.40	0.40
DCA	39.40	40.10	1.40
FAVE	40.10	40.20	0.20
ACRT	40.20	40.50	0.60
R	40.50	40.70	0.40
ACRD	40.70	40.80	0.20
DCA	40.80	41.20	0.80
SP	41.20	41.30	0.20
DCA	41.30	44.90	7.20
ACRD	44.90	45.00	0.20
SC	45.00	45.30	0.60
DCA	45.30	46.00	1.40
SC	46.00	46.10	0.20
DCA	46.10	47.70	3.20
ACRD	47.70	47.80	0.20
ACRE	47.80	48.00	0.40
MIL	48.00	48.20	0.40
FAVS	48.20	48.30	0.20
DCA	48.30	50.00	3.40

N20: Jurabi Pt. Head – Transect 3

Field Code	Length 1	Length 2	% Cover
DCA	0.00	0.70	1.40
SC	0.70	1.30	1.20
DCA	1.30	3.00	3.40
RCK	3.00	3.30	0.60
MIL	3.30	3.40	0.20
RCK	3.40	4.00	1.20
ACRD	4.00	4.10	0.20
RCK	4.10	4.80	1.40
SC	4.80	4.90	0.20
RCK	4.90	5.50	1.20
FAVS	5.50	5.80	0.60
DCA	5.80	6.00	0.40
ACRE	6.00	6.10	0.20
FAVS	6.10	6.30	0.40
DCA	6.30	6.40	0.20
ACRD	6.40	6.50	0.20
DCA	6.50	13.00	13.00
ACRE	13.00	13.30	0.60
DCA	13.30	14.00	1.40
ACRD	14.00	14.20	0.40
DCA	14.20	16.70	5.00
ACRD	16.70	16.90	0.40
DCA	16.90	18.00	2.20
POCS	18.00	18.10	0.20
FAVS	18.10	18.20	0.20
RCK	18.20	20.00	3.60
SC	20.00	21.15	2.30
DCA	21.15	22.20	2.10
FAVS	22.20	22.40	0.40
DCA	22.40	26.00	7.20
SC	26.00	26.20	0.40
RCK	26.20	28.00	3.60
S	28.00	29.20	2.40
RCK	29.20	31.30	4.20
FAVS	31.30	31.50	0.40
DCA	31.50	32.00	1.00
DCA	32.00	32.50	1.00
SC	32.50	32.60	0.20
FAVE	32.60	32.65	0.10
DCA	32.65	36.20	7.10
SC	36.20	36.40	0.40
DCA	36.40	40.20	7.60
RCK	40.20	41.00	1.60
DCA	41.00	41.30	0.60
FAVM	41.30	41.40	0.20
DCA	41.40	42.20	1.60
POCS	42.20	42.40	0.40
DCA	42.40	42.60	0.40
POCS	42.60	42.80	0.40
DCA	42.80	44.40	3.20
ACRD	44.40	44.50	0.20
DCA	44.50	49.80	10.60
ACRE	49.80	50.00	0.40

N5: Tantabiddi – Transect 1

Field Code	Length 1	Length 2	% Cover
RCK	0.00	2.10	4.20
PORM	2.10	2.40	0.60
DCA	2.40	4.40	4.00
ACRT	4.40	4.90	1.00
RCK	4.90	6.60	3.40
ACRD	6.60	6.90	0.60
FAVS	6.90	7.00	0.20
RCK	7.00	7.40	0.80
DCA	7.40	7.70	0.60
RCK	7.70	12.30	9.20
ACRD	12.30	12.40	0.20
DCA	12.40	12.50	0.20
ACRD	12.50	12.70	0.40
RCK	12.70	13.10	0.80
DCA	13.10	13.20	0.20
RCK	13.20	13.60	0.80
ACRD	13.60	13.70	0.20
RCK	13.70	15.10	2.80
S	15.10	15.20	0.20
RCK	15.20	16.20	2.00
SP	16.20	16.30	0.20
RCK	16.30	16.90	1.20
MILME	16.90	17.10	0.40
RCK	17.10	18.30	2.40
PORM	18.30	18.40	0.20
DCA	18.40	18.70	0.60
ACRE	18.70	18.80	0.20
DCA	18.80	19.10	0.60
ACRE	19.10	19.10	0.00
DCA	19.10	21.90	5.60
ACRT	21.90	22.10	0.40
DCA	22.10	22.30	0.40
PORM	22.30	22.40	0.20
R	22.40	24.40	4.00
S	24.40	24.70	0.60
DCA	24.70	24.80	0.20
S	24.80	25.00	0.40
DCA	25.00	25.20	0.40
FAVS	25.20	25.30	0.20
R	25.30	25.80	1.00
FAVS	25.80	26.30	1.00
DCA	26.30	26.50	0.40
S	26.50	26.70	0.40
DCA	26.70	27.20	1.00
ACRT	27.20	27.30	0.20
DCA	27.30	28.40	2.20
ACRD	28.40	28.50	0.20
MIL	28.50	28.70	0.40
RCK	28.70	30.00	2.60
DCA	30.00	30.30	0.60
MIL	30.30	30.40	0.20
DCA	30.40	30.50	0.20
SC	30.50	30.60	0.20
RCK	30.60	31.60	2.00
S	31.60	32.30	1.40
RCK	32.30	34.60	4.60
DCA	34.60	35.20	1.20
S	35.20	35.40	0.40
ACRD	35.40	35.60	0.40
S	35.60	35.70	0.20
DCA	35.70	36.00	0.60
RCK	36.00	40.00	8.00
ACRB	40.00	40.10	0.20
S	40.10	40.30	0.40
ACRD	40.30	40.50	0.40
ACRB	40.50	41.30	1.60
ACRD	41.30	41.80	1.00
RCK	41.80	42.20	0.80
ACRD	42.20	42.30	0.20
RCK	42.30	43.50	2.40
ACRD	43.50	43.60	0.20
R	43.60	44.20	1.20
ARCD	44.20	44.50	0.60
DCA	44.50	44.60	0.20
ARCD	44.60	44.90	0.60
DCA	44.90	45.00	0.20
S	45.00	45.20	0.40
R	45.20	46.00	1.60
RCK	46.00	49.80	7.60
ACRD	49.80	50.00	0.40

N5: Tantabiddi – Transect 2

Field Code	Length 1	Length 2	% Cover
RCK	0.00	1.60	3.20
ACRD	1.60	1.90	0.60
DCA	1.90	2.10	0.40
S	2.10	2.20	0.20
R	2.20	4.70	5.00
RCK	4.70	6.50	3.60
R	6.50	9.90	6.80
DCA	9.90	10.30	0.80
S	10.30	10.60	0.60
R	10.60	12.00	2.80
RCK	12.00	13.50	3.00
R	13.50	16.00	5.00
RCK	16.00	16.20	0.40
R	16.20	17.40	2.40
ACRD	17.40	17.50	0.20
R	17.50	22.00	9.00
DCA	22.00	22.10	0.20
ACRD	22.10	22.20	0.20
R	22.20	22.90	1.40
DCA	22.90	23.10	0.40
R	23.10	23.40	0.60
DCA	23.40	23.50	0.20
R	23.50	24.00	1.00
DCA	24.00	25.00	2.00
R	25.00	25.30	0.60
ACRD	25.30	25.40	0.20
RCK	25.40	27.20	3.60
R	27.20	28.30	2.20
RCK	28.30	29.80	3.00
S	29.80	30.00	0.40
RCK	30.00	30.10	0.20
S	30.10	30.20	0.20
RCK	30.20	32.30	4.20
DCA	32.30	33.10	1.60
R	33.10	33.25	0.30
FAVM	33.25	33.30	0.10
R	33.30	33.40	0.20
ACRD	33.40	33.60	0.40
S	33.60	33.90	0.60
RCK	33.90	34.40	1.00
DCA	34.40	34.60	0.40
PORM	34.60	34.65	0.10
DCA	34.65	34.70	0.10
R	34.70	35.10	0.80
PORM	35.10	35.80	1.40
DCA	35.80	36.20	0.80
PORM	36.20	36.25	0.10
DCA	36.25	36.60	0.70
PORM	36.60	36.80	0.40
DCA	36.80	37.10	0.60
PORM	37.10	37.20	0.20
DCA	37.20	37.30	0.20
RCK	37.30	39.40	4.20
PORM	39.40	40.00	1.20
DCA	40.00	40.20	0.40
ACRD	40.20	40.50	0.60
DCA	40.50	41.50	2.00
ACRD	41.50	42.00	1.00
RCK	42.00	42.40	0.80
MIL	42.40	42.60	0.40
DCA	42.60	45.00	4.80
R	45.00	45.10	0.20
ACRD	45.10	45.20	0.20
RCK	45.20	46.15	1.90
OT	46.15	46.20	0.10
RCK	46.20	49.10	5.80
S	49.10	49.20	0.20
RCK	49.20	50.00	1.60

N5: Tantabiddi – Transect 3

Field Code	Length 1	Length 2	% Cover
RCK	0.00	1.80	3.60
DCA	1.80	1.90	0.20
RCK	1.90	2.10	0.40
R	2.10	2.15	0.10
RCK	2.15	3.40	2.50
U	3.40	3.45	0.10
RCK	3.45	9.80	12.70
R	9.80	10.40	1.20
RCK	10.40	11.65	2.50
ACRS	11.65	11.70	0.10
DCA	11.70	11.80	0.20
RCK	11.80	14.30	5.00
DCA	14.30	14.80	1.00
ACRS	14.80	14.85	0.10
RCK	14.85	15.20	0.70
MIL	15.20	15.30	0.20
RCK	15.30	15.80	1.00
DCA	15.80	15.90	0.20
RCK	15.90	16.20	0.60
S	16.20	16.30	0.20
RCK	16.30	16.80	1.00
S	16.80	16.90	0.20
RCK	16.90	19.35	4.90
PORM	19.35	19.40	0.10
DCA	19.40	19.50	0.20
PORM	19.50	19.57	0.14
DCA	19.57	20.00	0.86
ACRD	20.00	20.05	0.10
RCK	20.05	20.20	0.30
R	20.20	20.30	0.20
RCK	20.30	20.90	1.20
S	20.90	21.00	0.20
DCA	21.00	21.60	1.20
R	21.60	21.90	0.60
FAVS	21.90	22.00	0.20
R	22.00	22.10	0.20
MIL	22.10	22.20	0.20
R	22.20	22.50	0.60
ACRD	22.50	22.55	0.10
RCK	22.55	24.10	3.10
ACRS	24.10	24.15	0.10
RCK	24.15	24.20	0.10
ACRD	24.20	24.25	0.10
DCA	24.25	25.80	3.10
RCK	25.80	26.00	0.40
DCA	26.00	26.80	1.60
RCK	26.80	27.10	0.60
ACRE	27.10	27.20	0.20
RCK	27.20	27.80	1.20
S	27.80	28.00	0.40
RCK	28.00	28.20	0.40
MIL	28.20	28.50	0.60
DCA	28.50	28.55	0.10
RCK	28.55	29.50	1.90
DCA	29.50	30.20	1.40
RCK	30.20	30.60	0.80
MIL	30.60	31.10	1.00
DCA	31.10	31.40	0.60
RCK	31.40	31.80	0.80
MIL	31.80	32.30	1.00
DCA	32.30	32.70	0.80
RCK	32.70	33.20	1.00
PORM	33.20	33.30	0.20
DCA	33.30	33.50	0.40
PORM	33.50	33.55	0.10
RCK	33.55	34.80	2.50
S	34.80	35.00	0.40
RCK	35.00	38.45	6.90
ACRD	38.45	38.50	0.10
RCK	38.50	39.30	1.60
DCA	39.30	40.25	1.90
PORM	40.25	40.30	0.10
RCK	40.30	44.15	7.70
MIL	44.15	44.17	0.04
RCK	44.17	45.10	1.86
ACRS	45.10	45.15	0.10
RCK	45.15	46.30	2.30
ACRS	46.30	46.40	0.20
RCK	46.40	47.50	2.20
ACRS	47.50	47.55	0.10
RCK	47.55	49.40	3.70
DCA	49.40	49.50	0.20
RCK	49.50	50.00	1.00

N6: Ned's Camp/Mesa – Transect 1

Field Code	Length 1	Length 2	% Cover
RCK	0.00	0.10	0.20
DCA	0.10	0.20	0.20
RCK	0.20	0.90	1.40
MA	0.90	1.00	0.20
RCK	1.00	1.35	0.70
ACRD	1.35	1.45	0.20
RCK	1.45	3.00	3.10
MA	3.00	3.25	0.50
DCA	3.25	3.30	0.10
S	3.30	3.90	1.20
SGH	3.90	4.00	0.20
RCK	4.00	4.30	0.60
S	4.30	4.50	0.40
SGH	4.50	4.60	0.20
S	4.60	5.00	0.80
ACRB	5.00	5.05	0.10
S	5.05	5.20	0.30
RCK	5.20	5.80	1.20
ACRB	5.80	6.00	0.40
DCA	6.00	6.35	0.70
S	6.35	6.50	0.30
R	6.50	7.20	1.40
DCA	7.20	7.60	0.80
S	7.60	7.70	0.20
DCA	7.70	8.00	0.60
S	8.00	8.50	1.00
ACRS	8.50	9.10	1.20
DCA	9.10	11.20	4.20
FAVM	11.20	11.30	0.20
S	11.30	12.30	2.00
DCA	12.30	13.40	2.20
ACRT	13.40	13.50	0.20
DCA	13.50	13.80	0.60
SGH	13.80	14.20	0.80
S	14.20	18.60	8.80
SGH	18.60	18.90	0.60
DCA	18.90	19.20	0.60
FAVS	19.20	19.40	0.40
DCA	19.40	19.50	0.20
S	19.50	19.70	0.40
DCA	19.70	20.00	0.60
S	20.00	20.80	1.60
SGH	20.80	21.30	1.00
ACRB	21.30	21.60	0.60
DCA	21.60	22.00	0.80
ACRB	22.00	22.90	1.80
DCA	22.90	23.10	0.40
ACRB	23.10	23.40	0.60
S	23.40	23.75	0.70
SGH	23.75	23.85	0.20
DCA	23.85	24.50	1.30
S	24.50	25.10	1.20
MA	25.10	25.20	0.20
S	25.20	26.10	1.80
R	26.10	26.20	0.20
RCK	26.20	27.80	3.20
ACRD	27.80	27.90	0.20
RCK	27.90	28.90	2.00
FAVS	28.90	29.10	0.40
RCK	29.10	29.80	1.40
DCA	29.80	30.30	1.00
ACRE	30.30	30.50	0.40
DCA	30.50	31.00	1.00
MA	31.00	31.30	0.60
ACRT	31.30	31.60	0.60
S	31.60	31.80	0.40
RCK	31.80	32.60	1.60
S	32.60	33.70	2.20
RCK	33.70	34.50	1.60
S	34.50	37.40	5.80
SGH	37.40	38.30	1.80
RCK	38.30	38.40	0.20
S	38.40	40.40	4.00
RCK	40.40	41.20	1.60
ACRD	41.20	41.40	0.40
RCK	41.40	42.40	2.00
ACRD	42.40	42.70	0.60
RCK	42.70	43.00	0.60
MA	43.00	43.20	0.40
RCK	43.20	44.20	2.00
ACRD	44.20	44.50	0.60
DCA	44.50	44.60	0.20
S	44.60	45.20	1.20
RCK	45.20	46.30	2.20
ACRT	46.30	46.40	0.20
RCK	46.40	47.00	1.20
ACRD	47.00	47.10	0.20
DCA	47.10	47.20	0.20
ACRD	47.20	47.40	0.40
MA	47.40	47.50	0.20
S	47.50	47.70	0.40
DCA	47.70	48.10	0.80
S	48.10	49.20	2.20
SGH	49.20	49.40	0.40
ACRD	49.40	49.50	0.20
S	49.50	49.90	0.80
RCK	49.90	50.00	0.20

N6: Ned's Camp/Mesa – Transect 2

Field Code	Length 1	Length 2	% Cover
S	0.00	0.20	0.40
RCK	0.20	0.50	0.60
S	0.50	3.50	6.00
RCK	3.50	3.75	0.50
ACRD	3.75	3.90	0.30
RCK	3.90	4.60	1.40
MA	4.60	4.80	0.40
FIL	4.80	5.20	0.80
RCK	5.20	5.70	1.00
R	5.70	6.00	0.60
S	6.00	7.85	3.70
RCK	7.85	8.35	1.00
ACRE	8.35	8.40	0.10
RCK	8.40	8.70	0.60
ACRD	8.70	8.75	0.10
MA	8.75	9.10	0.70
DCA	9.10	10.20	2.20
S	10.20	10.70	1.00
RCK	10.70	11.00	0.60
DCA	11.00	11.50	1.00
S	11.50	11.80	0.60
DCA	11.80	12.20	0.80
FAVS	12.20	12.40	0.40
MA	12.40	12.60	0.40
DCA	12.60	17.70	10.20
S	17.70	18.00	0.60
R	18.00	18.10	0.20
FUNMR	18.10	18.20	0.20
RCK	18.20	18.30	0.20
ACRD	18.30	18.40	0.20
AA	18.40	18.90	1.00
S	18.90	19.00	0.20
RCK	19.00	19.10	0.20
FUMR	19.10	19.25	0.30
S	19.25	19.50	0.50
RCK	19.50	19.88	0.76
FAVS	19.88	19.92	0.08
S	19.92	20.00	0.16
FAVS	20.00	20.20	0.40
DCA	20.20	20.80	1.20
AA	20.80	21.00	0.40
RCK	21.00	21.30	0.60
AA	21.30	21.50	0.40
RCK	21.50	23.00	3.00
S	23.00	23.50	1.00
RCK	23.50	24.80	2.60
DCA	24.80	25.00	0.40
DCA	25.00	28.90	7.80
FAVS	28.90	29.00	0.20
RCK	29.00	29.10	0.20
S	29.10	29.30	0.40
SGH	29.30	29.40	0.20
DCA	29.40	30.20	1.60
S	30.20	30.30	0.20
MA	30.30	31.10	1.60
RCK	31.10	31.90	1.60
MA	31.90	32.00	0.20
S	32.00	32.30	0.60
AA	32.30	32.80	1.00
FAVS	32.80	33.00	0.40
AA	33.00	34.00	2.00
DCA	34.00	34.20	0.40
DCA	34.20	39.00	9.60
MA	39.00	40.00	2.00
RCK	40.00	44.00	8.00
ACRD	44.00	44.10	0.20
MA	44.10	44.50	0.80
DCA	44.50	46.40	3.80
ACRS	46.40	46.50	0.20
DCA	46.50	47.00	1.00
MV	47.00	47.30	0.60
RCK	47.30	50.00	5.40

N6: Ned's Camp/Mesa – Transect 3

Field Code	Length 1	Length 2	% Cover
RCK	0.00	2.60	5.20
S	2.60	3.60	2.00
MA	3.60	4.00	0.80
DCA	4.00	4.20	0.40
FAVS	4.20	4.22	0.04
MA	4.22	4.50	0.56
DCA	4.50	4.60	0.20
RCK	4.60	5.00	0.80
MA	5.00	5.30	0.60
RCK	5.30	7.40	4.20
SC	7.40	7.45	0.10
RCK	7.45	8.90	2.90
MA	8.90	9.00	0.20
RCK	9.00	9.30	0.60
MA	9.30	9.40	0.20
DCA	9.40	9.80	0.80
SC	9.80	9.95	0.30
S	9.95	10.25	0.60
RCK	10.25	10.30	0.10
FAVS	10.30	10.40	0.20
RCK	10.40	10.90	1.00
S	10.90	11.20	0.60
RK	11.20	11.30	0.20
S	11.30	11.50	0.40
RCK	11.50	12.00	1.00
DCA	12.00	12.20	0.40
S	12.20	12.40	0.40
DCA	12.40	14.10	3.40
FAVS	14.10	14.20	0.20
DCA	14.20	14.40	0.40
SC	14.40	14.45	0.10
S	14.45	14.60	0.30
DCA	14.60	14.75	0.30
ACRD	14.75	15.00	0.50
MA	15.00	15.10	0.20
RCK	15.10	15.30	0.40
MA	15.30	15.40	0.20
DCA	15.40	15.90	1.00
FAVS	15.90	15.92	0.04
S	15.92	16.10	0.36
DCA	16.10	17.10	2.00
S	17.10	17.25	0.30
RCK	17.25	17.90	1.30
DCA	17.90	18.00	0.20
S	18.00	18.20	0.40
DCA	18.20	18.90	1.40
MA	18.90	19.55	1.30
FAVS	19.55	19.65	0.20
MA	19.65	20.10	0.90
DCA	20.10	20.50	0.80
S	20.50	20.75	0.50
DCA	20.75	20.85	0.20
FAVS	20.85	21.00	0.30
DCA	21.00	22.25	2.50
OT	22.25	22.30	0.10
DCA	22.30	22.80	1.00
S	22.80	23.00	0.40
RCK	23.00	24.50	3.00
MA	24.50	24.70	0.40
RCK	24.70	24.90	0.40
MA	24.90	25.00	0.20
DCA	25.00	29.00	8.00
MA	29.00	29.10	0.20
S	29.10	29.50	0.80
RCK	29.50	29.90	0.80
MA	29.90	30.00	0.20
RCK	30.00	33.50	7.00
DCA	33.50	33.60	0.20
RCK	33.60	34.00	0.80
DCA	34.00	34.20	0.40
RCK	34.20	34.85	1.30
ACRD	34.85	35.00	0.30
RCK	35.00	36.00	2.00
MA	36.00	36.10	0.20
S	36.10	36.20	0.20
DCA	36.20	37.80	3.20
S	37.80	38.40	1.20
DCA	38.40	41.20	5.60
RCK	41.20	41.40	0.40
DCA	41.40	42.20	1.60
RCK	42.20	43.00	1.60
SC	43.00	43.05	0.10
RCK	43.05	46.10	6.10
MA	46.10	48.10	4.00
DCA	48.10	48.40	0.60
S	48.40	49.00	1.20
RCK	49.00	50.00	2.00

N7: Turquoise Bay – Transect 1

Field Code	Length 1	Length 2	% Cover
RCK	0.00	0.25	0.50
DCA	0.25	1.10	1.70
ACRD	1.10	1.20	0.20
DCA	1.20	2.80	3.20
DC2	2.80	2.90	0.20
DCA	2.90	3.30	0.80
ACRD	3.30	3.40	0.20
DCA	3.40	4.20	1.60
ACRT	4.20	4.60	0.80
DCA	4.60	5.20	1.20
ACRD	5.20	5.30	0.20
DCA	5.30	5.60	0.60
S	5.60	6.10	1.00
ACRD	6.10	6.15	0.10
S	6.15	6.20	0.10
ACRD	6.20	6.75	1.10
S	6.75	6.85	0.20
ACRD	6.85	7.10	0.50
S	7.10	7.20	0.20
FAVS	7.20	7.22	0.04
DCA	7.22	7.25	0.06
DCA	7.25	8.50	2.50
ACRD	8.50	8.60	0.20
DCA	8.60	10.20	3.20
MA	10.20	10.30	0.20
S	10.30	10.50	0.40
DCA	10.50	11.30	1.60
ACRT	11.30	11.60	0.60
DCA	11.60	11.80	0.40
ACRD	11.80	12.00	0.40
ACRT	12.00	12.40	0.80
DCA	12.40	14.00	3.20
DC1	14.00	14.12	0.24
DC2	14.12	14.20	0.16
DCA	14.20	14.80	1.20
MA	14.80	14.85	0.10
S	14.85	15.20	0.70
DCA	15.20	16.00	1.60
DCA	16.00	16.30	0.60
ACRT	16.30	16.70	0.80
MA	16.70	16.90	0.40
DCA	16.90	18.00	2.20
MA	18.00	18.15	0.30
DCA	18.15	18.70	1.10
S	18.70	19.20	1.00
ACRD	19.20	19.60	0.80
DCA	19.60	20.00	0.80
MA	20.00	20.30	0.60
DCA	20.30	21.10	1.60
ACRT	21.10	21.40	0.60
DC1	21.40	21.42	0.04
DC2	21.42	21.45	0.06
DCA	21.45	23.60	4.30
ACRD	23.60	23.70	0.20
DCA	23.70	23.75	0.10
ACRD	23.75	23.80	0.10
DCA	23.80	24.80	2.00
FAVS	24.80	24.87	0.14
DCA	24.87	25.20	0.66
ACRD	25.20	25.30	0.20
DCA	25.30	28.80	7.00
FAVS	28.80	29.00	0.40
DCA	29.00	30.80	3.60
ACRD	30.80	31.00	0.40
RCK	31.00	31.25	0.50
ACRD	31.25	31.30	0.10
ACRS	31.30	31.40	0.20
ACRD	31.40	31.60	0.40
DCA	31.60	31.95	0.70
ACRD	31.95	32.05	0.20
DCA	32.05	32.20	0.30
S	32.20	32.80	1.20
RCK	32.80	34.20	2.80
ACRS	34.20	34.30	0.20
RCK	34.30	35.90	3.20
ACRD	35.90	36.00	0.20
RCK	36.00	37.00	2.00
DCA	37.00	37.10	0.20
ACRT	37.10	37.40	0.60
RCK	37.40	39.00	3.20
ACRT	39.00	39.30	0.60
DCA	39.30	40.10	1.60
DC2	40.10	40.20	0.20
DCA	40.20	40.30	0.20
ACRT	40.30	40.90	1.20
DC1	40.90	40.92	0.04
DC2	40.92	41.00	0.16
DCA	41.00	41.80	1.60
ACRS	41.80	42.00	0.40
DCA	42.00	43.70	3.40
ACRD	43.70	43.80	0.20
ACRD	43.80	43.90	0.20
DCA	43.90	44.20	0.60
ACRT	44.20	44.30	0.20
DCA	44.30	44.35	0.10
FAVS	44.35	44.40	0.10
ACRT	44.40	45.20	1.60
MA	45.20	45.40	0.40
DCA	45.40	45.50	0.20
ACRD	45.50	45.60	0.20
DCA	45.60	46.20	1.20
ACRD	46.20	46.30	0.20
MA	46.30	46.40	0.20
ACRD	46.40	46.50	0.20
DCA	46.50	47.10	1.20
ACRD	47.10	47.40	0.60
DCA	47.40	48.00	1.20
ACRD	48.00	48.10	0.20
DCA	48.10	48.30	0.40
ACRD	48.30	48.50	0.40
DCA	48.50	48.60	0.20
ACRD	48.60	49.00	0.80
DCA	49.00	49.60	1.20
ACRD	49.60	50.00	0.80

N7: Turquoise Bay – Transect 2

Field Code	Length 1	Length 2	% Cover
MA	0.00	0.20	0.40
S	0.20	0.80	1.20
RCK	0.80	1.00	0.40
SC	1.00	1.40	0.80
DCA	1.40	1.90	1.00
ACRT	1.90	2.00	0.20
ACRD	2.00	2.15	0.30
DCA	2.15	2.20	0.10
FAVS	2.20	2.30	0.20
DCA	2.30	5.05	5.50
ACRT	5.05	5.60	1.10
S	5.60	6.00	0.80
DCA	6.00	6.20	0.40
ACRD	6.20	6.25	0.10
DCA	6.25	6.80	1.10
S	6.80	6.90	0.20
ACRD	6.90	7.00	0.20
DCA	7.00	7.40	0.80
ACRD	7.40	7.45	0.10
DCA	7.45	8.30	1.70
ACRD	8.30	8.45	0.30
DCA	8.45	9.15	1.40
ACRD	9.15	9.20	0.10
DCA	9.20	9.30	0.20
ACRD	9.30	9.50	0.40
DCA	9.50	11.30	3.60
S	11.30	11.50	0.40
FAVE	11.50	11.60	0.20
DCA	11.60	14.00	4.80
ACRD	14.00	14.20	0.40
DCA	14.20	14.80	1.20
ACRT	14.80	15.20	0.80
DCA	15.20	15.40	0.40
S	15.40	15.60	0.40
MA	15.60	15.80	0.40
DCA	15.80	16.30	1.00
ACRD	16.30	16.50	0.40
DCA	16.50	17.00	1.00
S	17.00	17.40	0.80
MA	17.40	17.50	0.20
ACRD	17.50	17.60	0.20
S	17.60	17.80	0.40
DCA	17.80	18.00	0.40
ACRD	18.00	18.40	0.80
MA	18.40	18.60	0.40
DCA	18.60	19.30	1.40
ACRT	19.30	20.05	1.50
DC2	20.05	20.10	0.10
DCA	20.10	22.40	4.60
ACRT	22.40	22.45	0.10
DC1	22.45	22.47	0.04
DC2	22.47	22.50	0.06
DCA	22.50	23.00	1.00
ACRS	23.00	23.20	0.40
ACRD	23.20	23.40	0.40
AA	23.40	23.80	0.80
S	23.80	23.90	0.20
ACRD	23.90	24.10	0.40
DCA	24.10	25.80	3.40
ACRD	25.80	25.90	0.20
DCA	25.90	28.50	5.20
ACRD	28.50	28.60	0.20
DCA	28.60	28.85	0.50
ACRD	28.85	29.10	0.50
DCA	29.10	29.50	0.80
ACRD	29.50	29.60	0.20
DCA	29.60	31.20	3.20
ACRT	31.20	31.70	1.00
DCA	31.70	33.80	4.20
ACRD	33.80	34.20	0.80
DCA	34.20	35.70	3.00
ACRT	35.70	36.30	1.20
DCA	36.30	37.40	2.20
ACRD	37.40	39.20	3.60
DCA	39.20	39.60	0.80
SC	39.60	39.65	0.10
DCA	39.65	40.60	1.90
ACRS	40.60	41.00	0.80
ACRD	41.00	41.40	0.80
S	41.40	41.50	0.20
DCA	41.50	42.70	2.40
ACRD	42.70	42.80	0.20
DCA	42.80	45.20	4.80
ACRD	45.20	45.30	0.20
S	45.30	46.00	1.40
ACRD	46.00	46.10	0.20
DCA	46.10	48.00	3.80
ACRE	48.00	48.15	0.30
DCA	48.15	48.30	0.30
ACRT	48.30	48.40	0.20
DCA	48.40	49.00	1.20
ACRD	49.00	49.10	0.20
DCA	49.10	49.90	1.60
ACRT	49.90	50.00	0.20

N7: Turquoise Bay – Transect 3

Field Code	Length 1	Length 2	% Cover
DCA	0.00	1.40	2.80
ACRD	1.40	1.50	0.20
DCA	1.50	2.80	2.60
AA	2.80	3.20	0.80
DCA	3.20	3.90	1.40
ACRD	3.90	4.00	0.20
RCK	4.00	4.40	0.80
ACRD	4.40	4.55	0.30
S	4.55	4.90	0.70
ACRD	4.90	5.20	0.60
S	5.20	5.30	0.20
R	5.30	6.00	1.40
DCA	6.00	6.70	1.40
AA	6.70	7.00	0.60
ACRT	7.00	7.60	1.20
S	7.60	7.70	0.20
FAVS	7.70	7.80	0.20
S	7.80	7.95	0.30
ACRD	7.95	8.70	1.50
MA	8.70	9.00	0.60
DCA	9.00	9.90	1.80
ACRT	9.90	10.10	0.40
S	10.10	10.60	1.00
ACRD	10.60	10.70	0.20
DCA	10.70	10.90	0.40
ACRD	10.90	11.00	0.20
RCK	11.00	14.00	6.00
DCA	14.00	14.20	0.40
RCK	14.20	14.30	0.20
DCA	14.30	14.40	0.20
RCK	14.40	15.30	1.80
ACRD	15.30	15.35	0.10
DCA	15.35	15.80	0.90
ACRD	15.80	15.90	0.20
HOL	15.90	16.00	0.20
DCA	16.00	18.00	4.00
RCK	18.00	20.00	4.00
DCA	20.00	20.20	0.40
DCA	20.20	20.80	1.20
RCK	20.80	21.80	2.00
ACRD	21.80	22.00	0.40
DCA	22.00	22.60	1.20
RCK	22.60	25.70	6.20
DCA	25.70	26.50	1.60
RCK	26.50	30.20	7.40
DCA	30.20	33.00	5.60
RCK	33.00	34.85	3.70
HOL	34.85	34.90	0.10
RCK	34.90	37.10	4.40
DCA	37.10	38.10	2.00
DCA	38.10	40.10	4.00
ACRD	40.10	40.20	0.20
DCA	40.20	41.15	1.90
ACRD	41.15	41.30	0.30
DCA	41.30	41.90	1.20
S	41.90	42.10	0.40
DCA	42.10	43.70	3.20
ACRD	43.70	43.90	0.40
DCA	43.90	44.10	0.40
ACRD	44.10	44.30	0.40
DCA	44.30	44.50	0.40
ACRD	44.50	44.70	0.40
DCA	44.70	45.00	0.60
FAVM	45.00	45.10	0.20
S	45.10	45.90	1.60
DCA	45.90	47.30	2.80
ACRD	47.30	47.50	0.40
DCA	47.50	48.30	1.60
S	48.30	48.40	0.20
DCA	48.40	48.50	0.20
ACRD	48.50	48.55	0.10
DCA	48.55	48.80	0.50
HOL	48.80	48.85	0.10
DCA	48.85	49.20	0.70
ACRD	49.20	49.40	0.40
DCA	49.40	49.80	0.80
ACRD	49.80	50.00	0.40

N8: Osprey – Transect 1

Field Code	Length 1	Length 2	% Cover
RCK	0.00	0.30	0.60
S	0.30	1.10	1.60
HOL	1.10	1.20	0.20
DCA	1.20	1.30	0.20
S	1.30	1.40	0.20
DCA	1.40	3.20	3.60
R	3.20	3.40	0.40
DCA	3.40	3.80	0.80
S	3.80	4.00	0.40
DCA	4.00	5.20	2.40
MA	5.20	5.30	0.20
DCA	5.30	5.45	0.30
FAVM	5.45	5.55	0.20
DCA	5.55	7.80	4.50
S	7.80	8.00	0.40
MA	8.00	8.10	0.20
ACRD	8.10	8.20	0.20
DCA	8.20	8.40	0.40
MA	8.40	8.60	0.40
S	8.60	9.10	1.00
DCA	9.10	11.60	5.00
FAVS	11.60	11.80	0.40
DCA	11.80	13.70	3.80
S	13.70	14.30	1.20
ACRD	14.30	14.80	1.00
DCA	14.80	15.20	0.80
ACRD	15.20	15.30	0.20
ACRE	15.30	15.40	0.20
DCA	15.40	18.70	6.60
S	18.70	19.00	0.60
DCA	19.00	19.90	1.80
S	19.90	20.10	0.40
AA	20.10	20.20	0.20
DCA	20.20	21.50	2.60
ACRD	21.50	21.70	0.40
AA	21.70	22.10	0.80
DCA	22.10	23.00	1.80
FAVM	23.00	23.20	0.40
DCA	23.20	23.30	0.20
ACRD	23.30	23.40	0.20
AA	23.40	23.80	0.80
DCA	23.80	27.70	7.80
MA	27.70	27.80	0.20
S	27.80	28.00	0.40
DCA	28.00	29.30	2.60
S	29.30	29.50	0.40
DCA	29.50	30.00	1.00
S	30.00	30.10	0.20
DCA	30.10	32.70	5.20
ACRD	32.70	32.80	0.20
S	32.80	33.70	1.80
ACRS	33.70	34.00	0.60
S	34.00	34.60	1.20
DCA	34.60	34.90	0.60
S	34.90	35.80	1.80
DCA	35.80	41.90	12.20
S	41.90	42.10	0.40
HOL	42.10	42.20	0.20
S	42.20	42.30	0.20
DCA	42.30	43.20	1.80
S	43.20	44.00	1.60
DCA	44.00	48.30	8.60
S	48.30	48.40	0.20
DCA	48.40	50.00	3.20

N8: Osprey – Transect 2

Field Code	Length 1	Length 2	% Cover
RCK	0.00	1.00	2.00
DCA	1.00	2.10	2.20
S	2.10	2.90	1.60
DCA	2.90	5.00	4.20
S	5.00	5.20	0.40
DCA	5.20	6.00	1.60
S	6.00	6.30	0.60
DCA	6.30	6.90	1.20
R	6.90	7.90	2.00
ACRD	7.90	8.00	0.20
DCA	8.00	9.45	2.90
S	9.45	9.55	0.20
DCA	9.55	11.20	3.30
RCK	11.20	11.90	1.40
DCA	11.90	12.20	0.60
FAVS	12.20	12.22	0.04
R	12.22	12.60	0.76
DCA	12.60	13.20	1.20
R	13.20	13.40	0.40
DCA	13.40	16.90	7.00
S	16.90	17.00	0.20
ACRD	17.00	17.20	0.40
S	17.20	17.50	0.60
FAVS	17.50	17.60	0.20
DCA	17.60	18.70	2.20
ACRD	18.70	18.80	0.20
S	18.80	19.10	0.60
DCA	19.10	19.30	0.40
S	19.30	20.00	1.40
DCA	20.00	20.60	1.20
S	20.60	21.00	0.80
DC2	21.00	21.10	0.20
ACRT	21.10	21.20	0.20
DC2	21.20	21.25	0.10
DC1	21.25	21.30	0.10
ACRT	21.30	21.50	0.40
DCA	21.50	21.70	0.40
S	21.70	23.10	2.80
DCA	23.10	24.00	1.80
ACRT	24.00	24.20	0.40
S	24.20	25.10	1.80
DCA	25.10	31.10	12.00
S	31.10	31.20	0.20
DCA	31.20	40.70	19.00
S	40.70	41.00	0.60
MA	41.00	41.20	0.40
ACRD	41.20	41.30	0.20
DCA	41.30	41.40	0.20
S	41.40	41.60	0.40
DCA	41.60	43.90	4.60
ACRD	43.90	44.00	0.20
DCA	44.00	45.00	2.00
ACRD	45.00	45.20	0.40
DCA	45.20	48.10	5.80
MA	48.10	48.20	0.20
DCA	48.20	50.00	3.60

N8: Osprey – Transect 3

Field Code	Length 1	Length 2	% Cover
DCA	0.00	2.20	4.40
S	2.20	2.90	1.40
DCA	2.90	3.50	1.20
FAVS	3.50	3.60	0.20
DCA	3.60	4.00	0.80
POC	4.00	4.20	0.40
DCA	4.20	4.70	1.00
S	4.70	5.00	0.60
DCA	5.00	5.40	0.80
S	5.40	5.60	0.40
DCA	5.60	9.50	7.80
S	9.50	10.40	1.80
DCA	10.40	12.20	3.60
S	12.20	12.40	0.40
DCA	12.40	14.00	3.20
S	14.00	14.20	0.40
DCA	14.20	16.10	3.80
S	16.10	16.25	0.30
DCA	16.25	17.50	2.50
MA	17.50	17.60	0.20
RCK	17.60	18.00	0.80
S	18.00	18.20	0.40
RCK	18.20	24.00	11.60
DCA	24.00	24.70	1.40
RCK	24.70	25.40	1.40
DCA	25.40	27.00	3.20
S	27.00	27.20	0.40
R	27.20	31.00	7.60
DCA	31.00	31.20	0.40
DCA	31.20	32.00	1.60
ACRD	32.00	32.10	0.20
S	32.10	32.20	0.20
DCA	32.20	33.00	1.60
R	33.00	38.20	10.40
R	38.20	42.30	8.20
DCA	42.30	43.80	3.00
DCA	43.80	44.30	1.00
R	44.30	45.20	1.80
DCA	45.20	46.97	3.54
FAVS	46.97	47.00	0.06
DCA	47.00	50.00	6.00

N21: Yardie Creek – Transect 1

Field Code	Length 1	Length 2	% Cover
DCA	0.00	2.00	4.00
RCK	2.00	3.00	2.00
DCA	3.00	4.80	3.60
FAVS	4.80	4.90	0.20
DCA	4.90	5.20	0.60
S	5.20	5.50	0.60
DCA	5.50	5.80	0.60
ACRD	5.80	6.00	0.40
DCA	6.00	7.40	2.80
RCK	7.40	8.00	1.20
DCA	8.00	8.50	1.00
FAVS	8.50	8.60	0.20
RCK	8.60	9.40	1.60
DCA	9.40	11.00	3.20
RCK	11.00	12.20	2.40
DCA	12.20	14.00	3.60
ACRD	14.00	14.10	0.20
DCA	14.10	16.30	4.40
RCK	16.30	16.60	0.60
DCA	16.60	17.30	1.40
RCK	17.30	18.00	1.40
DCA	18.00	22.00	8.00
FAVS	22.00	22.10	0.20
DCA	22.10	25.55	6.90
ACRD	25.55	25.65	0.20
DCA	25.65	29.65	8.00
ACRD	29.65	29.85	0.40
DCA	29.85	32.30	4.90
MA	32.30	32.40	0.20
DCA	32.40	40.70	16.60
RCK	40.70	41.00	0.60
DCA	41.00	47.30	12.60
ACRD	47.30	47.50	0.40
DCA	47.50	48.35	1.70
FAVS	48.35	48.45	0.20
DCA	48.45	49.90	2.90
FAVS	49.90	50.00	0.20

N21: Yardie Creek – Transect 1

Field Code	Length 1	Length 2	% Cover
DCA	0.00	1.20	2.40
ACRD	1.20	1.22	0.04
DCA	1.22	2.00	1.56
RCK	2.00	3.40	2.80
DCA	3.40	5.40	4.00
ACRD	5.40	5.60	0.40
DCA	5.60	7.90	4.60
MA	7.90	8.00	0.20
DCA	8.00	8.20	0.40
RCK	8.20	9.20	2.00
DCA	9.20	10.20	2.00
RCK	10.20	10.40	0.40
DCA	10.40	10.50	0.20
RCK	10.50	11.30	1.60
DCA	11.30	12.00	1.40
ACRD	12.00	12.10	0.20
DCA	12.10	14.00	3.80
RCK	14.00	14.20	0.40
S	14.20	14.30	0.20
RCK	14.30	15.20	1.80
DCA	15.20	15.40	0.40
ACRE	15.40	15.50	0.20
DCA	15.50	15.90	0.80
ACRD	15.90	16.15	0.50
DCA	16.15	16.35	0.40
ACRD	16.35	16.65	0.60
RCK	16.65	17.50	1.70
DCA	17.50	19.00	3.00
ACRD	19.00	19.15	0.30
DCA	19.15	20.10	1.90
ACRD	20.10	20.20	0.20
DCA	20.20	22.30	4.20
RCK	22.30	22.60	0.60
ACRD	22.60	22.65	0.10
RCK	22.65	25.00	4.70
ACRD	25.00	25.20	0.40
DCA	25.20	30.10	9.80
SC	30.10	30.20	0.20
DCA	30.20	30.30	0.20
RCK	30.30	30.50	0.40
DCA	30.50	31.80	2.60
RCK	31.80	32.00	0.40
ACRD	32.00	32.15	0.30
DCA	32.15	33.60	2.90
MA	33.60	33.90	0.60
ACRD	33.90	34.00	0.20
DCA	34.00	36.70	5.40
ACRD	36.70	36.80	0.20
DCA	36.80	38.20	2.80
FUNMR	38.20	38.30	0.20
DCA	38.30	40.70	4.80
ACRS	40.70	40.80	0.20
DCA	40.80	49.75	17.90
MA	49.75	49.95	0.40
ACRD	49.95	50.00	0.10

N21: Yardie Creek – Transect 3

Field Code	Length 1	Length 2	% Cover
DCA	0.00	0.30	0.60
RCK	0.30	1.00	1.40
ACRD	1.00	1.15	0.30
S	1.15	1.30	0.30
DCA	1.30	3.80	5.00
ACRD	3.80	3.82	0.04
RCK	3.82	4.00	0.36
ACRD	4.00	4.10	0.20
RCK	4.10	5.40	2.60
DCA	5.40	7.10	3.40
FAVM	7.10	7.20	0.20
RCK	7.20	7.70	1.00
DCA	7.70	8.20	1.00
FAVM	8.20	8.30	0.20
DCA	8.30	11.30	6.00
ACRE	11.30	11.32	0.04
DCA	11.32	11.70	0.76
ACRD	11.70	11.75	0.10
DCA	11.75	15.20	6.90
ACRD	15.20	15.30	0.20
DCA	15.30	15.40	0.20
ACRE	15.40	15.50	0.20
DCA	15.50	18.85	6.70
ACRD	18.85	18.90	0.10
DCA	18.90	21.20	4.60
FAVM	21.20	21.25	0.10
DCA	21.25	28.10	13.70
MA	28.10	28.30	0.40
ACRD	28.30	28.50	0.40
DCA	28.50	29.60	2.20
ACRD	29.60	29.65	0.10
DCA	29.65	30.30	1.30
AA	30.30	30.50	0.40
DCA	30.50	34.00	7.00
AA	34.00	34.30	0.60
ACRD	34.30	34.40	0.20
DCA	34.40	35.30	1.80
FAVM	35.30	35.40	0.20
DCA	35.40	36.40	2.00
FAVM	36.40	36.42	0.04
DCA	36.42	37.90	2.96
ACRD	37.90	38.00	0.20
DCA	38.00	39.10	2.20
ACRD	39.10	39.25	0.30
DCA	39.25	39.80	1.10
DC2	39.80	39.82	0.04
DCA	39.82	40.00	0.36
ACRT	40.00	40.10	0.20
DCA	40.10	42.85	5.50
ACRD	42.85	42.95	0.20
DCA	42.95	45.85	5.80
MA	45.85	45.95	0.20
ACRD	45.95	46.00	0.10
DCA	46.00	50.00	8.00

N9: Bunderra – Transect 1

Field Code	Length 1	Length 2	% Cover
DCA	0.00	1.20	2.40
ACRD	1.20	1.50	0.60
MA	1.50	1.60	0.20
ACRD	1.60	1.90	0.60
RCK	1.90	2.50	1.20
DCA	2.50	2.90	0.80
ACRD	2.90	3.00	0.20
DCA	3.00	4.00	2.00
ACRD	4.00	4.20	0.40
DCA	4.20	4.30	0.20
MA	4.30	4.50	0.40
DCA	4.50	4.70	0.40
DCA	4.70	5.20	1.00
ACRT	5.20	5.40	0.40
S	5.40	5.50	0.20
ACRD	5.50	5.80	0.60
DCA	5.80	6.30	1.00
S	6.30	6.80	1.00
DCA	6.80	8.00	2.40
DCA	8.00	8.60	1.20
S	8.60	8.80	0.40
DCA	8.80	9.80	2.00
S	9.80	10.00	0.40
RCK	10.00	10.10	0.20
S	10.10	11.40	2.60
ACRD	11.40	11.60	0.40
ACRD	11.60	11.70	0.20
DCA	11.70	12.00	0.60
SC	12.00	12.10	0.20
S	12.10	12.20	0.20
SC	12.20	12.90	1.40
MA	12.90	13.00	0.20
S	13.00	13.30	0.60
FAVM	13.30	13.40	0.20
DCA	13.40	13.70	0.60
S	13.70	14.00	0.60
DCA	14.00	14.30	0.60
ACRD	14.30	14.40	0.20
DCA	14.40	14.80	0.80
ACRD	14.80	14.90	0.20
DCA	14.90	15.20	0.60
FAVM	15.20	15.30	0.20
S	15.30	15.40	0.20
DCA	15.40	16.10	1.40
S	16.10	16.30	0.40
DCA	16.30	16.70	0.80
ACRD	16.70	16.90	0.40
DCA	16.90	17.10	0.40
FAVM	17.10	17.30	0.40
RCK	17.30	17.60	0.60
S	17.60	17.80	0.40
DCA	17.80	18.70	1.80
SC	18.70	22.50	7.60
S	22.50	22.60	0.20
DCA	22.60	22.80	0.40
S	22.80	23.20	0.80
SC	23.20	23.60	0.80
S	23.60	24.00	0.80
DCA	24.00	24.40	0.80
R	24.40	25.30	1.80
ACRD	25.30	25.40	0.20
DCA	25.40	25.90	1.00
S	25.90	26.70	1.60
ACRT	26.70	26.80	0.20
DCA	26.80	27.20	0.80
ACRT	27.20	27.40	0.40
MA	27.40	27.60	0.40
ACRD	27.60	27.70	0.20
MA	27.70	28.00	0.60
ACRD	28.00	28.40	0.80
DCA	28.40	29.00	1.20
ACRD	29.00	29.20	0.40
S	29.20	29.60	0.80
DCA	29.60	29.80	0.40
ACRT	29.80	30.00	0.40
DCA	30.00	30.20	0.40
ACRD	30.20	30.30	0.20
DCA	30.30	30.60	0.60
ACRD	30.60	30.70	0.20
DCA	30.70	31.10	0.80
S	31.10	31.30	0.40
DCA	31.30	31.80	1.00
ACRT	31.80	32.00	0.40
DCA	32.00	32.30	0.60
ACRT	32.30	32.40	0.20
S	32.40	32.80	0.80
DCA	32.80	32.90	0.20
S	32.90	33.30	0.80
DCA	33.30	33.50	0.40
ACRD	33.50	33.60	0.20
DCA	33.60	34.00	0.80
ACRD	34.00	34.20	0.40
S	34.20	34.60	0.80
ACRD	34.60	34.70	0.20
DCA	34.70	35.40	1.40
ACRD	35.40	35.45	0.10
MA	35.45	35.60	0.30
ACRT	35.60	35.80	0.40
DCA	35.80	36.20	0.80
ACRD	36.20	36.30	0.20
DCA	36.30	36.60	0.60
ACRD	36.60	36.80	0.40
DCA	36.80	37.00	0.40
ACRD	37.00	37.20	0.40
S	37.20	37.50	0.60
FAVM	37.50	37.60	0.20
SC	37.60	38.00	0.80
DCA	38.00	38.70	1.40
S	38.70	39.00	0.60
DCA	39.00	39.30	0.60
S	39.30	39.40	0.20
ACRT	39.40	39.90	1.00
DCA	39.90	40.80	1.80
ACRD	40.80	41.00	0.40

Field Code	Length 1	Length 2	% Cover
DCA	41.00	41.10	0.20
S	41.10	41.35	0.50
ACRD	41.35	41.50	0.30
S	41.50	41.75	0.50
ACRT	41.75	41.90	0.30
DCA	41.90	42.10	0.40
MA	42.10	42.20	0.20
ACRD	42.20	42.30	0.20
MA	42.30	42.70	0.80
S	42.70	43.00	0.60
DCA	43.00	44.10	2.20
S	44.10	44.20	0.20
SC	44.20	44.30	0.20
DCA	44.30	44.40	0.20
ACRD	44.40	44.70	0.60
S	44.70	45.10	0.80
R	45.10	45.20	0.20
ACRD	45.20	45.30	0.20
S	45.30	45.90	1.20
DCA	45.90	46.00	0.20
S	46.00	46.10	0.20
DCA	46.10	46.60	1.00
SC	46.60	46.70	0.20
DCA	46.70	46.90	0.40
R	46.90	47.40	1.00
ACRD	47.40	48.00	1.20
SC	48.00	48.30	0.60
DCA	48.30	48.70	0.80
S	48.70	48.95	0.50
ACRD	48.95	49.00	0.10
DCA	49.00	49.30	0.60
S	49.30	50.00	1.40

N9: Bunderra – Transect 2

Field Code	Length 1	Length 2	% Cover
DCA	0.00	0.50	1.00
ACRD	0.50	0.60	0.20
DCA	0.60	1.30	1.40
ACRT	1.30	1.70	0.80
DCA	1.70	2.00	0.60
ACRT	2.00	2.30	0.60
DCA	2.30	2.70	0.80
S	2.70	2.80	0.20
SC	2.80	3.10	0.60
DCA	3.10	3.40	0.60
S	3.40	3.60	0.40
RCK	3.60	3.90	0.60
ACRD	3.90	4.00	0.20
DCA	4.00	4.25	0.50
ACRD	4.25	4.30	0.10
DCA	4.30	4.50	0.40
ACRD	4.50	4.70	0.40
S	4.70	4.90	0.40
ACRD	4.90	5.30	0.80
DCA	5.30	6.00	1.40
S	6.00	6.10	0.20
MA	6.10	6.60	1.00
S	6.60	6.70	0.20
DCA	6.70	6.90	0.40
ACRT	6.90	7.20	0.60
DCA	7.20	7.50	0.60
S	7.50	7.60	0.20
DCA	7.60	7.90	0.60
ACRD	7.90	8.20	0.60
DCA	8.20	8.40	0.40
ACRD	8.40	8.50	0.20
SP	8.50	8.60	0.20
S	8.60	9.40	1.60
DCA	9.40	9.50	0.20
ACRD	9.50	9.70	0.40
DCA	9.70	10.00	0.60
S	10.00	10.30	0.60
DCA	10.30	10.40	0.20
S	10.40	10.60	0.40
DCA	10.60	10.70	0.20
S	10.70	12.60	3.80
MA	12.60	12.70	0.20
RCK	12.70	12.80	0.20
DCA	12.80	14.20	2.80
FAVS	14.20	14.30	0.20
ACRD	14.30	14.50	0.40
DCA	14.50	15.80	2.60
ACRD	15.80	16.00	0.40
DCA	16.00	16.60	1.20
ACRD	16.60	16.70	0.20
MA	16.70	16.80	0.20
S	16.80	17.40	1.20
ACRD	17.40	17.50	0.20
DCA	17.50	17.60	0.20
S	17.60	17.70	0.20
DCA	17.70	18.20	1.00
S	18.20	18.50	0.60
ACRD	18.50	18.70	0.40
S	18.70	20.00	2.60
DCA	20.00	23.60	7.20
S	23.60	23.70	0.20
MA	23.70	23.90	0.40
ACRD	23.90	24.00	0.20
DCA	24.00	24.20	0.40
ACRD	24.20	26.40	4.40
MA	26.40	28.00	3.20
ACRT	28.00	28.30	0.60
DCA	28.30	29.15	1.70
ACRT	29.15	29.70	1.10
DCA	29.70	30.00	0.60
ACRD	30.00	30.40	0.80
DCA	30.40	31.40	2.00
ACRD	31.40	31.50	0.20
DCA	31.50	32.00	1.00
FAVM	32.00	32.10	0.20
DCA	32.10	34.10	4.00
ACRD	34.10	34.20	0.20
DCA	34.20	35.75	3.10
ACRD	35.75	35.90	0.30
DCA	35.90	38.30	4.80
FAVM	38.30	38.40	0.20
DCA	38.40	38.60	0.40
ACRD	38.60	38.80	0.40
DCA	38.80	39.40	1.20
ACRD	39.40	39.50	0.20
DCA	39.50	39.60	0.20
S	39.60	40.00	0.80
DCA	40.00	41.20	2.40
ACRD	41.20	41.55	0.70
DCA	41.55	42.40	1.70
ACRT	42.40	42.42	0.04
DCA	42.42	42.80	0.76
SC	42.80	42.90	0.20
ACRD	42.90	43.00	0.20
DCA	43.00	44.10	2.20
ACRD	44.10	44.30	0.40
DCA	44.30	46.00	3.40
S	46.00	46.40	0.80
MA	46.40	46.50	0.20
ACRD	46.50	46.90	0.80
MA	46.90	47.30	0.80
ACRD	47.30	47.40	0.20
FAVM	47.40	47.50	0.20
S	47.50	47.90	0.80
ACRD	47.90	48.00	0.20
DCA	48.00	48.60	1.20
SC	48.60	48.70	0.20
ACRT	48.70	49.30	1.20
ACRD	49.30	49.60	0.60
S	49.60	49.70	0.20
FAVS	49.70	49.80	0.20
S	49.80	50.00	0.40

N9: Bunderra – Transect 3

Field Code	Length 1	Length 2	% Cover
S	0.00	0.20	0.40
MA	0.20	0.25	0.10
S	0.25	1.60	2.70
ACRT	1.60	2.00	0.80
RCK	2.00	2.30	0.60
S	2.30	2.40	0.20
ACRD	2.40	2.80	0.80
DCA	2.80	4.10	2.60
ACRD	4.10	4.30	0.40
DCA	4.30	5.20	1.80
FAVM	5.20	5.30	0.20
DCA	5.30	5.65	0.70
ACRD	5.65	6.00	0.70
DCA	6.00	6.30	0.60
S	6.30	6.50	0.40
DCA	6.50	6.60	0.20
S	6.60	7.00	0.80
ACRD	7.00	7.10	0.20
DCA	7.10	7.20	0.20
ACRD	7.20	7.30	0.20
DCA	7.30	7.80	1.00
ACRE	7.80	7.90	0.20
ACRD	7.90	8.00	0.20
ACRT	8.00	8.50	1.00
S	8.50	9.10	1.20
ACRT	9.10	9.20	0.20
DCA	9.20	9.90	1.40
S	9.90	10.40	1.00
R	10.40	11.00	1.20
S	11.00	11.50	1.00
R	11.50	12.20	1.40
ACRD	12.20	12.30	0.20
S	12.30	12.80	1.00
DCA	12.80	13.60	1.60
HOL	13.60	13.70	0.20
ACRD	13.70	14.30	1.20
S	14.30	14.40	0.20
DCA	14.40	14.80	0.80
S	14.80	14.90	0.20
ACRD	14.90	15.10	0.40
DCA	15.10	15.95	1.70
ACRD	15.95	16.05	0.20
DCA	16.05	16.80	1.50
SC	16.80	16.90	0.20
S	16.90	17.00	0.20
SC	17.00	17.80	1.60
RCK	17.80	18.00	0.40
S	18.00	18.30	0.60
SC	18.30	19.10	1.60
S	19.10	19.80	1.40
DCA	19.80	20.30	1.00
ACRD	20.30	20.40	0.20
DCA	20.40	21.00	1.20
S	21.00	21.20	0.40
ACRD	21.20	21.60	0.80
S	21.60	22.00	0.80
ACRD	22.00	22.50	1.00
S	22.50	23.20	1.40
ACRD	23.20	23.30	0.20
S	23.30	23.50	0.40
DCA	23.50	23.80	0.60
ACRD	23.80	23.95	0.30
DCA	23.95	24.70	1.50
ACRD	24.70	24.80	0.20
R	24.80	25.20	0.80
DCA	25.20	28.90	7.40
ACRD	28.90	29.10	0.40
DCA	29.10	29.90	1.60
S	29.90	31.20	2.60
R	31.20	32.90	3.40
ACRS	32.90	33.40	1.00
DCA	33.40	34.50	2.20
ACRB	34.50	35.00	1.00
DCA	35.00	36.00	2.00
R	36.00	37.00	2.00
ACRS	37.00	37.10	0.20
S	37.10	37.20	0.20
ACRS	37.20	37.40	0.40
R	37.40	37.60	0.40
ACRD	37.60	37.70	0.20
R	37.70	38.00	0.60
S	38.00	38.40	0.80
R	38.40	39.20	1.60
ACRT	39.20	39.30	0.20
DCA	39.30	39.90	1.20
R	39.90	41.00	2.20
S	41.00	41.30	0.60
R	41.30	42.10	1.60
DCA	42.10	42.40	0.60
R	42.40	45.00	5.20
S	45.00	46.30	2.60
ACRD	46.30	46.50	0.40
DCA	46.50	47.00	1.00
R	47.00	47.50	1.00
ACRD	47.50	48.10	1.20
ACRS	48.10	48.20	0.20
ACRD	48.20	48.60	0.80
S	48.60	49.00	0.80
ACRD	49.00	49.20	0.40
ACRD	49.20	49.70	1.00
R	49.70	50.00	0.60

N10: Lefroy Bay – Transect 1

Field Code	Length 1	Length 2	% Cover
S	0.00	0.40	0.80
DCA	0.40	1.00	1.20
R	1.00	1.70	1.40
ACRE	1.70	1.90	0.40
S	1.90	1.95	0.10
FAVS	1.95	2.00	0.10
DCA	2.00	2.10	0.20
S	2.10	2.30	0.40
DCA	2.30	2.90	1.20
ACRE	2.90	3.00	0.20
DCA	3.00	3.70	1.40
MA	3.70	3.80	0.20
S	3.80	4.00	0.40
DCA	4.00	5.20	2.40
FAVM	5.20	5.40	0.40
DCA	5.40	6.10	1.40
FAVM	6.10	6.20	0.20
DCA	6.20	6.70	1.00
FAVS	6.70	6.80	0.20
SC	6.80	7.00	0.40
DCA	7.00	7.20	0.40
SC	7.20	7.40	0.40
DCA	7.40	7.85	0.90
FAVM	7.85	8.05	0.40
DCA	8.05	8.30	0.50
ACRD	8.30	8.40	0.20
DCA	8.40	8.50	0.20
S	8.50	9.20	1.40
DCA	9.20	9.40	0.40
FAVM	9.40	9.45	0.10
DCA	9.45	10.20	1.50
S	10.20	10.70	1.00
SC	10.70	10.80	0.20
DCA	10.80	11.00	0.40
ACRT	11.00	11.10	0.20
DCA	11.10	11.30	0.40
DCA	11.30	12.00	1.40
S	12.00	12.10	0.20
FAVM	12.10	12.20	0.20
DCA	12.20	12.40	0.40
FAVM	12.40	12.42	0.04
DCA	12.42	13.50	2.16
ACRD	13.50	13.60	0.20
S	13.60	14.00	0.80
R	14.00	14.10	0.20
S	14.10	14.50	0.80
DCA	14.50	14.70	0.40
S	14.70	15.00	0.60
DCA	15.00	16.10	2.20
MA	16.10	16.20	0.20
S	16.20	16.40	0.40
DCA	16.40	17.00	1.20
SC	17.00	17.10	0.20
S	17.10	18.20	2.20
DCA	18.20	18.75	1.10
SC	18.75	18.85	0.20
DCA	18.85	18.90	0.10
SC	18.90	19.00	0.20
S	19.00	19.20	0.40
DCA	19.20	20.00	1.60
FAVS	20.00	20.10	0.20
DCA	20.10	21.60	3.00
SC	21.60	21.70	0.20
DCA	21.70	21.90	0.40
FAVS	21.90	22.00	0.20
DCA	22.00	23.50	3.00
S	23.50	23.70	0.40
FAVM	23.70	23.75	0.10
S	23.75	23.90	0.30
ACRD	23.90	24.00	0.20
DCA	24.00	24.30	0.60
S	24.30	25.20	1.80
DCA	25.20	26.10	1.80
ACRS	26.10	26.40	0.60
DCA	26.40	27.00	1.20
FAVM	27.00	27.20	0.40
DCA	27.20	28.00	1.60
FAVM	28.00	28.05	0.10
DCA	28.05	28.25	0.40
FAVM	28.25	28.35	0.20
DCA	28.35	28.80	0.90
MA	28.80	28.90	0.20
S	28.90	29.30	0.80
MA	29.30	29.70	0.80
ACRD	29.70	29.80	0.20
FAVM	29.80	29.90	0.20
DCA	29.90	30.10	0.40
SC	30.10	30.15	0.10
DCA	30.15	30.30	0.30
SC	30.30	30.40	0.20
MA	30.40	30.50	0.20
SC	30.50	30.70	0.40
MA	30.70	30.80	0.20
ACRD	30.80	30.90	0.20
SC	30.90	31.15	0.50
MA	31.15	31.20	0.10
ACRT	31.20	31.40	0.40
MA	31.40	31.60	0.40
S	31.60	32.30	1.40
MA	32.30	32.60	0.60
FAVS	32.60	32.80	0.40
DCA	32.80	33.70	1.80
ACRT	33.70	34.00	0.60
FAVS	34.00	34.20	0.40
ACRT	34.20	34.90	1.40
DCA	34.90	35.10	0.40
ACRT	35.10	35.20	0.20
S	35.20	35.30	0.20
FAVS	35.30	35.50	0.40
RCK	35.50	35.70	0.40
S	35.70	36.50	1.60
DCA	36.50	36.90	0.80
FAVM	36.90	37.00	0.20
DCA	37.00	38.10	2.20

Field Code	Length 1	Length 2	% Cover
S	38.10	38.20	0.20
DCA	38.20	38.70	1.00
S	38.70	38.80	0.20
DCA	38.80	39.00	0.40
DCA	39.00	39.20	0.40
MA	39.20	39.40	0.40
ACRT	39.40	39.80	0.80
MA	39.80	40.00	0.40
DCA	40.00	40.20	0.40
S	40.20	40.30	0.20
DCA	40.30	41.00	1.40
S	41.00	41.30	0.60
HOL	41.30	41.35	0.10
DCA	41.35	41.80	0.90
S	41.80	42.60	1.60
DCA	42.60	43.70	2.20
DCA	43.70	44.20	1.00
S	44.20	44.90	1.40
RCK	44.90	45.00	0.20
MA	45.00	45.10	0.20
DCA	45.10	45.60	1.00
DCA	45.60	49.80	8.40
S	49.80	50.00	0.40

N10: Lefroy Bay – Transect 2

Field Code	Length 1	Length 2	% Cover
DCA	0.00	0.10	0.20
ACRD	0.10	0.20	0.20
DCA	0.20	0.50	0.60
ACRT	0.50	0.90	0.80
DCA	0.90	1.20	0.60
ACRT	1.20	1.30	0.20
DCA	1.30	2.70	2.80
ACRE	2.70	2.80	0.20
S	2.80	3.10	0.60
MA	3.10	3.30	0.40
DCA	3.30	3.40	0.20
FAVM	3.40	3.50	0.20
S	3.50	3.60	0.20
FAVM	3.60	3.70	0.20
DCA	3.70	5.70	4.00
ACRD	5.70	6.00	0.60
DCA	6.00	6.40	0.80
SC	6.40	6.50	0.20
MA	6.50	6.60	0.20
ACRD	6.60	6.70	0.20
DCA	6.70	6.90	0.40
DCA	6.90	9.80	5.80
S	9.80	9.90	0.20
ACRD	9.90	10.05	0.30
DCA	10.05	10.15	0.20
ACRD	10.15	10.25	0.20
DCA	10.25	12.20	3.90
FAVM	12.20	12.35	0.30
ACRE	12.35	12.40	0.10
DCA	12.40	13.20	1.60
FAVM	13.20	13.40	0.40
S	13.40	14.00	1.20
MA	14.00	14.10	0.20
DCA	14.10	14.30	0.40
FAVM	14.30	14.40	0.20
DCA	14.40	14.75	0.70
SC	14.75	14.90	0.30
RCK	14.90	15.50	1.20
DCA	15.50	17.30	3.60
SC	17.30	17.40	0.20
ACRD	17.40	17.50	0.20
DCA	17.50	19.90	4.80
FAVS	19.90	20.00	0.20
DCA	20.00	20.50	1.00
FAVS	20.50	20.60	0.20
DCA	20.60	20.80	0.40
ACRE	20.80	21.00	0.40
DCA	21.00	21.20	0.40
S	21.20	21.40	0.40
DCA	21.40	21.80	0.80
MA	21.80	21.90	0.20
S	21.90	22.00	0.20
MA	22.00	23.10	2.20
S	23.10	23.70	1.20
DCA	23.70	25.20	3.00
ACRT	25.20	25.50	0.60
DCA	25.50	25.70	0.40
FAVM	25.70	25.75	0.10
S	25.75	26.40	1.30
DCA	26.40	26.80	0.80
RCK	26.80	27.20	0.80
FAVM	27.20	27.40	0.40
SC	27.40	35.00	15.20
S	35.00	37.00	4.00
MA	37.00	39.00	4.00
S	39.00	39.10	0.20
FAVM	39.10	39.20	0.20
S	39.20	40.00	1.60
MA	40.00	40.10	0.20
DCA	40.10	40.60	1.00
FAVM	40.60	40.70	0.20
S	40.70	41.20	1.00
DCA	41.20	43.10	3.80
FAVM	43.10	43.20	0.20
DCA	43.20	43.60	0.80
S	43.60	44.20	1.20
DCA	44.20	44.70	1.00
S	44.70	44.80	0.20
AA	44.80	45.00	0.40
S	45.00	45.80	1.60
DCA	45.80	45.90	0.20
ACRD	45.90	46.10	0.40
S	46.10	46.40	0.60
SC	46.40	46.50	0.20
SC	46.50	46.70	0.40
DCA	46.70	47.40	1.40
ACRD	47.40	47.70	0.60
DCA	47.70	49.70	4.00
S	49.70	49.90	0.40
ACRD	49.90	50.00	0.20

N10: Lefroy Bay – Transect 3

Field Code	Length 1	Length 2	% Cover
DCA	0.00	0.30	0.60
S	0.30	0.50	0.40
DCA	0.50	2.75	4.50
FAVM	2.75	2.80	0.10
DCA	2.80	4.40	3.20
S	4.40	4.50	0.20
DCA	4.50	5.40	1.80
SC	5.40	5.50	0.20
DCA	5.50	5.70	0.40
FAVM	5.70	5.80	0.20
MA	5.80	6.10	0.60
DCA	6.10	6.50	0.80
S	6.50	7.60	2.20
DCA	7.60	9.50	3.80
MA	9.50	9.60	0.20
S	9.60	10.00	0.80
ACRT	10.00	10.05	0.10
S	10.05	11.80	3.50
FAVM	11.80	12.00	0.40
DCA	12.00	12.10	0.20
SC	12.10	12.15	0.10
DCA	12.15	12.45	0.60
ACRD	12.45	12.55	0.20
DCA	12.55	12.70	0.30
ACRD	12.70	12.90	0.40
SC	12.90	13.10	0.40
DCA	13.10	13.50	0.80
SC	13.50	13.55	0.10
DCA	13.55	15.30	3.50
ACRD	15.30	15.40	0.20
DCA	15.40	16.00	1.20
S	16.00	16.10	0.20
MA	16.10	16.30	0.40
S	16.30	16.40	0.20
DCA	16.40	16.90	1.00
FAVM	16.90	17.00	0.20
FAVM	17.00	17.10	0.20
S	17.10	17.30	0.40
ACRD	17.30	17.35	0.10
DCA	17.35	17.70	0.70
SC	17.70	18.00	0.60
S	18.00	18.10	0.20
SC	18.10	18.20	0.20
DCA	18.20	19.40	2.40
S	19.40	20.00	1.20
DCA	20.00	20.10	0.20
S	20.10	20.20	0.20
DCA	20.20	21.00	1.60
MA	21.00	21.30	0.60
FAVM	21.30	21.50	0.40
DCA	21.50	21.70	0.40
FAVM	21.70	21.90	0.40
DCA	21.90	22.50	1.20
FAVE	22.50	22.60	0.20
R	22.60	23.50	1.80
DCA	23.50	24.40	1.80
FAVM	24.40	24.50	0.20
DCA	24.50	24.70	0.40
FAVM	24.70	24.80	0.20
DCA	24.80	27.80	6.00
SC	27.80	27.85	0.10
DCA	27.85	28.20	0.70
MA	28.20	28.40	0.40
DCA	28.40	28.50	0.20
ACRT	28.50	28.55	0.10
DCA	28.55	29.00	0.90
S	29.00	29.70	1.40
MA	29.70	30.00	0.60
DCA	30.00	31.80	3.60
ACRD	31.80	31.90	0.20
S	31.90	32.20	0.60
ACRD	32.20	32.40	0.40
DCA	32.40	32.75	0.70
ACRD	32.75	32.80	0.10
MA	32.80	32.90	0.20
S	32.90	33.00	0.20
ACRD	33.00	33.10	0.20
DCA	33.10	33.20	0.20
S	33.20	33.80	1.20
SC	33.80	34.00	0.40
DCA	34.00	34.20	0.40
S	34.20	34.40	0.40
MA	34.40	34.50	0.20
S	34.50	34.80	0.60
S	34.80	35.20	0.80
MV	35.20	35.30	0.20
ACRE	35.30	35.40	0.20
DCA	35.40	36.00	1.20
ACRD	36.00	36.10	0.20
DCA	36.10	36.20	0.20
DCA	36.20	36.40	0.40
S	36.40	36.60	0.40
DCA	36.60	38.40	3.60
S	38.40	38.60	0.40
FAVE	38.60	38.70	0.20
DCA	38.70	40.10	2.80
MA	40.10	40.30	0.40
SC	40.30	41.00	1.40
DCA	41.00	42.30	2.60
S	42.30	43.60	2.60
DCA	43.60	43.70	0.20
S	43.70	43.90	0.40
MA	43.90	44.00	0.20
S	44.00	44.10	0.20
ACRD	44.10	44.30	0.40
R	44.30	44.50	0.40
SC	44.50	44.55	0.10
S	44.55	45.20	1.30
SC	45.20	45.30	0.20
S	45.30	45.40	0.20
MA	45.40	45.50	0.20
S	45.50	45.60	0.20
MA	45.60	46.00	0.80
DCA	46.00	47.00	2.00

Field Code	Length 1	Length 2	% Cover
HOL	47.00	47.10	0.20
S	47.10	47.40	0.60
ACRD	47.40	47.60	0.40
S	47.60	47.80	0.40
MA	47.80	47.90	0.20
S	47.90	48.00	0.20
DCA	48.00	49.30	2.60
ACRD	49.30	49.40	0.20
DCA	49.40	50.00	1.20

N25: Pt. Billy – Transect 1

Field Code	Length 1	Length 2	% Cover
DCA	0.00	1.20	2.40
BC	1.20	1.25	0.10
DCA	1.25	1.40	0.30
ACRD	1.40	1.50	0.20
DCA	1.50	2.40	1.80
ACRD	2.40	2.45	0.10
DCA	2.45	3.70	2.50
ACRD	3.70	3.80	0.20
DCA	3.80	4.30	1.00
ACRD	4.30	4.50	0.40
DCA	4.50	6.00	3.00
ACRD	6.00	6.20	0.40
DCA	6.20	6.80	1.20
FAVM	6.80	7.00	0.40
DCA	7.00	9.00	4.00
ACRS	9.00	9.10	0.20
DCA	9.10	10.10	2.00
ACRD	10.10	10.25	0.30
FAVM	10.25	10.30	0.10
DCA	10.30	10.50	0.40
FAVM	10.50	10.60	0.20
DCA	10.60	11.10	1.00
ACRD	11.10	11.35	0.50
DCA	11.35	11.50	0.30
ACRD	11.50	12.00	1.00
DCA	12.00	12.20	0.40
ACRD	12.20	12.50	0.60
DCA	12.50	13.80	2.60
ACRD	13.80	14.00	0.40
DCA	14.00	14.10	0.20
ACRE	14.10	14.15	0.10
DCA	14.15	15.00	1.70
ACRD	15.00	15.20	0.40
DCA	15.20	15.30	0.20
ACRD	15.30	15.70	0.80
DCA	15.70	16.80	2.20
ACRD	16.80	17.00	0.40
DCA	17.00	17.30	0.60
ACRT	17.30	18.30	2.00
DCA	18.30	19.70	2.80
FAVE	19.70	19.90	0.40
DCA	19.90	20.40	1.00
FAVS	20.40	20.80	0.80
DCA	20.80	20.90	0.20
ACRD	20.90	21.00	0.20
DCA	21.00	21.40	0.80
ACRT	21.40	22.10	1.40
DC2	22.10	22.30	0.40
DCA	22.30	22.60	0.60
ACRT	22.60	22.70	0.20
DCA	22.70	23.20	1.00
ACRD	23.20	23.50	0.60
DCA	23.50	24.20	1.40
ACRD	24.20	24.30	0.20
DCA	24.30	24.40	0.20
ACRT	24.40	24.60	0.40
DCA	24.60	24.90	0.60
ACRT	24.90	25.10	0.40
DCA	25.10	25.70	1.20
ACRD	25.70	25.80	0.20
FAVE	25.80	26.00	0.40
DCA	26.00	29.20	6.40
ACRD	29.20	29.30	0.20
DCA	29.30	30.20	1.80
ACRD	30.20	30.30	0.20
ACRD	30.30	30.40	0.20
DCA	30.40	31.00	1.20
DCA	31.00	31.20	0.40
ACRD	31.20	31.35	0.30
DCA	31.35	31.80	0.90
FAVM	31.80	32.10	0.60
ACRD	32.10	32.40	0.60
DCA	32.40	32.60	0.40
ACRT	32.60	33.00	0.80
DCA	33.00	33.60	1.20
ACRD	33.60	33.90	0.60
DCA	33.90	36.20	4.60
ACRS	36.20	36.30	0.20
DCA	36.30	36.90	1.20
ACRD	36.90	37.45	1.10
DCA	37.45	37.60	0.30
ACRD	37.60	37.65	0.10
DCA	37.65	38.30	1.30
ACRD	38.30	38.60	0.60
DCA	38.60	39.30	1.40
FAVM	39.30	39.50	0.40
DCA	39.50	40.00	1.00
ACRD	40.00	40.15	0.30
DCA	40.15	40.65	1.00
ACRD	40.65	40.80	0.30
DCA	40.80	41.20	0.80
ACRD	41.20	41.25	0.10
DCA	41.25	43.30	4.10
MV	43.30	43.50	0.40
DCA	43.50	49.40	11.80
ACRD	49.40	49.60	0.40
FAVS	49.60	49.70	0.20
ACRD	49.70	49.75	0.10
DCA	49.75	49.90	0.30
ACRD	49.90	50.00	0.20

N25: Pt. Billy – Transect 2

Field Code	Length 1	Length 2	% Cover
DCA	0.00	2.50	5.00
ACRD	2.50	2.65	0.30
DCA	2.65	5.70	6.10
ACRD	5.70	5.75	0.10
DCA	5.75	6.70	1.90
ACRD	6.70	6.80	0.20
DCA	6.80	8.00	2.40
ACRD	8.00	8.10	0.20
DCA	8.10	8.30	0.40
ACRD	8.30	8.50	0.40
DCA	8.50	8.90	0.80
ACRD	8.90	9.20	0.60
DCA	9.20	9.80	1.20
ACRD	9.80	9.90	0.20
DCA	9.90	13.50	7.20
ACRT	13.50	13.70	0.40
DCA	13.70	14.10	0.80
ACRT	14.10	14.70	1.20
DCA	14.70	15.70	2.00
ACRD	15.70	15.80	0.20
DCA	15.80	17.40	3.20
ACRT	17.40	17.60	0.40
DCA	17.60	19.50	3.80
ACRD	19.50	19.70	0.40
DCA	19.70	19.80	0.20
ACRD	19.80	19.85	0.10
DCA	19.85	20.30	0.90
ACRD	20.30	20.45	0.30
DCA	20.45	22.40	3.90
ACRT	22.40	22.60	0.40
DCA	22.60	23.00	0.80
ACRD	23.00	23.10	0.20
DCA	23.10	24.50	2.80
ACRD	24.50	24.70	0.40
DCA	24.70	26.00	2.60
ACRT	26.00	26.50	1.00
DCA	26.50	26.95	0.90
ACRD	26.95	27.15	0.40
DCA	27.15	30.00	5.70
ACRD	30.00	30.10	0.20
DCA	30.10	30.60	1.00
ACRD	30.60	30.70	0.20
DCA	30.70	31.30	1.20
ACRD	31.30	31.50	0.40
DCA	31.50	33.20	3.40
ACRD	33.20	33.30	0.20
DCA	33.30	33.90	1.20
ACRD	33.90	34.00	0.20
DCA	34.00	34.70	1.40
ACRD	34.70	34.90	0.40
DCA	34.90	35.20	0.60
ACRT	35.20	35.30	0.20
R	35.30	36.00	1.40
DCA	36.00	36.20	0.40
R	36.20	39.70	7.00
DCA	39.70	40.20	1.00
DCA	40.20	45.00	9.60
R	45.00	45.90	1.80
ACRD	45.90	46.00	0.20
R	46.00	48.00	4.00
ACRD	48.00	48.10	0.20
DCA	48.10	49.50	2.80
ACRD	49.50	49.70	0.40
DCA	49.70	50.00	0.60

N25: Pt. Billy – Transect 3

Field Code	Length 1	Length 2	% Cover
DCA	0.00	1.20	2.40
ACRD	1.20	1.30	0.20
DCA	1.30	4.10	5.60
ACRD	4.10	4.50	0.80
DCA	4.50	7.50	6.00
RCK	7.50	9.50	4.00
R	9.50	10.00	1.00
R	10.00	10.80	1.60
ACRD	10.80	11.00	0.40
RCK	11.00	12.20	2.40
DCA	12.20	12.70	1.00
RCK	12.70	13.10	0.80
DCA	13.10	13.20	0.20
RCK	13.20	14.00	1.60
DCA	14.00	17.90	7.80
RCK	17.90	19.90	4.00
ACRD	19.90	20.00	0.20
DCA	20.00	21.00	2.00
RCK	21.00	21.30	0.60
DCA	21.30	23.00	3.40
RCK	23.00	24.00	2.00
DCA	24.00	25.10	2.20
ACRT	25.10	25.20	0.20
RCK	25.20	28.20	6.00
DCA	28.20	31.20	6.00
DCA	31.20	33.20	4.00
RCK	33.20	34.00	1.60
DCA	34.00	37.50	7.00
R	37.50	38.00	1.00
DCA	38.00	39.10	2.20
ACRD	39.10	39.30	0.40
RCK	39.30	40.20	1.80
DCA	40.20	41.90	3.40
ACRE	41.90	42.00	0.20
DCA	42.00	47.50	11.00
RCK	47.50	49.50	4.00
R	49.50	50.00	1.00

N11: Pt. Cloates – Transect 1

Field Code	Length 1	Length 2	% Cover
R	0.00	0.30	0.60
ACRD	0.30	0.40	0.20
MA	0.40	1.25	1.70
DCA	1.25	1.60	0.70
DC2	1.60	1.63	0.06
DC1	1.63	1.65	0.04
ACRT	1.65	1.85	0.40
S	1.85	2.00	0.30
MA	2.00	2.50	1.00
DCA	2.50	2.90	0.80
MA	2.90	3.30	0.80
S	3.30	3.80	1.00
MA	3.80	4.70	1.80
DCA	4.70	5.30	1.20
MU	5.30	5.40	0.20
DCA	5.40	6.20	1.60
FAVM	6.20	6.30	0.20
AA	6.30	6.50	0.40
S	6.50	6.70	0.40
FAVM	6.70	6.80	0.20
DCA	6.80	7.70	1.80
S	7.70	7.80	0.20
DCA	7.80	8.40	1.20
FAVM	8.40	8.60	0.40
AA	8.60	8.80	0.40
S	8.80	9.40	1.20
DCA	9.40	10.10	1.40
MA	10.10	10.20	0.20
S	10.20	10.70	1.00
MA	10.70	11.20	1.00
RCK	11.20	11.50	0.60
ACRD	11.50	12.10	1.20
DCA	12.10	12.50	0.80
HOL	12.50	12.70	0.40
S	12.70	13.00	0.60
DCA	13.00	16.00	6.00
ACRT	16.00	16.25	0.50
DCA	16.25	16.40	0.30
ACRD	16.40	16.50	0.20
DCA	16.50	16.90	0.80
RCK	16.90	17.00	0.20
S	17.00	17.40	0.80
PORM	17.40	17.60	0.40
S	17.60	17.70	0.20
MU	17.70	17.75	0.10
DCA	17.75	18.70	1.90
ACRT	18.70	18.90	0.40
DCA	18.90	20.10	2.40
S	20.10	20.15	0.10
ACRD	20.15	20.40	0.50
DCA	20.40	21.00	1.20
RCK	21.00	22.10	2.20
MA	22.10	22.60	1.00
DCA	22.60	22.90	0.60
RCK	22.90	23.70	1.60
MA	23.70	24.00	0.60
ACRD	24.00	24.30	0.60
MA	24.30	24.40	0.20
RCK	24.40	25.20	1.60
MA	25.20	25.50	0.60
DCA	25.50	25.70	0.40
ACRD	25.70	25.85	0.30
DCA	25.85	26.00	0.30
MA	26.00	26.20	0.40
ACRD	26.20	26.40	0.40
MA	26.40	26.60	0.40
S	26.60	27.00	0.80
DCA	27.00	27.30	0.60
S	27.30	27.40	0.20
ACRT	27.40	27.70	0.60
RCK	27.70	28.20	1.00
S	28.20	28.60	0.80
ACRD	28.60	28.75	0.30
DCA	28.75	29.00	0.50
SC	29.00	29.20	0.40
DCA	29.20	29.40	0.40
DCA	29.40	29.80	0.80
FAVM	29.80	30.05	0.50
S	30.05	30.40	0.70
ACRD	30.40	30.45	0.10
RCK	30.45	31.00	1.10
S	31.00	31.80	1.60
DCA	31.80	32.00	0.40
S	32.00	32.20	0.40
R	32.20	32.40	0.40
DCA	32.40	32.70	0.60
FAVS	32.70	32.75	0.10
DCA	32.75	33.40	1.30
MUSS	33.40	33.50	0.20
DCA	33.50	33.90	0.80
FAVS	33.90	34.00	0.20
MA	34.00	34.20	0.40
ACRD	34.20	34.30	0.20
DCA	34.30	34.70	0.80
FAVM	34.70	34.80	0.20
DCA	34.80	35.00	0.40
FAVM	35.00	35.15	0.30
S	35.15	35.80	1.30
RCK	35.80	36.10	0.60
MA	36.10	36.20	0.20
FAVM	36.20	36.40	0.40
DCA	36.40	36.50	0.20
ACRD	36.50	36.95	0.90
RCK	36.95	37.50	1.10
FAVS	37.50	37.70	0.40
DCA	37.70	38.10	0.80

N11: Pt. Cloates – Transect 2

Field Code	Length 1	Length 2	% Cover
DCA	0.00	0.10	0.20
ACRD	0.10	0.30	0.40
DCA	0.30	2.10	3.60
ACRD	2.10	2.25	0.30
DCA	2.25	3.30	2.10
RCK	3.30	3.80	1.00
DCA	3.80	4.80	2.00
MA	4.80	5.00	0.40
DCA	5.00	5.10	0.20
ACRD	5.10	5.20	0.20
DCA	5.20	5.70	1.00
FAVM	5.70	5.75	0.10
MA	5.75	6.00	0.50
ACRD	6.00	6.25	0.50
S	6.25	6.40	0.30
RCK	6.40	7.10	1.40
FAVS	7.10	7.20	0.20
ACRD	7.20	7.40	0.40
S	7.40	7.60	0.40
ACRT	7.60	8.00	0.80
S	8.00	8.10	0.20
ACRD	8.10	8.30	0.40
FAVS	8.30	8.50	0.40
MUSS	8.50	8.60	0.20
S	8.60	9.20	1.20
DCA	9.20	9.80	1.20
ACRD	9.80	10.00	0.40
DCA	10.00	10.70	1.40
S	10.70	11.40	1.40
FAVM	11.40	11.60	0.40
S	11.60	12.50	1.80
RCK	12.50	12.70	0.40
DCA	12.70	15.40	5.40
FAVE	15.40	15.50	0.20
DCA	15.50	16.40	1.80
ACRD	16.40	16.70	0.60
DCA	16.70	17.00	0.60
ACRE	17.00	17.50	1.00
DCA	17.50	18.00	1.00
FAVE	18.00	18.10	0.20
DCA	18.10	18.90	1.60
FAVS	18.90	18.95	0.10
MU	18.95	19.00	0.10
DCA	19.00	21.00	4.00
FAVS	21.00	21.10	0.20
DCA	21.10	21.60	1.00
ACRD	21.60	21.70	0.20
DCA	21.70	22.00	0.60
FAVS	22.00	22.10	0.20
DCA	22.10	23.00	1.80
ACRT	23.00	23.35	0.70
RCK	23.35	24.10	1.50
ACRT	24.10	24.30	0.40
MA	24.30	24.40	0.20
ACRD	24.40	24.90	1.00
DCA	24.90	25.30	0.80
FAVM	25.30	25.35	0.10
DCA	25.35	25.90	1.10
FAVM	25.90	26.00	0.20
DCA	26.00	27.70	3.40
ACRD	27.70	27.80	0.20
FAVS	27.80	28.00	0.40
S	28.00	28.90	1.80
DCA	28.90	30.50	3.20
FAVM	30.50	30.60	0.20
DCA	30.60	31.80	2.40
ACRD	31.80	31.90	0.20
DCA	31.90	32.00	0.20
S	32.00	32.20	0.40
ACRD	32.20	32.30	0.20
ACRE	32.30	32.50	0.40
DCA	32.50	33.00	1.00
FAVM	33.00	33.70	1.40
RCK	33.70	36.10	4.80
DCA	36.10	36.20	0.20
ACRD	36.20	36.30	0.20
DCA	36.30	36.70	0.80
ACRD	36.70	36.80	0.20
DCA	36.80	37.40	1.20
FAVM	37.40	37.50	0.20
DCA	37.50	38.00	1.00
ACRD	38.00	38.20	0.40
FAVM	38.20	38.30	0.20
DCA	38.30	38.70	0.80
FAVM	38.70	38.75	0.10
DCA	38.75	40.00	2.50
FAVM	40.00	40.20	0.40
MA	40.20	40.40	0.40
POCS	40.40	40.50	0.20
DCA	40.50	41.00	1.00
RCK	41.00	41.10	0.20
S	41.10	41.75	1.30
FAVE	41.75	42.00	0.50
RCK	42.00	44.50	5.00
S	44.50	45.00	1.00
RCK	45.00	45.30	0.60
RCK	45.30	45.80	1.00
S	45.80	46.00	0.40
POCS	46.00	46.10	0.20
DCA	46.10	48.30	4.40
POCS	48.30	48.40	0.20
DCA	48.40	48.70	0.60
POCS	48.70	48.80	0.20
DCA	48.80	49.00	0.40
FAVM	49.00	49.15	0.30
DCA	49.15	50.00	1.70

N11: Pt. Cloates – Transect 3

Field Code	Length 1	Length 2	% Cover
DCA	0.00	1.10	2.20
MA	1.10	1.20	0.20
RCK	1.20	2.30	2.20
POCS	2.30	2.40	0.20
RCK	2.40	2.50	0.20
POCS	2.50	2.55	0.10
DCA	2.55	3.20	1.30
DCA	3.20	4.75	3.10
ACRD	4.75	4.85	0.20
RCK	4.85	5.90	2.10
S	5.90	6.40	1.00
DCA	6.40	6.85	0.90
FAVE	6.85	6.90	0.10
DCA	6.90	7.70	1.60
ACRD	7.70	7.80	0.20
MA	7.80	8.10	0.60
DCA	8.10	10.85	5.50
FAVE	10.85	11.00	0.30
FAVM	11.00	11.25	0.50
DCA	11.25	12.50	2.50
ACRD	12.50	12.60	0.20
DCA	12.60	13.20	1.20
ACRD	13.20	13.35	0.30
DCA	13.35	14.40	2.10
ACRD	14.40	14.50	0.20
RCK	14.50	16.10	3.20
FAVM	16.10	16.20	0.20
DCA	16.20	17.70	3.00
ACRT	17.70	17.85	0.30
DCA	17.85	19.30	2.90
FAVM	19.30	19.50	0.40
RCK	19.50	19.80	0.60
DCA	19.80	20.10	0.60
S	20.10	20.40	0.60
DCA	20.40	23.30	5.80
ACRD	23.30	23.45	0.30
DCA	23.45	23.70	0.50
ACRD	23.70	23.90	0.40
DCA	23.90	24.15	0.50
ACRD	24.15	24.30	0.30
DCA	24.30	24.70	0.80
FAVM	24.70	24.80	0.20
DCA	24.80	25.10	0.60
ACRD	25.10	25.20	0.20
MA	25.20	25.30	0.20
FAVM	25.30	25.40	0.20
DCA	25.40	25.50	0.20
ACRT	25.50	26.10	1.20
DCA	26.10	26.30	0.40
ACRD	26.30	26.40	0.20
DCA	26.40	26.50	0.20
S	26.50	27.30	1.60
ACRT	27.30	27.40	0.20
DCA	27.40	27.60	0.40
ACRD	27.60	27.70	0.20
ACRT	27.70	28.25	1.10
DCA	28.25	28.40	0.30
ACRD	28.40	28.50	0.20
DCA	28.50	29.20	1.40
ACRD	29.20	29.30	0.20
DCA	29.30	29.90	1.20
ACRD	29.90	30.00	0.20
DCA	30.00	30.80	1.60
MA	30.80	31.00	0.40
MA	31.00	31.10	0.20
RCK	31.10	31.30	0.40
DCA	31.30	31.90	1.20
MA	31.90	32.00	0.20
RCK	32.00	32.10	0.20
RCK	32.10	32.20	0.20
ACRD	32.20	32.40	0.40
DCA	32.40	32.50	0.20
FAVM	32.50	32.70	0.40
RCK	32.70	33.50	1.60
DCA	33.50	33.70	0.40
RCK	33.70	34.00	0.60
DCA	34.00	34.80	1.60
ACRD	34.80	35.70	1.80
DCA	35.70	36.30	1.20
ACRB	36.30	36.50	0.40
MA	36.50	36.70	0.40
DCA	36.70	37.70	2.00
ACRD	37.70	37.90	0.40
S	37.90	38.40	1.00
DCA	38.40	38.90	1.00
S	38.90	40.20	2.60
DCA	40.20	40.40	0.40
S	40.40	40.50	0.20
ACRD	40.50	40.70	0.40
MA	40.70	40.90	0.40
S	40.90	41.30	0.80
ACRD	41.30	41.40	0.20
RCK	41.40	41.50	0.20
DCA	41.50	41.90	0.80
ACRD	41.90	42.00	0.20
DCA	42.00	43.00	2.00
S	43.00	43.20	0.40
ACRD	43.20	43.30	0.20
S	43.30	43.60	0.60
ACRD	43.60	44.10	1.00
MA	44.10	44.20	0.20
ACRD	44.20	44.30	0.20
ACRD	44.30	44.50	0.40
MA	44.50	44.60	0.20
ACRD	44.60	44.90	0.60
DCA	44.90	45.00	0.20
ACRD	45.00	45.20	0.40
DCA	45.20	45.90	1.40
ACRD	45.90	46.00	0.20
MA	46.00	46.20	0.40
DCA	46.20	49.90	7.40
ACRD	49.90	50.00	0.20

N12: Dugong Sanctuary – Transect 1

Field Code	Length 1	Length 2	% Cover
DCA	0.00	0.90	1.80
FAVE	0.90	0.95	0.10
DCA	0.95	1.20	0.50
FAVS	1.20	1.25	0.10
DCA	1.25	2.70	2.90
MA	2.70	3.00	0.60
DCA	3.00	3.20	0.40
MA	3.20	3.30	0.20
FAVM	3.30	3.50	0.40
FAVM	3.50	3.60	0.20
DCA	3.60	4.20	1.20
ACRT	4.20	4.50	0.60
DCA	4.50	5.20	1.40
ACRT	5.20	5.70	1.00
S	5.70	6.00	0.60
DCA	6.00	6.20	0.40
S	6.20	7.20	2.00
RCK	7.20	8.20	2.00
ACRD	8.20	8.70	1.00
DCA	8.70	10.00	2.60
RCK	10.00	12.00	4.00
DCA	12.00	14.50	5.00
ACRT	14.50	14.80	0.60
DCA	14.80	15.60	1.60
FAVE	15.60	15.70	0.20
DCA	15.70	15.90	0.40
ACRD	15.90	16.00	0.20
DCA	16.00	19.70	7.40
SC	19.70	19.80	0.20
DCA	19.80	20.60	1.60
ACRT	20.60	20.80	0.40
DCA	20.80	21.90	2.20
FAVM	21.90	22.00	0.20
DCA	22.00	22.50	1.00
ACRD	22.50	22.60	0.20
DCA	22.60	22.70	0.20
ACRD	22.70	22.80	0.20
DCA	22.80	24.00	2.40
ACRS	24.00	24.20	0.40
DCA	24.20	24.50	0.60
FAVE	24.50	24.60	0.20
DCA	24.60	25.40	1.60
ACRS	25.40	25.60	0.40
ACRT	25.60	25.90	0.60
ACRD	25.90	26.20	0.60
DCA	26.20	26.60	0.80
ACRT	26.60	26.90	0.60
DCA	26.90	27.10	0.40
ACRD	27.10	27.20	0.20
DCA	27.20	30.05	5.70
U	30.05	30.10	0.10
ACRT	30.10	30.15	0.10
DCA	30.15	32.75	5.20
ACRT	32.75	32.80	0.10
DCA	32.80	34.90	4.20
FAVS	34.90	35.00	0.20
ACRD	35.00	35.30	0.60
ACRD	35.30	35.60	0.60
MA	35.60	35.70	0.20
ACRT	35.70	36.20	1.00
DCA	36.20	37.50	2.60
ACRD	37.50	37.60	0.20
DCA	37.60	38.30	1.40
ACRD	38.30	38.40	0.20
DCA	38.40	39.10	1.40
ACRT	39.10	39.30	0.40
DCA	39.30	39.70	0.80
ACRD	39.70	39.80	0.20
DCA	39.80	40.00	0.40
ACRT	40.00	40.15	0.30
DCA	40.15	40.40	0.50
ACRD	40.40	40.60	0.40
DCA	40.60	41.20	1.20
ACRD	41.20	41.80	1.20
DCA	41.80	42.70	1.80
ACRT	42.70	43.00	0.60
DCA	43.00	43.10	0.20
ACRT	43.10	43.30	0.40
DCA	43.30	44.20	1.80
SP	44.20	44.30	0.20
DCA	44.30	44.90	1.20
ACRD	44.90	45.00	0.20
DCA	45.00	45.10	0.20
ACRD	45.10	45.50	0.80
DCA	45.50	46.90	2.80
ACRD	46.90	47.00	0.20
ACRD	47.00	47.40	0.80
MA	47.40	47.90	1.00
DCA	47.90	48.70	1.60
ACRD	48.70	48.90	0.40
ACRD	48.90	49.20	0.60
DCA	49.20	50.00	1.60

N12: Dugong Sanctuary – Transect 2

Field Code	Length 1	Length 2	% Cover
RCK	0.00	2.10	4.20
ACRT	2.10	2.20	0.20
RCK	2.20	2.50	0.60
ACR	2.50	3.50	2.00
DCA	3.50	3.70	0.40
ACRB	3.70	4.30	1.20
DCA	4.30	4.40	0.20
ACRT	4.40	4.50	0.20
DCA	4.50	4.70	0.40
ACRT	4.70	5.00	0.60
DCA	5.00	5.10	0.20
ACRT	5.10	5.60	1.00
DCA	5.60	6.90	2.60
MA	6.90	7.10	0.40
ACRT	7.10	7.40	0.60
DCA	7.40	7.70	0.60
DCA	7.70	8.00	0.60
ACRT	8.00	8.70	1.40
DCA	8.70	10.00	2.60
MA	10.00	10.10	0.20
ACRD	10.10	10.20	0.20
DCA	10.20	11.00	1.60
ACRD	11.00	11.10	0.20
DCA	11.10	11.80	1.40
FAVE	11.80	12.10	0.60
DCA	12.10	13.40	2.60
MA	13.40	13.50	0.20
ACRD	13.50	13.70	0.40
DCA	13.70	14.85	2.30
ACRD	14.85	14.90	0.10
DCA	14.90	15.30	0.80
ACRD	15.30	15.60	0.60
RCK	15.60	16.10	1.00
SP	16.10	16.40	0.60
MA	16.40	16.50	0.20
DCA	16.50	16.70	0.40
DCA	16.70	17.30	1.20
FAVM	17.30	17.50	0.40
DCA	17.50	18.40	1.80
ACRD	18.40	19.10	1.40
DCA	19.10	20.00	1.80
ACRD	20.00	20.50	1.00
DCA	20.50	20.80	0.60
FAVS	20.80	21.00	0.40
DCA	21.00	22.60	3.20
ACRT	22.60	22.70	0.20
DCA	22.70	24.20	3.00
ACRD	24.20	24.70	1.00
DCA	24.70	27.00	4.60
RCK	27.00	28.30	2.60
DCA	28.30	29.00	1.40
ACRD	29.00	29.30	0.60
DCA	29.30	30.20	1.80
ACRD	30.20	30.25	0.10
DCA	30.25	30.80	1.10
RCK	30.80	31.30	1.00
DCA	31.30	31.70	0.80
MA	31.70	31.80	0.20
FAVS	31.80	31.95	0.30
DCA	31.95	32.10	0.30
ACRD	32.10	32.20	0.20
DCA	32.20	33.20	2.00
ACRD	33.20	33.40	0.40
DCA	33.40	34.30	1.80
FAVE	34.30	34.40	0.20
DCA	34.40	37.20	5.60
FAVM	37.20	37.25	0.10
DCA	37.25	39.10	3.70
ACRD	39.10	39.30	0.40
FAVM	39.30	39.50	0.40
DCA	39.50	41.00	3.00
FAVM	41.00	41.30	0.60
DCA	41.30	43.30	4.00
ACRD	43.30	43.80	1.00
DCA	43.80	43.85	0.10
FAVS	43.85	44.00	0.30
DCA	44.00	44.80	1.60
FAVM	44.80	44.90	0.20
DCA	44.90	46.40	3.00
ACRD	46.40	47.20	1.60
DCA	47.20	47.75	1.10
ACRD	47.75	47.85	0.20
ACRS	47.85	48.40	1.10
ACRT	48.40	48.70	0.60
DCA	48.70	50.00	2.60

N12: Dugong Sanctuary – Transect 3

Field Code	Length 1	Length 2	% Cover
DCA	0.00	2.20	4.40
FAVS	2.20	2.30	0.20
ACRD	2.30	2.80	1.00
DCA	2.80	2.90	0.20
MA	2.90	3.00	0.20
DCA	3.00	3.20	0.40
FAVE	3.20	3.25	0.10
DCA	3.25	3.70	0.90
ACRT	3.70	4.00	0.60
DCA	4.00	5.05	2.10
ACRD	5.05	5.20	0.30
DCA	5.20	5.40	0.40
ACRD	5.40	5.50	0.20
DCA	5.50	5.60	0.20
ACRD	5.60	6.00	0.80
DCA	6.00	6.40	0.80
ACRD	6.40	6.55	0.30
DCA	6.55	7.10	1.10
FAVM	7.10	7.20	0.20
DCA	7.20	7.60	0.80
ACRD	7.60	7.70	0.20
DCA	7.70	8.00	0.60
ACRD	8.00	8.20	0.40
DCA	8.20	8.50	0.60
ACRD	8.50	8.70	0.40
DCA	8.70	8.80	0.20
ACRD	8.80	8.90	0.20
DCA	8.90	10.00	2.20
ACRD	10.00	10.50	1.00
DCA	10.50	12.10	3.20
FAVS	12.10	12.15	0.10
ACRT	12.15	12.25	0.20
DCA	12.25	13.00	1.50
ACRD	13.00	13.40	0.80
DCA	13.40	16.50	6.20
MA	16.50	16.90	0.80
ACRT	16.90	17.20	0.60
DCA	17.20	17.40	0.40
ACRT	17.40	18.80	2.80
DCA	18.80	17.90	-1.80
ACRD	17.90	18.15	0.50
DCA	18.15	18.30	0.30
ACRD	18.30	18.50	0.40
DCA	18.50	18.95	0.90
ACRD	18.95	19.00	0.10
DCA	19.00	19.20	0.40
SC	19.20	19.30	0.20
ACRT	19.30	19.50	0.40
DCA	19.50	20.00	1.00
ACRT	20.00	20.10	0.20
DCA	20.10	20.30	0.40
ACRD	20.30	20.35	0.10
DCA	20.35	21.15	1.60
ACRD	21.15	21.25	0.20
RCK	21.25	22.20	1.90
DCA	22.20	23.20	2.00
SC	23.20	23.30	0.20
DCA	23.30	24.00	1.40
ACRD	24.00	24.20	0.40
DCA	24.20	24.50	0.60
ACRD	24.50	24.60	0.20
RCK	24.60	26.00	2.80
DCA	26.00	26.30	0.60
ACRD	26.30	26.60	0.60
DCA	26.60	27.20	1.20
ACRD	27.20	27.40	0.40
DCA	27.40	27.45	0.10
ACRT	27.45	27.90	0.90
DCA	27.90	28.30	0.80
ACRD	28.30	28.40	0.20
FAVM	28.40	28.55	0.30
DCA	28.55	29.30	1.50
ACRD	29.30	29.40	0.20
DCA	29.40	31.50	4.20
FAVM	31.50	31.70	0.40
ACRD	31.70	32.00	0.60
DCA	32.00	32.80	1.60
ACRD	32.80	33.80	2.00
DCA	33.80	33.90	0.20
DCA	33.90	34.45	1.10
FAVS	34.45	34.50	0.10
ACRD	34.50	35.00	1.00
DCA	35.00	35.75	1.50
ACRD	35.75	37.25	3.00
DCA	37.25	37.45	0.40
ACRT	37.45	37.60	0.30
DCA	37.60	39.20	3.20
ACRD	39.20	39.30	0.20
DCA	39.30	39.80	1.00
ACRD	39.80	40.00	0.40
DCA	40.00	41.75	3.50
FAVS	41.75	41.80	0.10
FAVM	41.80	41.85	0.10
DCA	41.85	42.30	0.90
ACRT	42.30	42.50	0.40
DCA	42.50	43.10	1.20
ACRD	43.10	43.30	0.40
DCA	43.30	44.00	1.40
ACRD	44.00	44.15	0.30
DCA	44.15	44.50	0.70
ACRD	44.50	44.70	0.40
DCA	44.70	45.20	1.00
ACRD	45.20	45.70	1.00
DCA	45.70	45.85	0.30
ACRD	45.85	46.10	0.50
DCA	46.10	46.50	0.80
ACRD	46.50	46.70	0.40
DCA	46.70	47.00	0.60
FAVS	47.00	47.20	0.40
DCA	47.20	48.20	2.00
ACRD	48.20	48.30	0.20
DCA	48.30	48.60	0.60
ACRD	48.60	48.80	0.40
DCA	48.80	49.10	0.60

Field Code	Length 1	Length 2	% Cover
ACRD	49.10	49.20	0.20
DCA	49.20	50.00	1.60

N13: Bruboodijoo – Transect 1

Field Code	Length 1	Length 2	% Cover
DCA	0.00	1.00	2.00
MU	1.00	1.10	0.20
ACRB	1.10	1.20	0.20
DCA	1.20	1.30	0.20
ACRB	1.30	2.00	1.40
DCA	2.00	3.30	2.60
MA	3.30	3.40	0.20
ACRD	3.40	3.60	0.40
DCA	3.60	7.00	6.80
ACRF	7.00	7.30	0.60
DCA	7.30	8.10	1.60
ACRT	8.10	8.30	0.40
DCA	8.30	8.80	1.00
DRUP	8.80	8.85	0.10
ACRT	8.85	9.50	1.30
DC2	9.50	9.65	0.30
DC1	9.65	9.70	0.10
DCA	9.70	15.70	12.00
MA	15.70	15.90	0.40
MA	15.90	16.10	0.40
DCA	16.10	22.00	11.80
MA	22.00	23.00	2.00
DCA	23.00	25.40	4.80
ACRT	25.40	25.50	0.20
MA	25.50	26.50	2.00
DCA	26.50	27.00	1.00
ACRT	27.00	27.10	0.20
DCA	27.10	28.60	3.00
ACRT	28.60	28.70	0.20
DC2	28.70	28.90	0.40
ACRT	28.90	29.10	0.40
DC2	29.10	29.25	0.30
ACRT	29.25	29.70	0.90
DCA	29.70	43.30	27.20
MA	43.30	45.30	4.00
ACRD	45.30	45.40	0.20
DCA	45.40	46.30	1.80
ACRT	46.30	46.70	0.80
MA	46.70	48.70	4.00
DCA	48.70	49.20	1.00
ACRT	49.20	49.30	0.20
DC2	49.30	49.40	0.20
DCA	49.40	50.00	1.20

N13: Bruboodijoo – Transect 2

Field Code	Length 1	Length 2	% Cover
DCA	0.00	1.00	2.00
DC2	1.00	1.30	0.60
DRUP	1.30	1.40	0.20
DCA	1.40	3.30	3.80
ACRD	3.30	3.45	0.30
DCA	3.45	9.50	12.10
MA	9.50	10.00	1.00
DCA	10.00	13.00	6.00
DC2	13.00	13.20	0.40
DCA	13.20	14.50	2.60
MA	14.50	14.80	0.60
ACRD	14.80	15.00	0.40
DCA	15.00	21.20	12.40
ACRS	21.20	21.50	0.60
S	21.50	23.00	3.00
DCA	23.00	26.80	7.60
MA	26.80	27.80	2.00
ACRD	27.80	28.00	0.40
DCA	28.00	30.00	4.00
ACRD	30.00	30.30	0.60
DCA	30.30	32.00	3.40
ACRD	32.00	32.20	0.40
MA	32.20	34.00	3.60
DCA	34.00	34.90	1.80
ACRD	34.90	35.00	0.20
DCA	35.00	36.20	2.40
ACRD	36.20	36.40	0.40
ACRT	36.40	36.60	0.40
MA	36.60	38.00	2.80
ACRB	38.00	38.20	0.40
DCA	38.20	38.60	0.80
ACRB	38.60	40.20	3.20
S	40.20	40.80	1.20
DCA	40.80	41.80	2.00
ACRT	41.80	42.00	0.40
DCA	42.00	42.90	1.80
ACRT	42.90	43.40	1.00
DCA	43.40	44.70	2.60
ACRD	44.70	45.40	1.40
DCA	45.40	49.10	7.40
MA	49.10	50.00	1.80

N13: Bruboodijoo – Transect 3

Field Code	Length 1	Length 2	% Cover
DCA	0.00	6.60	13.20
MA	6.60	8.10	3.00
ACRT	8.10	8.35	0.50
DCA	8.35	8.70	0.70
ACRT	8.70	9.30	1.20
DCA	9.30	18.30	18.00
ACRT	18.30	18.60	0.60
DCA	18.60	19.30	1.40
ACRT	19.30	19.40	0.20
DCA	19.40	21.00	3.20
ACRT	21.00	23.30	4.60
DCA	23.30	23.70	0.80
ACRT	23.70	23.90	0.40
DC2	23.90	24.00	0.20
DCA	24.00	24.80	1.60
ACRT	24.80	24.90	0.20
DC2	24.90	25.00	0.20
DCA	25.00	25.60	1.20
ACRT	25.60	26.00	0.80
DCA	26.00	29.00	6.00
MA	29.00	30.00	2.00
AA	30.00	30.80	1.60
DCA	30.80	31.30	1.00
ACRD	31.30	31.40	0.20
R	31.40	33.00	3.20
ACRT	33.00	33.30	0.60
DCA	33.30	33.80	1.00
ACRT	33.80	34.50	1.40
DCA	34.50	36.80	4.60
ACRT	36.80	38.20	2.80
DCA	38.20	39.00	1.60
ACRT	39.00	39.30	0.60
DCA	39.30	42.50	6.40
R	42.50	43.20	1.40
S	43.20	44.00	1.60
R	44.00	44.20	0.40
S	44.20	44.40	0.40
DCA	44.40	45.20	1.60
ACRD	45.20	45.50	0.60
DCA	45.50	46.30	1.60
ACRB	46.30	47.00	1.40
DCA	47.00	48.70	3.40
ACRB	48.70	49.00	0.60
DCA	49.00	49.80	1.60
ACRD	49.80	50.00	0.40

N22: North Coral Bay – Transect 1

Field Code	Length 1	Length 2	% Cover
R	0.00	0.20	0.40
ACRD	0.20	0.25	0.10
R	0.25	0.30	0.10
MU	0.30	0.40	0.20
R	0.40	2.10	3.40
DCA	2.10	3.00	1.80
R	3.00	3.90	1.80
DCA	3.90	4.80	1.80
ACRF	4.80	5.10	0.60
DCA	5.10	7.20	4.20
ACRF	7.20	7.30	0.20
DCA	7.30	8.90	3.20
ACRD	8.90	9.00	0.20
DCA	9.00	10.10	2.20
R	10.10	11.00	1.80
DCA	11.00	14.40	6.80
MA	14.40	14.90	1.00
MU	14.90	15.00	0.20
DCA	15.00	23.50	17.00
ACRD	23.50	23.80	0.60
DCA	23.80	26.90	6.20
FUN	26.90	27.00	0.20
DCA	27.00	29.50	5.00
ACRD	29.50	30.00	1.00
DCA	30.00	32.40	4.80
ACRD	32.40	32.90	1.00
DCA	32.90	33.30	0.80
ACRD	33.30	33.90	1.20
DCA	33.90	39.90	12.00
ACRD	39.90	40.00	0.20
DCA	40.00	41.25	2.50
ACRD	41.25	41.30	0.10
DCA	41.30	42.50	2.40
ACRD	42.50	43.00	1.00
DCA	43.00	44.00	2.00
ACRD	44.00	44.50	1.00
DCA	44.50	50.00	11.00

N22: North Coral Bay – Transect 2

Field Code	Length 1	Length 2	% Cover
DCA	0.00	0.10	0.20
ACRD	0.10	0.20	0.20
DCA	0.20	0.30	0.20
ACRD	0.30	0.40	0.20
DCA	0.40	4.00	7.20
MA	4.00	4.50	1.00
FAVM	4.50	4.60	0.20
DCA	4.60	7.10	5.00
FAVM	7.10	7.25	0.30
DCA	7.25	7.40	0.30
ACRD	7.40	7.55	0.30
DCA	7.55	8.60	2.10
ACRT	8.60	8.90	0.60
DCA	8.90	10.20	2.60
ACRD	10.20	10.40	0.40
DCA	10.40	14.60	8.40
ACRD	14.60	14.75	0.30
DCA	14.75	15.70	1.90
FAVM	15.70	15.80	0.20
R	15.80	16.20	0.80
FAVM	16.20	16.30	0.20
DCA	16.30	17.20	1.80
ACRD	17.20	17.35	0.30
DCA	17.35	17.70	0.70
ACRD	17.70	17.80	0.20
DCA	17.80	19.90	4.20
ACRD	19.90	20.00	0.20
DCA	20.00	21.80	3.60
ACRD	21.80	21.90	0.20
DCA	21.90	29.30	14.80
MA	29.30	29.80	1.00
MU	29.80	30.00	0.40
DCA	30.00	30.30	0.60
ACRT	30.30	30.50	0.40
DCA	30.50	31.30	1.60
ACRD	31.30	31.40	0.20
DCA	31.40	31.90	1.00
MU	31.90	32.10	0.40
DCA	32.10	32.70	1.20
ACRD	32.70	32.85	0.30
DCA	32.85	39.40	13.10
MA	39.40	39.90	1.00
MU	39.90	40.00	0.20
DCA	40.00	46.70	13.40
MA	46.70	47.20	1.00
ACRD	47.20	47.30	0.20
DCA	47.30	49.70	4.80
MA	49.70	50.00	0.60

N22: North Coral Bay – Transect 3

Field Code	Length 1	Length 2	% Cover
DCA	0.00	2.85	5.70
MA	2.85	3.15	0.60
ACRD	3.15	3.30	0.30
DCA	3.30	4.60	2.60
MU	4.60	4.70	0.20
S	4.70	5.30	1.20
DCA	5.30	5.40	0.20
ACRD	5.40	5.45	0.10
DCA	5.45	6.05	1.20
FAVM	6.05	6.15	0.20
MU	6.15	6.20	0.10
FAVM	6.20	6.30	0.20
DCA	6.30	8.30	4.00
MUSS	8.30	8.50	0.40
ACRD	8.50	8.90	0.80
S	8.90	9.95	2.10
SGH	9.95	10.00	0.10
DCA	10.00	10.20	0.40
ACRD	10.20	10.30	0.20
MU	10.30	10.40	0.20
DCA	10.40	12.60	4.40
FAVM	12.60	12.70	0.20
ACRD	12.70	12.80	0.20
DCA	12.80	13.20	0.80
SC	13.20	13.30	0.20
MU	13.30	13.40	0.20
SC	13.40	13.55	0.30
DCA	13.55	15.70	4.30
FAVM	15.70	15.80	0.20
MU	15.80	16.00	0.40
DCA	16.00	16.50	1.00
FAVM	16.50	16.60	0.20
DCA	16.60	18.20	3.20
FAVM	18.20	18.30	0.20
DCA	18.30	18.40	0.20
S	18.40	18.55	0.30
SGH	18.55	18.60	0.10
ACRD	18.55	18.65	0.20
FAVM	18.65	18.90	0.50
DCA	18.90	19.10	0.40
S	19.10	19.80	1.40
ACRS	19.80	20.00	0.40
DCA	20.00	20.30	0.60
ACRD	20.30	21.30	2.00
DCA	21.30	22.00	1.40
S	22.00	23.70	3.40
SGH	23.70	23.80	0.20
FAVM	23.80	24.00	0.40
S	24.00	24.50	1.00
DCA	24.50	26.10	3.20
SC	26.10	26.20	0.20
ACRD	26.20	26.30	0.20
DCA	26.30	27.00	1.40
ACRD	27.00	27.15	0.30
FAVM	27.15	27.50	0.70
DCA	27.50	28.90	2.80
ACRD	28.90	29.05	0.30
S	29.05	29.70	1.30
SGH	29.70	29.90	0.40
DCA	29.90	30.30	0.80
FAVM	30.30	30.45	0.30
DCA	30.45	30.70	0.50
ACRF	30.70	31.00	0.60
DCA	31.00	31.30	0.60
S	31.30	32.50	2.40
DCA	32.50	35.00	5.00
S	35.00	35.30	0.60
MA	35.30	35.80	1.00
R	35.80	36.00	0.40
S	36.00	36.90	1.80
DCA	36.90	37.90	2.00
MU	37.90	38.00	0.20
ACRD	38.00	38.30	0.60
DCA	38.30	40.90	5.20
FAVM	40.90	41.00	0.20
ACRD	41.00	41.20	0.40
DCA	41.20	41.50	0.60
ACRD	41.50	41.60	0.20
DCA	41.60	41.70	0.20
ACRD	41.70	41.80	0.20
DCA	41.80	42.20	0.80
ACRE	42.20	42.40	0.40
DCA	42.40	44.90	5.00
MA	44.90	45.00	0.20
MA	45.00	45.50	1.00
ACRF	45.50	45.60	0.20
DCA	45.60	46.00	0.80
FAVM	46.00	46.10	0.20
DCA	46.10	49.50	6.80
ACRF	49.50	49.80	0.60
FAVM	49.80	50.00	0.40

N14: Coral Bay/Bill's Bay – Transect 1

Field Code	Length 1	Length 2	% Cover
DCA	0.00	1.25	2.50
FAVM	1.25	1.30	0.10
ACRD	1.30	1.35	0.10
RCK	1.35	4.00	5.30
FAVM	4.00	4.30	0.60
DCA	4.30	6.30	4.00
ACRD	6.30	6.40	0.20
DCA	6.40	6.60	0.40
RCK	6.60	7.50	1.80
FAVM	7.50	7.55	0.10
DCA	7.55	7.80	0.50
FAVM	7.80	7.85	0.10
DCA	7.85	8.20	0.70
ACRF	8.20	8.30	0.20
DCA	8.30	10.75	4.90
FAVM	10.75	10.80	0.10
RCK	10.80	12.80	4.00
FAVM	12.80	12.90	0.20
DCA	12.90	13.00	0.20
FAVM	13.00	13.05	0.10
DCA	13.05	13.75	1.40
ACRS	13.75	13.80	0.10
MU	13.80	13.90	0.20
DCA	13.90	14.70	1.60
ACRB	14.70	15.00	0.60
DCA	15.00	15.20	0.40
ACRB	15.20	15.90	1.40
DCA	15.90	16.00	0.20
RCK	16.00	16.80	1.60
ACRD	16.80	17.05	0.50
DCA	17.05	21.40	8.70
RCK	21.40	22.30	1.80
ACRD	22.30	22.70	0.80
FAVS	22.70	23.10	0.80
DCA	23.10	24.90	3.60
ACRD	24.90	24.95	0.10
DCA	24.95	25.20	0.50
ACRD	25.20	25.40	0.40
FAVM	25.40	25.50	0.20
DCA	25.50	27.00	3.00
FAVM	27.00	27.20	0.40
FAVM	27.20	27.35	0.30
DCA	27.35	30.00	5.30
RCK	30.00	32.50	5.00
FAVE	32.50	32.60	0.20
RCK	32.60	33.50	1.80
DCA	33.50	36.90	6.80
ACRD	36.90	37.00	0.20
S	37.00	37.80	1.60
DCA	37.80	38.20	0.80
ACRD	38.20	38.30	0.20
RCK	38.30	39.00	1.40
ACRD	39.00	39.10	0.20
DCA	39.10	40.10	2.00
S	40.10	41.00	1.80
DCA	41.00	41.50	1.00
ACRE	41.50	41.60	0.20
DCA	41.60	41.80	0.40
FAVE	41.80	41.85	0.10
DCA	41.85	43.70	3.70
FAVM	43.70	43.85	0.30
FAVM	43.85	43.95	0.20
DCA	43.95	45.00	2.10
FAVM	45.00	45.05	0.10
DCA	45.05	48.10	6.10
R	48.10	49.00	1.80
RCK	49.00	49.50	1.00
S	49.50	50.00	1.00

N14: Coral Bay/Bill's Bay – Transect 2

Field Code	Length 1	Length 2	% Cover
S	0.00	0.30	0.60
RCK	0.30	0.40	0.20
S	0.40	1.20	1.60
DCA	1.20	2.40	2.40
S	2.40	3.20	1.60
DCA	3.20	3.80	1.20
S	3.80	4.10	0.60
MA	4.10	4.20	0.20
DCA	4.20	4.70	1.00
S	4.70	6.40	3.40
SC	6.40	7.10	1.40
S	7.10	7.70	1.20
SC	7.70	8.10	0.80
R	8.10	8.30	0.40
ACRD	8.30	8.40	0.20
R	8.40	10.20	3.60
ACRD	10.20	10.40	0.40
R	10.40	11.20	1.60
MA	11.20	11.30	0.20
S	11.30	12.00	1.40
R	12.00	12.30	0.60
ACRD	12.30	12.50	0.40
DCA	12.50	13.80	2.60
S	13.80	15.90	4.20
R	15.90	16.00	0.20
ACRD	16.00	16.25	0.50
S	16.25	16.90	1.30
DCA	16.90	19.80	5.80
S	19.80	20.00	0.40
DCA	20.00	21.00	2.00
MUSS	21.00	21.30	0.60
FAVM	21.30	21.70	0.80
DCA	21.70	22.70	2.00
MA	22.70	23.00	0.60
DCA	23.00	26.60	7.20
S	26.60	26.70	0.20
ACRD	26.70	27.00	0.60
DCA	27.00	30.90	7.80
MA	30.90	31.00	0.20
S	31.00	31.60	1.20
ACRD	31.60	31.70	0.20
S	31.70	32.80	2.20
ACRE	32.80	33.00	0.40
MU	33.00	33.15	0.30
ACRS	33.15	33.50	0.70
DCA	33.50	34.00	1.00
FAVM	34.00	34.10	0.20
DCA	34.10	34.40	0.60
ACRS	34.40	34.60	0.40
DCA	34.60	35.00	0.80
ACRS	35.00	35.20	0.40
DCA	35.20	39.60	8.80
MU	39.60	39.70	0.20
ACRD	39.70	39.80	0.20
DCA	39.80	40.60	1.60
S	40.60	40.80	0.40
FAVM	40.80	40.85	0.10
DCA	40.85	40.90	0.10
FAVM	40.90	41.00	0.20
DCA	41.00	41.20	0.40
FAVM	41.20	41.50	0.60
DCA	41.50	41.60	0.20
ACRD	41.60	41.70	0.20
DCA	41.70	41.80	0.20
FAVS	41.80	41.90	0.20
DCA	41.90	43.20	2.60
FAVM	43.20	43.40	0.40
DCA	43.40	44.00	1.20
ACRD	44.00	44.20	0.40
DCA	44.20	45.00	1.60
FAVM	45.00	45.05	0.10
R	45.05	47.00	3.90
DCA	47.00	47.60	1.20
FAVM	47.60	47.70	0.20
DCA	47.70	47.80	0.20
FAVS	47.80	48.10	0.60
DCA	48.10	49.80	3.40
MU	49.80	49.90	0.20
MUSS	49.90	50.00	0.20

N14: Coral Bay/Bill's Bay – Transect 3

Field Code	Length 1	Length 2	% Cover
R	0.00	0.50	1.00
FAVM	0.50	0.60	0.20
S	0.60	1.20	1.20
DCA	1.20	2.60	2.80
S	2.60	3.50	1.80
ACRT	3.50	3.60	0.20
S	3.60	5.10	3.00
R	5.10	5.30	0.40
ACRS	5.30	5.40	0.20
MA	5.40	5.50	0.20
ACRS	5.50	6.20	1.40
ACRD	6.20	6.30	0.20
MU	6.30	6.40	0.20
DCA	6.40	7.10	1.40
FAVM	7.10	7.20	0.20
S	7.20	7.30	0.20
ACRD	7.30	7.60	0.60
DCA	7.60	8.20	1.20
FAVM	8.20	8.40	0.40
DCA	8.40	9.70	2.60
FAVM	9.70	9.80	0.20
DCA	9.80	10.00	0.40
FAVM	10.00	10.20	0.40
DCA	10.20	12.00	3.60
ACRS	12.00	12.20	0.40
R	12.20	14.10	3.80
S	14.10	14.60	1.00
ACRD	14.60	14.70	0.20
DCA	14.70	17.10	4.80
FAVM	17.10	17.20	0.20
S	17.20	18.00	1.60
R	18.00	18.20	0.40
DCA	18.20	20.45	4.50
FAVM	20.45	20.50	0.10
FAVM	20.50	20.80	0.60
DCA	20.80	21.70	1.80
S	21.70	21.90	0.40
ACRD	21.90	22.00	0.20
ACRS	22.00	22.60	1.20
DCA	22.60	23.50	1.80
ACRD	23.50	23.70	0.40
DCA	23.70	24.30	1.20
S	24.30	26.80	5.00
DCA	26.80	27.10	0.60
S	27.10	28.00	1.80
DCA	28.00	30.10	4.20
S	30.10	30.30	0.40
DCA	30.30	30.40	0.20
FAVM	30.40	30.50	0.20
DCA	30.50	31.00	1.00
FAVM	31.00	31.05	0.10
DCA	31.05	31.20	0.30
FAVM	31.20	31.30	0.20
DCA	31.30	31.40	0.20
ACRF	31.40	32.20	1.60
DCA	32.20	33.50	2.60
FAVM	33.50	33.60	0.20
DCA	33.60	34.60	2.00
S	34.60	34.80	0.40
FAVM	34.80	34.90	0.20
DCA	34.90	39.05	8.30
FAVM	39.05	39.10	0.10
MA	39.10	39.20	0.20
MU	39.20	39.30	0.20
DCA	39.30	39.50	0.40
ACRD	39.50	39.70	0.40
DCA	39.70	41.90	4.40
FAVM	41.90	42.00	0.20
DCA	42.00	42.30	0.60
ACRF	42.30	42.50	0.40
DCA	42.50	42.80	0.60
FAVM	42.80	43.20	0.80
DCA	43.20	44.80	3.20
FAVM	44.80	45.10	0.60
DCA	45.10	48.00	5.80
FUN	48.00	48.30	0.60
DCA	48.30	50.00	3.40

N24: Pelican Pt. – Transect 1

Field Code	Length 1	Length 2	% Cover
S	0.00	0.30	0.60
DCA	0.30	1.20	1.80
S	1.20	1.40	0.40
ACRT	1.40	2.80	2.80
DCA	2.80	3.10	0.60
ACRT	3.10	3.20	0.20
DCA	3.20	4.20	2.00
S	4.20	5.10	1.80
ACRT	5.10	6.10	2.00
MA	6.10	6.30	0.40
DCA	6.30	6.90	1.20
ACRT	6.90	6.95	0.10
DC2	6.95	7.00	0.10
DCA	7.00	7.80	1.60
ACRT	7.80	8.00	0.40
DC2	8.00	8.30	0.60
DCA	8.30	13.50	10.40
ACRT	13.50	13.70	0.40
DCA	13.70	13.90	0.40
ACRT	13.90	14.30	0.80
DCA	14.30	14.90	1.20
ACRT	14.90	15.50	1.20
DC2	15.50	15.70	0.40
DCA	15.70	16.75	2.10
ACRT	16.75	17.00	0.50
DCA	17.00	17.40	0.80
ACRT	17.40	17.80	0.80
DCA	17.80	19.10	2.60
DCA	19.10	19.20	0.20
ACRT	19.20	19.30	0.20
DC2	19.30	19.40	0.20
ACRT	19.40	20.40	2.00
MA	20.40	21.00	1.20
ACRT	21.00	23.00	4.00
DCA	23.00	23.20	0.40
ACRT	23.20	23.30	0.20
DCA	23.30	24.80	3.00
ACRT	24.80	25.20	0.80
DC2	25.20	25.30	0.20
DCA	25.30	25.40	0.20
ACRT	25.40	25.70	0.60
DCA	25.70	30.40	9.40
ACRT	30.40	32.00	3.20
ACRT	32.00	32.45	0.90
DCA	32.45	32.50	0.10
DCA	32.50	34.00	3.00
ACRD	34.00	34.30	0.60
S	34.30	35.00	1.40
ACRD	35.00	35.70	1.40
DCA	35.70	36.50	1.60
ACRT	36.50	36.70	0.40
DCA	36.70	37.50	1.60
ACRT	37.50	39.00	3.00
MA	39.00	39.10	0.20
DCA	39.10	39.70	1.20
ACRT	39.70	40.00	0.60
DCA	40.00	41.50	3.00
ACRT	41.50	41.70	0.40
DCA	41.70	42.00	0.60
ACRT	42.00	42.30	0.60
DC1	42.30	42.32	0.04
DC2	42.32	42.35	0.06
DCA	42.35	44.60	4.50
ACRT	44.60	45.10	1.00
DCA	45.10	45.30	0.40
ACRT	45.30	45.70	0.80
DCA	45.70	45.80	0.20
DCA	45.80	46.10	0.60
ACRT	46.10	46.40	0.60
DCA	46.40	48.70	4.60
ACRT	48.70	48.80	0.20
DCA	48.80	49.85	2.10
ACRT	49.85	50.00	0.30

N24: Pelican Pt. – Transect 2

Field Code	Length 1	Length 2	% Cover
ACRT	0.00	1.40	2.80
DCA	1.40	1.60	0.40
ACRT	1.60	2.95	2.70
DC1	2.95	3.00	0.10
ACRT	3.00	3.70	1.40
DCA	3.70	4.30	1.20
ACRT	4.30	4.90	1.20
DC2	4.90	5.00	0.20
DCA	5.00	6.10	2.20
DC2	6.10	6.15	0.10
DC1	6.15	6.17	0.04
ACRT	6.17	6.30	0.26
DCA	6.30	6.50	0.40
ACRT	6.50	7.00	1.00
DCA	7.00	7.70	1.40
ACRT	7.70	7.90	0.40
DCA	7.90	8.10	0.40
ACRT	8.10	9.60	3.00
DC2	9.60	9.70	0.20
DCA	9.70	10.00	0.60
ACRT	10.00	10.40	0.80
DCA	10.40	10.70	0.60
ACRT	10.70	11.05	0.70
DCA	11.05	11.10	0.10
ACRT	11.10	11.50	0.80
DCA	11.50	11.90	0.80
ACRT	11.90	12.30	0.80
DCA	12.30	12.50	0.40
ACRT	12.50	13.20	1.40
DCA	13.20	14.40	2.40
ACRT	14.40	15.11	1.42
DCA	15.11	17.20	4.18
ACRT	17.20	18.15	1.90
DC1	18.15	18.17	0.04
DC2	18.17	18.20	0.06
DCA	18.20	18.35	0.30
ACRT	18.35	19.50	2.30
DCA	19.50	19.80	0.60
ACRT	19.80	22.00	4.40
DCA	22.00	22.20	0.40
ACRT	22.20	24.30	4.20
DCA	24.30	24.50	0.40
ACRT	24.50	24.90	0.80
ACRD	24.90	25.00	0.20
ACRT	25.00	27.10	4.20
DC2	27.10	27.20	0.20
DCA	27.20	28.70	3.00
ACRT	28.70	29.00	0.60
DCA	29.00	29.20	0.40
ACRT	29.20	32.90	7.40
DCA	32.90	33.00	0.20
ACRT	33.00	33.20	0.40
DCA	33.20	34.30	2.20
ACRT	34.30	34.80	1.00
DCA	34.80	35.40	1.20
ACRT	35.40	36.10	1.40
DC2	36.10	36.20	0.20
DCA	36.20	36.30	0.20
ACRT	36.30	36.70	0.80
DCA	36.70	36.90	0.40
ACRT	36.90	38.10	2.40
R	38.10	39.60	3.00
S	39.60	39.80	0.40
ACRT	39.80	41.70	3.80
DCA	41.70	41.80	0.20
ACRD	41.80	42.00	0.40
ACRT	42.00	42.20	0.40
ACRD	42.20	42.40	0.40
ACRT	42.40	42.90	1.00
DCA	42.90	43.00	0.20
ACRT	43.00	45.10	4.20
DCA	45.10	47.60	5.00
ACRT	47.60	49.30	3.40
ACRD	49.30	49.50	0.40
DCA	49.50	49.60	0.20
ACRT	49.60	50.00	0.80

N24: Pelican Pt. – Transect 3

Field Code	Length 1	Length 2	% Cover
DCA	0.00	0.20	0.40
ACRT	0.20	5.30	10.20
DCA	5.30	6.20	1.80
ACRT	6.20	6.30	0.20
DC2	6.30	6.35	0.10
ACRT	6.35	9.50	6.30
DCA	9.50	9.70	0.40
ACRT	9.70	9.90	0.40
DCA	9.90	10.00	0.20
ACRT	10.00	11.00	2.00
DCA	11.00	13.00	4.00
S	13.00	15.00	4.00
DCA	15.00	16.80	3.60
ACRD	16.80	16.90	0.20
DCA	16.90	17.30	0.80
ACRE	17.30	17.50	0.40
ACRT	17.50	18.00	1.00
DCA	18.00	18.50	1.00
ACRT	18.50	21.20	5.40
DCA	21.20	22.00	1.60
S	22.00	22.40	0.80
ACRT	22.40	25.50	6.20
DCA	25.50	25.70	0.40
ACRT	25.70	26.30	1.20
ACRD	26.30	26.50	0.40
DCA	26.50	26.90	0.80
ACRD	26.90	27.00	0.20
DCA	27.00	27.20	0.40
ACRT	27.20	27.80	1.20
DC1	27.80	28.00	0.40
DC2	28.00	28.10	0.20
ACRT	28.10	29.70	3.20
ACRB	29.70	30.10	0.80
ACRT	30.10	32.90	5.60
DCA	32.90	33.10	0.40
ACRT	33.10	35.90	5.60
DC2	35.90	36.10	0.40
DCA	36.10	36.20	0.20
ACRT	36.20	36.90	1.40
DCA	36.90	38.70	3.60
ACRE	38.70	39.30	1.20
DCA	39.30	40.80	3.00
MA	40.80	41.00	0.40
DCA	41.00	42.20	2.40
ACRT	42.20	42.30	0.20
DCA	42.30	42.50	0.40
ACRT	42.50	45.00	5.00
ACRD	45.00	45.20	0.40
DCA	45.20	46.10	1.80
ACRT	46.10	48.00	3.80
DCA	48.00	49.60	3.20
ACRT	49.60	49.70	0.20
S	49.70	50.00	0.60

N17: Cape Farquhar – Transect 1

Field Code	Length 1	Length 2	% Cover
DCA	0.00	0.10	0.20
ACRF	0.10	0.20	0.20
ACRB	0.20	1.00	1.60
ACRT	1.00	1.40	0.80
RCK	1.40	1.50	0.20
ACRT	1.50	2.10	1.20
R	2.10	4.00	3.80
S	4.00	4.30	0.60
DCA	4.30	5.00	1.40
ACRT	5.00	5.10	0.20
ACRB	5.10	6.50	2.80
FAVS	6.50	6.70	0.40
ACRB	6.70	6.80	0.20
R	6.80	7.10	0.60
S	7.10	7.30	0.40
ACRT	7.30	10.10	5.60
S	10.10	10.20	0.20
ACRB	10.20	11.00	1.60
SC	11.00	11.10	0.20
ACRB	11.10	11.20	0.20
ACRT	11.20	11.30	0.20
DCA	11.30	11.40	0.20
ACRT	11.40	12.50	2.20
ACRE	12.50	13.10	1.20
DCA	13.10	13.80	1.40
ACRT	13.80	14.00	0.40
ACRF	14.00	14.30	0.60
ACRT	14.30	15.30	2.00
ACRB	15.30	15.17	-0.26
ACRT	15.17	16.10	1.86
DCA	16.10	16.30	0.40
ACRT	16.30	17.30	2.00
DCA	17.30	17.40	0.20
ACRT	17.40	18.30	1.80
DCA	18.30	18.45	0.30
ACRD	18.45	18.60	0.30
POCS	18.60	18.70	0.20
DCA	18.70	18.90	0.40
ACRT	18.90	19.50	1.20
ACRB	19.50	20.30	1.60
ACRT	20.30	20.40	0.20
MUSM	20.40	21.30	1.80
DCA	21.30	21.40	0.20
MUSM	21.40	22.10	1.40
DCA	22.10	22.20	0.20
ACRT	22.20	23.10	1.80
S	23.10	23.30	0.40
ACRB	23.30	23.80	1.00
R	23.80	24.20	0.80
ACRT	24.20	25.80	3.20
DCA	25.80	26.20	0.80
ACRB	26.20	27.20	2.00
ACRT	27.20	27.50	0.60
DCA	27.50	28.00	1.00
ACRT	28.00	28.20	0.40
DCA	28.20	28.40	0.40
ACRT	28.40	29.90	3.00
ACRD	29.90	30.00	0.20
DCA	30.00	30.10	0.20
ACRT	30.10	30.60	1.00
ACRB	30.60	31.30	1.40
DCA	31.30	31.80	1.00
ACRT	31.80	32.50	1.40
ACRD	32.50	32.90	0.80
ACRT	32.90	33.10	0.40
ACRB	33.10	33.40	0.60
DCA	33.40	35.00	3.20
ACRT	35.00	35.20	0.40
DCA	35.20	35.50	0.60
ACRD	35.50	35.80	0.60
ACRB	35.80	36.10	0.60
DCA	36.10	37.50	2.80
DCA	37.50	38.00	1.00
ACRE	38.00	38.30	0.60
DCA	38.30	38.80	1.00
ACRT	38.80	40.00	2.40
ACRB	40.00	41.00	2.00
DCA	41.00	42.00	2.00
ACRD	42.00	42.30	0.60
ACRT	42.30	45.12	5.64
SC	45.12	45.30	0.36
ACRB	45.30	45.50	0.40
DCA	45.50	46.00	1.00
ACRT	46.00	46.20	0.40
SC	46.20	46.50	0.60
ACRT	46.50	46.70	0.40
S	46.70	47.20	1.00
ACRT	47.20	48.20	2.00
S	48.20	48.40	0.40
ACRD	48.40	49.70	2.60
ACRE	49.70	49.90	0.40
S	49.90	50.00	0.20

N17: Cape Farquhar – Transect 2

Field Code	Length 1	Length 2	% Cover
SC	0.00	0.10	0.20
ACRT	0.10	0.80	1.40
ACRB	0.80	2.00	2.40
DCA	2.00	2.10	0.20
ACRT	2.10	2.30	0.40
ACRT	2.30	3.30	2.00
ACRB	3.30	4.70	2.80
ACRT	4.70	4.90	0.40
S	4.90	5.30	0.80
ACRT	5.30	7.50	4.40
ACRF	7.50	7.60	0.20
ACRT	7.60	9.10	3.00
ACRB	9.10	9.80	1.40
ACRT	9.80	11.30	3.00
DCA	11.30	11.40	0.20
ACRT	11.40	12.00	1.20
DCA	12.00	12.80	1.60
ACRT	12.80	13.00	0.40
ACRB	13.00	14.50	3.00
DCA	14.50	16.00	3.00
ACRT	16.00	16.10	0.20
DCA	16.10	16.90	1.60
ACRT	16.90	18.20	2.60
DCA	18.20	20.10	3.80
ACRB	20.10	21.30	2.40
ACRT	21.30	22.00	1.40
S	22.00	22.30	0.60
ACRT	22.30	23.10	1.60
S	23.10	23.70	1.20
ACRT	23.70	24.90	2.40
ACRB	24.90	25.40	1.00
DCA	25.40	26.90	3.00
ACRT	26.90	27.30	0.80
ACRB	27.30	28.20	1.80
ACRT	28.20	28.30	0.20
ACRB	28.30	28.50	0.40
DCA	28.50	30.30	3.60
ACRT	30.30	30.50	0.40
DCA	30.50	31.50	2.00
ACRB	31.50	32.30	1.60
ACRT	32.30	33.30	2.00
ACRB	33.30	34.30	2.00
ACRT	34.30	34.60	0.60
DCA	34.60	34.70	0.20
SC	34.70	35.00	0.60
POCS	35.00	35.10	0.20
ACRS	35.10	35.30	0.40
ACRF	35.30	35.80	1.00
DCA	35.80	36.00	0.40
ACRT	36.00	36.20	0.40
DCA	36.20	36.40	0.40
ACRT	36.40	38.80	4.80
DCA	38.80	39.80	2.00
ACRB	39.80	40.00	0.40
ACRB	40.00	40.30	0.60
S	40.30	40.40	0.20
ACRT	40.40	40.60	0.40
ACRB	40.60	41.10	1.00
ACRT	41.10	42.00	1.80
DCA	42.00	42.40	0.80
ACRT	42.40	42.50	0.20
DCA	42.50	43.00	1.00
DCA	43.00	44.30	2.60
ACRT	44.30	44.50	0.40
ACRB	44.50	48.40	7.80
ACRT	48.40	50.00	3.20

N17: Cape Farquhar – Transect 3

Field Code	Length 1	Length 2	% Cover
DCA	0.00	0.20	0.40
ACRE	0.20	1.20	2.00
S	1.20	1.25	0.10
ACRD	1.25	1.35	0.20
S	1.35	2.00	1.30
DCA	2.00	2.90	1.80
ACRD	2.90	3.10	0.40
ACRT	3.10	4.00	1.80
ACRB	4.00	4.30	0.60
ACRT	4.30	5.20	1.80
ACRB	5.20	6.00	1.60
ACRT	6.00	7.20	2.40
DCA	7.20	7.30	0.20
DCA	7.30	8.00	1.40
ACRT	8.00	8.10	0.20
ACRT	8.10	9.10	2.00
DCA	9.10	11.10	4.00
ACRT	11.10	12.90	3.60
DCA	12.90	17.20	8.60
ACRT	17.20	17.30	0.20
S	17.30	17.50	0.40
SC	17.50	17.90	0.80
ACRB	17.90	18.50	1.20
DCA	18.50	20.90	4.80
ACRT	20.90	21.50	1.20
DCA	21.50	21.80	0.60
DCA	21.80	22.80	2.00
ACRB	22.80	23.00	0.40
ACRT	23.00	24.30	2.60
ACRD	24.30	26.20	3.80
S	26.20	26.70	1.00
ACRT	26.70	28.00	2.60
DCA	28.00	28.60	1.20
ACRT	28.60	29.30	1.40
DCA	29.30	29.40	0.20
ACRB	29.40	30.50	2.20
DCA	30.50	31.90	2.80
ACRT	31.90	32.30	0.80
ACRT	32.30	33.80	3.00
DCA	33.80	36.00	4.40
ACRT	36.00	38.30	4.60
DCA	38.30	38.50	0.40
ACRT	38.50	39.20	1.40
DCA	39.20	39.70	1.00
ACRT	39.70	44.00	8.60
S	44.00	44.20	0.40
ACRT	44.20	44.80	1.20
DCA	44.80	45.20	0.80
ACRD	45.20	46.10	1.80
S	46.10	46.30	0.40
ACRT	46.30	48.00	3.40
S	48.00	48.40	0.80
ACRD	48.40	48.50	0.20
S	48.50	50.00	3.00

N18: Gnaraloo Bay – Transect 1

Field Code	Length 1	Length 2	% Cover
ACRT	0.00	1.10	2.20
ACRT	1.10	1.20	0.20
ACRF	1.20	2.20	2.00
ACRT	2.20	2.40	0.40
ACRT	2.40	4.70	4.60
ACRB	4.70	6.30	3.20
ACRF	6.30	7.00	1.40
ACRD	7.00	8.00	2.00
ACRE	8.00	8.20	0.40
ACRT	8.20	8.80	1.20
DCA	8.80	9.10	0.60
ACRB	9.10	10.10	2.00
ACRT	10.10	11.60	3.00
ACRS	11.60	12.40	1.60
DCA	12.40	14.70	4.60
SC	14.70	15.00	0.60
DCA	15.00	15.10	0.20
ACRT	15.10	17.00	3.80
DCA	17.00	17.50	1.00
ACRT	17.50	17.80	0.60
FAVE	17.80	18.60	1.60
ACRT	18.60	19.30	1.40
ACRB	19.30	19.40	0.20
ACRT	19.40	20.10	1.40
ACRB	20.10	20.30	0.40
POCS	20.30	20.40	0.20
DCA	20.40	24.90	9.00
FAVS	24.90	25.20	0.60
ACRD	25.20	26.10	1.80
ACRE	26.10	26.30	0.40
ACRT	26.30	28.20	3.80
DCA	28.20	29.00	1.60
ACRT	29.00	30.40	2.80
ACRF	30.40	30.50	0.20
ACRD	30.50	30.60	0.20
ACRF	30.60	31.10	1.00
ACRT	31.10	32.10	2.00
DCA	32.10	32.30	0.40
ACRD	32.30	35.20	5.80
DCA	35.20	35.30	0.20
FAVE	35.30	35.40	0.20
ACRD	35.40	36.00	1.20
DCA	36.00	36.30	0.60
ACRD	36.30	36.60	0.60
ACRT	36.60	38.20	3.20
DCA	38.20	38.30	0.20
ACRF	38.30	38.40	0.20
ACRT	38.40	39.80	2.80
ACRF	39.80	40.00	0.40
POCS	40.00	40.20	0.40
DCA	40.20	40.50	0.60
ACRF	40.50	40.60	0.20
ACRT	40.60	41.20	1.20
ACRE	41.20	41.40	0.40
ACRT	41.40	42.60	2.40
DCA	42.60	42.90	0.60
ACRD	42.90	43.30	0.80
ACRD	43.30	44.10	1.60
DCA	44.10	46.20	4.20
ACRT	46.20	46.40	0.40
ACRB	46.40	49.10	5.40
ACRF	49.10	49.50	0.80
DCA	49.50	50.00	1.00

N18: Gnaraloo Bay – Transect 2

Field Code	Length 1	Length 2	% Cover
ACRE	0.00	0.10	0.20
ACRF	0.10	0.30	0.40
FAVM	0.30	0.60	0.60
DCA	0.60	0.70	0.20
FAVM	0.70	1.10	0.80
ACRF	1.10	1.40	0.60
DCA	1.40	1.80	0.80
ACRT	1.80	3.10	2.60
ACRB	3.10	3.60	1.00
ACRT	3.60	4.10	1.00
ACRS	4.10	4.30	0.40
DCA	4.30	4.35	0.10
ACRT	4.35	4.80	0.90
ACRE	4.80	5.00	0.40
ACRT	5.00	7.60	5.20
DCA	7.60	7.70	0.20
DCA	7.70	7.80	0.20
ACRD	7.80	8.00	0.40
ACRS	8.00	8.50	1.00
ACRB	8.50	9.20	1.40
ACRT	9.20	9.40	0.40
ACRE	9.40	9.60	0.40
ACRE	9.60	10.10	1.00
ACRT	10.10	11.20	2.20
S	11.20	11.30	0.20
ACRT	11.30	11.70	0.80
DCA	11.70	11.75	0.10
ACRT	11.75	11.90	0.30
ACRB	11.90	12.10	0.40
ACRD	12.10	15.50	6.80
ACRF	15.50	16.00	1.00
MUSM	16.00	16.10	0.20
ACRF	16.10	16.20	0.20
DCA	16.20	16.60	0.80
ACRT	16.60	18.00	2.80
ACRS	18.00	18.10	0.20
DCA	18.10	18.20	0.20
ACRT	18.20	18.25	0.10
DCA	18.25	18.30	0.10
FAVS	18.30	18.50	0.40
ACRD	18.50	18.60	0.20
DCA	18.60	19.50	1.80
FAVM	19.50	20.10	1.20
ACRB	20.10	21.70	3.20
ACRT	21.70	22.00	0.60
DCA	22.00	22.40	0.80
ACRT	22.40	23.00	1.20
DCA	23.00	23.20	0.40
DCA	23.20	23.40	0.40
ACRT	23.40	23.80	0.80
ACRF	23.80	24.00	0.40
DCA	24.00	24.20	0.40
ACRT	24.20	24.40	0.40
S	24.40	25.30	1.80
SGH	25.30	25.40	0.20
ACRD	25.40	25.50	0.20
DCA	25.50	26.10	1.20
ACRF	26.10	26.50	0.80
DCA	26.50	27.00	1.00
ACRD	27.00	27.30	0.60
ACRB	27.30	27.50	0.40
ACRT	27.50	28.10	1.20
ACRB	28.10	29.50	2.80
ACRT	29.50	30.70	2.40
FUN	30.70	30.80	0.20
ACRE	30.80	31.20	0.80
ACRT	31.20	31.70	1.00
DCA	31.70	31.90	0.40
ACRB	31.90	32.30	0.80
DCA	32.30	32.60	0.60
ACRB	32.60	33.50	1.80
DCA	33.50	34.00	1.00
ACRD	34.00	34.20	0.40
R	34.20	34.50	0.60
ACRT	34.50	35.40	1.80
R	35.40	35.90	1.00
ACRT	35.90	36.40	1.00
R	36.40	36.60	0.40
ACRD	36.60	38.10	3.00
R	38.10	39.00	1.80
ACRS	39.00	39.10	0.20
DCA	39.10	39.30	0.40
ACRT	39.30	40.00	1.40
ACRB	40.00	40.30	0.60
DCA	40.30	40.60	0.60
ACRB	40.60	42.40	3.60
ACRT	42.40	42.70	0.60
ACRF	42.70	42.80	0.20
ACRT	42.80	48.00	10.40
DCA	48.00	48.50	1.00
ACRT	48.50	50.00	3.00

N18: Gnaraloo Bay – Transect 3

Field Code	Length 1	Length 2	% Cover
ACRT	0.00	0.30	0.60
S	0.30	0.40	0.20
DCA	0.40	1.00	1.20
ACRT	1.00	3.40	4.80
ACRB	3.40	4.10	1.40
ACRT	4.10	5.40	2.60
DCA	5.40	5.50	0.20
R	5.50	5.90	0.80
ACRD	5.90	6.10	0.40
DCA	6.10	6.50	0.80
ACRT	6.50	8.00	3.00
DCA	8.00	9.50	3.00
ACRB	9.50	9.80	0.60
ACRB	9.80	11.50	3.40
ACRF	11.50	13.30	3.60
ACRT	13.30	14.00	1.40
DCA	14.00	14.10	0.20
ACRT	14.10	14.40	0.60
ACRE	14.40	15.10	1.40
DCA	15.10	15.30	0.40
ACRF	15.30	15.40	0.20
ACRT	15.40	18.70	6.60
DCA	18.70	19.00	0.60
S	19.00	19.10	0.20
FAVM	19.10	20.00	1.80
ACRD	20.00	20.40	0.80
DCA	20.40	20.70	0.60
ACRD	20.70	21.00	0.60
S	21.00	21.10	0.20
ACRT	21.10	21.90	1.60
DCA	21.90	22.50	1.20
ACRD	22.50	25.00	5.00
DCA	25.00	25.40	0.80
ACRD	25.40	29.10	7.40
S	29.10	29.20	0.20
ACRT	29.20	34.60	10.80
ACRF	34.60	34.95	0.70
ACRT	34.95	36.30	2.70
DCA	36.30	37.00	1.40
ACRD	37.00	37.30	0.60
R	37.30	37.90	1.20
ACRD	37.90	38.00	0.20
R	38.00	38.40	0.80
ACRB	38.40	38.50	0.20
ACRT	38.50	38.90	0.80
ACRB	38.90	39.70	1.60
ACRT	39.70	40.00	0.60
R	40.00	41.20	2.40
DCA	41.20	41.90	1.40
ACRB	41.90	42.20	0.60
DCA	42.20	42.50	0.60
ACRD	42.50	43.00	1.00
DCA	43.00	43.70	1.40
ACRD	43.70	44.00	0.60
ACRB	44.00	44.20	0.40
DCA	44.20	44.30	0.20
ACRD	44.30	44.50	0.40
ACRF	44.50	44.55	0.10
ACRT	44.55	47.20	5.30
DCA	47.20	47.30	0.20
ACRT	47.30	48.00	1.40
DCA	48.00	48.70	1.40
ACRD	48.70	49.00	0.60
ACRD	49.00	50.00	2.00

APPENDIX 5: LINE INTERCEPT TRANSECT ANALYSED DATA

N19: BUNDEGI SANCTUARY

	CATEGORY PERCENTAGES				
	T1	**T2**	**T3**	**MEAN**	**S.E.**
Acroporidae					
Digitate	6.40	1.60	3.50	3.83	1.40
Tabular	4.90	14.30	5.80	8.33	2.99
Submassive	0.20	0.00	0.20	0.13	0.07
Branching	12.40	4.60	9.12	8.71	2.26
Foliose	0.00	0.00	0.30	0.10	0.10
Encrusting	0.00	0.80	0.00	0.27	0.27
TOTAL	**23.9**	**21.3**	**18.9**	**21.37**	**1.44**
Faviidae					
Massive	0.00	0.00	0.00	0.00	0.00
Submassive	0.00	0.00	0.00	0.00	0.00
Encrusting	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Pocilloporidae					
Massive	0.00	0.00	0.00	0.00	0.00
Submassive	0.00	0.00	0.40	0.13	0.23
TOTAL	**0.0**	**0.0**	**0.4**	**0.13**	**0.13**
Poritidae					
Massive	0.00	1.00	0.00	0.33	0.33
Submassive	0.00	0.00	0.00	0.00	0.00
Encrusting	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**1.0**	**0.0**	**0.33**	**0.33**
Merulinidae					
Massive	0.00	0.00	0.00	0.00	0.00
Submassive	0.00	0.00	0.00	0.00	0.00
Encrusting	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Mussidae					
Massive	0.00	0.00	0.00	0.00	0.00
Submassive	0.00	0.00	0.00	0.00	0.00
Encrusting	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Oculinidae					
Massive	0.00	0.00	0.00	0.00	0.00
Submassive	0.00	0.00	0.00	0.00	0.00
Encrusting	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Fungiidae					
Solitary, free-living corals	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Agariciidae					
Massive	0.00	0.00	0.00	0.00	0.00
Submassive	0.00	0.00	0.00	0.00	0.00
Encrusting	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Milleporidae					
Milleporidae	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**

N19: BUNDEGI SANCTUARY

	CATEGORY PERCENTAGES				
	T1	**T2**	**T3**	**MEAN**	**S.E.**
Dendrophylliidae					
Foliose	0.00	0.00	0.00	0.00	0.00
Encrusting	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Soft Coral					
SCSIN	0.00	0.00	0.00	0.00	0.00
SCSAR	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Dead Coral					
Reccently dead/bleached, white	0.00	0.00	0.00	0.00	0.00
Dead coral with relatively new algal growth, rusty brown	0.00	0.00	0.10	0.03	0.03
Standing (advanced algal growth)	21.60	29.50	65.28	38.79	13.44
Up turned plates	0.00	0.00	0.10	0.03	0.03
Broken coral fragments	0.00	0.00	0.00	0.00	0.00
TOTAL	**21.6**	**29.5**	**65.5**	**38.86**	**13.50**
Algae					
Assemblage >1species	0.00	0.00	0.00	0.00	0.00
Coralline	0.00	0.00	0.00	0.00	0.00
Halimeda	0.00	0.00	0.00	0.00	0.00
Macroalgae	0.40	0.20	0.00	0.20	0.12
Turf	0.00	0.00	0.00	0.00	0.00
Filiamentous blue-green	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.4**	**0.2**	**0.0**	**0.20**	**0.12**
Seagrass					
Halophila ovalis	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Other Lifeforms					
Sponges	0.00	0.00	0.00	0.00	0.00
Molluscs	0.00	0.00	0.00	0.00	0.00
Holothurians	0.06	0.00	0.00	0.02	0.02
Urchins	0.00	0.00	0.00	0.00	0.00
Other Lifeforms Total	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.1**	**0.0**	**0.0**	**0.02**	**0.02**
Coral Predators					
Crown of thorns starfish	0.00	0.00	0.00	0.00	0.00
Drupella	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Abiotic					
Rubble	25.60	21.00	9.40	18.67	4.82
Sand	3.50	6.70	2.00	4.07	1.39
Silt	0.00	0.00	0.00	0.00	0.00
Rock/limestone	24.94	24.94	3.80	17.89	7.05
TOTAL	**54.0**	**52.6**	**15.2**	**40.63**	**12.72**

N1: BUNDEGI

	CATEGORY PERCENTAGES				
	T1	**T2**	**T3**	**MEAN**	**S.E.**
Acroporidae					
Digitate	31.92	0.40	0.20	10.84	10.54
Tabular	0.00	0.00	0.00	0.00	0.00
Submassive	0.00	0.00	0.80	0.27	0.27
Branching	0.34	6.92	0.60	2.62	2.15
Foliose	0.00	1.90	12.34	4.75	3.84
Encrusting	0.50	0.20	0.70	0.47	0.15
TOTAL	**32.8**	**9.4**	**14.6**	**18.94**	**7.07**
Faviidae					
Massive	0.00	0.00	0.00	0.00	0.00
Submassive	0.00	0.00	0.20	0.07	0.07
Encrusting	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.2**	**0.07**	**0.07**
Pocilloporidae					
Massive	0.00	0.00	0.00	0.00	0.00
Submassive	2.56	1.10	0.00	1.22	1.28
TOTAL	**2.6**	**1.1**	**0.0**	**1.22**	**0.74**
Poritidae					
Massive	0.00	0.00	0.00	0.00	0.00
Submassive	0.00	0.00	0.00	0.00	0.00
Encrusting	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Merulinidae					
Massive	0.00	0.00	0.00	0.00	0.00
Submassive	0.00	0.00	0.00	0.00	0.00
Encrusting	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Mussidae					
Massive	0.00	0.00	0.00	0.00	0.00
Submassive	0.00	0.00	0.00	0.00	0.00
Encrusting	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Oculinidae					
Massive	0.00	0.00	0.00	0.00	0.00
Submassive	0.00	0.00	0.00	0.00	0.00
Encrusting	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Fungiidae					
Solitary, free-living corals	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Agariciidae					
Massive	0.00	0.00	0.00	0.00	0.00
Submassive	0.00	0.00	0.00	0.00	0.00
Encrusting	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Milleporidae					
Milleporidae	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**

N1: BUNDEGI

	CATEGORY PERCENTAGES				
	T1	**T2**	**T3**	**MEAN**	**S.E.**
Dendrophylliidae					
Foliose	0.00	0.00	0.00	0.00	0.00
Encrusting	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Soft Coral					
SCSIN	0.00	0.00	0.00	0.00	0.00
SCSAR	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Dead Coral					
Reccently dead/bleached, white	0.00	0.00	0.00	0.00	0.00
Dead coral with relatively new algal growth, rusty brown	0.00	0.00	0.00	0.00	0.00
Standing (advanced algal growth)	49.60	62.30	50.70	54.20	4.06
Up turned plates	0.00	0.00	0.00	0.00	0.00
Broken coral fragments	0.10	0.00	0.00	0.03	0.03
TOTAL	**49.7**	**62.3**	**50.7**	**54.23**	**4.04**
Algae					
Assemblage >1species	0.00	0.00	0.00	0.00	0.00
Coralline	0.00	0.00	0.00	0.00	0.00
Halimeda	0.00	0.00	0.00	0.00	0.00
Macroalgae	4.20	9.70	3.20	5.70	2.02
Turf	0.00	0.00	0.00	0.00	0.00
Filiamentous blue-green	0.00	0.80	0.00	0.27	0.27
TOTAL	**4.2**	**10.5**	**3.2**	**5.97**	**2.28**
Seagrass					
Halophila ovalis	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Other Lifeforms					
Sponges	0.00	0.00	0.00	0.00	0.00
Molluscs	0.00	0.00	0.00	0.00	0.00
Holothurians	0.00	0.00	0.00	0.00	0.00
Urchins	0.00	0.00	0.00	0.00	0.00
Other Lifeforms Total	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Coral Predators					
Crown of thorns starfish	0.00	0.00	0.00	0.00	0.00
Drupella	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Abiotic					
Rubble	8.20	12.10	10.20	10.17	1.13
Sand	0.00	0.00	0.00	0.00	0.00
Silt	2.70	4.80	21.96	9.82	6.10
Rock/limestone	0.00	0.00	0.00	0.00	0.00
TOTAL	**10.9**	**16.9**	**32.2**	**19.99**	**6.33**

N2: MILDURA WRECK

	CATEGORY PERCENTAGES				
	T1	**T2**	**T3**	**MEAN**	**S.E.**
Acroporidae					
Digitate	0.2	0.4	0.0	0.20	0.12
Tabular	0.0	0.0	0.0	0.00	0.00
Submassive	0.0	0.0	0.0	0.00	0.00
Branching	0.0	0.0	0.0	0.00	0.00
Foliose	0.0	0.0	0.0	0.00	0.00
Encrusting	0.0	0.0	0.0	0.00	0.00
TOTAL	**0.2**	**0.4**	**0.0**	**0.20**	**0.12**
Faviidae					
Massive	0.4	0.0	0.0	0.13	0.13
Submassive	0.6	0.0	1.5	0.70	0.44
Encrusting	1.2	0.8	0.3	0.77	0.26
TOTAL	**2.2**	**0.8**	**1.8**	**1.60**	**0.42**
Pocilloporidae					
Massive	0.0	0.0	0.0	0.00	0.00
Submassive	0.0	0.0	0.0	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Poritidae					
Massive	0.0	0.0	0.0	0.00	0.00
Submassive	0.0	0.0	0.0	0.00	0.00
Encrusting	0.0	0.0	0.0	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Merulinidae					
Massive	0.0	0.0	0.0	0.00	0.00
Submassive	0.0	0.0	0.0	0.00	0.00
Encrusting	0.0	0.0	0.0	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Mussidae					
Massive	0.0	0.0	0.0	0.00	0.00
Submassive	0.0	0.0	0.0	0.00	0.00
Encrusting	0.0	0.0	0.0	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Oculinidae					
Massive	0.0	0.0	0.0	0.00	0.00
Submassive	0.0	0.0	0.0	0.00	0.00
Encrusting	0.0	0.0	0.0	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Fungiidae					
Solitary, free-living corals	0.0	0.0	0.0	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Agariciidae					
Massive	0.0	0.0	0.0	0.00	0.00
Submassive	0.0	0.0	0.0	0.00	0.00
Encrusting	0.0	0.0	0.0	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Milleporidae					
Milleporidae	0.0	0.0	0.0	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**

N2: MILDURA WRECK

	CATEGORY PERCENTAGES				
	T1	**T2**	**T3**	**MEAN**	**S.E.**
Dendrophylliidae					
Foliose	0.0	0.0	0.0	0.00	0.00
Encrusting	0.0	0.0	0.0	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Soft Coral					
SCSIN	0.2	0.0	0.4	0.20	0.12
SCSAR	0.0	0.0	0.0	0.00	0.00
TOTAL	**0.2**	**0.0**	**0.4**	**0.20**	**0.12**
Dead Coral					
Recently dead/bleached, white	0.0	0.0	0.0	0.00	0.00
Dead coral with relatively new algal growth, rusty brown	0.0	0.0	0.0	0.00	0.00
Standing (advanced algal growth)	0.0	0.0	0.0	0.00	0.00
Up turned plates	0.0	0.0	0.0	0.00	0.00
Broken coral fragments	0.0	0.0	0.0	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Algae					
Assemblage >1species	0.0	0.0	0.0	0.00	0.00
Coralline	0.0	0.0	0.0	0.00	0.00
Halimeda	0.0	0.0	0.0	0.00	0.00
Macroalgae	9.5	22.0	72.1	34.55	19.12
Turf	0.0	0.0	0.0	0.00	0.00
Filiamentous blue-green	0.0	0.0	0.0	0.00	0.00
TOTAL	**9.5**	**22.0**	**72.1**	**34.55**	**19.12**
Seagrass					
Halophila ovalis	3.9	0.0	0.0	1.30	1.30
TOTAL	**3.9**	**0.0**	**0.0**	**1.3**	**1.3**
Other Lifeforms					
Sponges	0.2	0.0	0.0	0.07	0.07
Molluscs	0.6	0.0	0.0	0.20	0.20
Holothurians	0.0	0.0	0.0	0.00	0.00
Urchins	0.7	0.4	0.0	0.37	0.20
Other Lifeforms Total	0.0	0.2	0.0	0.07	0.07
TOTAL	**1.5**	**0.6**	**0.0**	**0.70**	**0.44**
Coral Predators					
Crown of thorns starfish	0.0	0.0	0.0	0.00	0.00
Drupella	0.0	0.0	0.0	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Abiotic					
Rubble	0.0	0.0	0.0	0.00	0.00
Sand	0.2	0.0	0.0	0.07	0.07
Silt	0.0	0.0	0.0	0.00	0.00
Rock/limestone	79.3	76.2	25.1	60.20	17.57
TOTAL	**79.5**	**76.2**	**25.1**	**60.27**	**17.61**

N3: VLAMINGH HEAD

	CATEGORY PERCENTAGES				
	T1	**T2**	**T3**	**MEAN**	**S.E.**
Acroporidae					
Digitate	0.80	0.40	1.1.	0.60	0.16
Tabular	0.00	0.00	0.00	0.00	0.00
Submassive	0.00	0.00	0.10	0.03	0.03
Branching	0.00	0.00	0.00	0.00	0.00
Foliose	0.00	0.00	0.00	0.00	0.00
Encrusting	0.00	0.00	0.20	0.07	0.07
TOTAL	**0.8**	**0.4**	**0.3**	**0.50**	**0.15**
Faviidae					
Massive	0.00	0.00	0.00	0.00	0.00
Submassive	0.20	1.00	0.00	0.40	0.31
Encrusting	0.10	0.00	0.50	0.20	0.15
TOTAL	**0.3**	**1.0**	**0.5**	**0.60**	**0.21**
Pocilloporidae					
Massive	0.00	0.00	0.00	0.00	0.00
Submassive	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Poritidae					
Massive	0.00	0.00	0.00	0.00	0.00
Submassive	0.00	0.00	0.00	0.00	0.00
Encrusting	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Merulinidae					
Massive	0.00	0.00	0.00	0.00	0.00
Submassive	0.00	0.00	0.00	0.00	0.00
Encrusting	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Mussidae					
Massive	0.00	0.00	0.00	0.00	0.00
Submassive	0.00	0.00	0.00	0.00	0.00
Encrusting	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Oculinidae					
Massive	0.00	0.00	0.00	0.00	0.00
Submassive	0.00	0.00	0.00	0.00	0.00
Encrusting	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Fungiidae					
Solitary, free-living corals	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Agariciidae					
Massive	0.00	0.00	0.00	0.00	0.00
Submassive	0.00	0.00	0.00	0.00	0.00
Encrusting	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Milleporidae					
Milleporidae	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**

N3: VLAMINGH HEAD

	CATEGORY PERCENTAGES				
	T1	**T2**	**T3**	**MEAN**	**S.E.**
Dendrophylliidae					
Foliose	0.00	0.00	0.00	0.00	0.00
Encrusting	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Soft Coral					
SCSIN	0.00	0.40	0.70	0.37	0.20
SCSAR	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.4**	**0.7**	**0.37**	**0.20**
Dead Coral					
Recently dead/bleached, white	0.00	0.00	0.00	0.00	0.00
Dead coral with relatively new algal growth, rusty brown	0.00	0.00	0.00	0.00	0.00
Standing (advanced algal growth)	0.70	0.00	0.00	0.23	0.23
Up turned plates	0.00	0.00	0.00	0.00	0.00
Broken coral fragments	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.7**	**0.0**	**0.0**	**0.23**	**0.23**
Algae					
Assemblage >1species	0.00	0.00	0.00	0.00	0.00
Coralline	0.00	0.00	0.00	0.00	0.00
Halimeda	0.00	0.00	0.00	0.00	0.00
Macroalgae	0.00	0.00	0.00	0.00	0.00
Turf	0.00	0.00	0.00	0.00	0.00
Filamentous blue-green	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Seagrass					
Halophila ovalis	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Other Lifeforms					
Sponges	0.00	0.40	0.50	0.30	0.15
Molluscs	0.00	0.00	0.00	0.00	0.00
Holothurians	0.00	0.00	0.00	0.00	0.00
Urchins	0.30	0.20	0.20	0.23	0.03
Other Lifeforms Total	0.00	0.10	0.00	0.03	0.03
TOTAL	**0.3**	**0.7**	**0.7**	**0.57**	**0.13**
Coral Predators					
Crown of thorns starfish	0.00	0.00	0.00	0.00	0.00
Drupella	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Abiotic					
Rubble	0.00	0.00	0.00	0.00	0.00
Sand	22.50	0.00	5.80	9.43	6.74
Silt	0.00	0.00	0.00	0.00	0.00
Rock/limestone	75.40	97.50	90.90	87.93	6.55
TOTAL	**97.9**	**97.5**	**96.7**	**97.37**	**0.35**

N20: JURABI PT.

	CATEGORY PERCENTAGES				
	T1	**T2**	**T3**	**MEAN**	**S.E.**
Acroporidae					
Digitate	2.60	10.00	1.40	4.67	2.69
Tabular	0.00	1.20	0.00	0.40	0.40
Submassive	0.00	0.00	0.00	0.00	0.00
Branching	0.00	0.00	0.00	0.00	0.00
Foliose	0.00	0.00	0.00	0.00	0.00
Encrusting	2.00	0.40	1.20	1.20	0.46
TOTAL	**4.6**	**11.6**	**2.6**	**6.27**	**2.73**
Faviidae					
Massive	0.00	0.40	0.20	0.20	0.12
Submassive	0.40	1.80	2.00	1.40	0.50
Encrusting	0.84	2.20	0.10	1.05	0.61
TOTAL	**1.2**	**4.4**	**2.3**	**2.65**	**0.93**
Pocilloporidae					
Massive	0.00	0.00	0.00	0.00	0.00
Submassive	0.40	0.40	1.00	0.60	0.35
TOTAL	**0.4**	**0.4**	**1.0**	**0.60**	**0.20**
Poritidae					
Massive	0.00	0.00	0.00	0.00	0.00
Submassive	0.00	0.00	0.00	0.00	0.00
Encrusting	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Merulinidae					
Massive	0.00	0.00	0.00	0.00	0.00
Submassive	0.00	0.00	0.00	0.00	0.00
Encrusting	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Mussidae					
Massive	0.00	0.00	0.00	0.00	0.00
Submassive	0.00	0.00	0.00	0.00	0.00
Encrusting	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Oculinidae					
Massive	0.00	0.00	0.00	0.00	0.00
Submassive	0.00	0.00	0.00	0.00	0.00
Encrusting	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Fungiidae					
Solitary, free-living corals	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Agariciidae					
Massive	0.00	0.00	0.00	0.00	0.00
Submassive	0.00	0.00	0.00	0.00	0.00
Encrusting	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Milleporidae					
Milleporidae	1.60	0.40	0.20	0.73	0.44
TOTAL	**1.6**	**0.4**	**0.2**	**0.73**	**0.44**

N20: JURABI PT.

	CATEGORY PERCENTAGES				
	T1	**T2**	**T3**	**MEAN**	**S.E.**
Dendrophylliidae					
Foliose	0.00	0.00	0.00	0.00	0.00
Encrusting	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Soft Coral					
SCSIN	4.90	4.20	4.70	4.60	0.21
SCSAR	0.00	0.00	0.00	0.00	0.00
TOTAL	**4.9**	**4.2**	**4.7**	**4.60**	**0.21**
Dead Coral					
Recently dead/bleached, white	0.00	0.00	0.00	0.00	0.00
Dead coral with relatively new algal growth, rusty brown	0.00	0.00	0.00	0.00	0.00
Standing (advanced algal growth)	78.66	72.60	69.40	73.55	2.72
Up turned plates	0.00	0.00	0.00	0.00	0.00
Broken coral fragments	0.00	0.00	0.00	0.00	0.00
TOTAL	**78.7**	**72.6**	**69.4**	**73.55**	**2.72**
Algae					
Assemblage >1species	0.00	0.00	0.00	0.00	0.00
Coralline	0.00	0.00	0.00	0.00	0.00
Halimeda	0.00	0.00	0.00	0.00	0.00
Macroalgae	0.00	0.00	0.00	0.00	0.00
Turf	0.00	0.00	0.00	0.00	0.00
Filamentous blue-green	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Seagrass					
Halophila ovalis	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Other Lifeforms					
Sponges	0.00	0.20	0.00	0.07	0.07
Molluscs	0.00	0.00	0.00	0.00	0.00
Holothurians	0.00	0.00	0.00	0.00	0.00
Urchins	0.00	0.00	0.00	0.00	0.00
Other Lifeforms Total	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.2**	**0.0**	**0.07**	**0.07**
Coral Predators					
Crown of thorns starfish	0.00	0.00	0.00	0.00	0.00
Drupella	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Abiotic					
Rubble	0.00	2.20	0.00	0.73	0.73
Sand	0.00	0.00	2.40	0.80	0.80
Silt	0.00	0.00	0.00	0.00	0.00
Rock/limestone	8.60	4.00	17.40	10.00	3.93
TOTAL	**8.6**	**6.2**	**19.8**	**11.53**	**4.19**

N5: TANTABIDDI

	CATEGORY PERCENTAGES				
	T1	**T2**	**T3**	**MEAN**	**S.E.**
Acroporidae					
Digitate	5.40	4.30	0.40	3.37	1.52
Tabular	1.60	0.00	0.00	0.53	0.53
Submassive	0.00	0.00	2.50	0.83	0.83
Branching	1.80	0.00	0.00	0.60	0.60
Foliose	0.00	0.00	0.00	0.00	0.00
Encrusting	0.60	0.00	0.10	0.23	0.19
TOTAL	**9.4**	**4.3**	**3.0**	**5.57**	**1.95**
Faviidae					
Massive	0.00	0.10	0.00	0.03	0.03
Submassive	1.40	0.00	0.10	0.50	0.45
Encrusting	0.00	0.00	0.00	0.00	0.00
TOTAL	**1.4**	**0.1**	**0.1**	**0.53**	**0.43**
Pocilloporidae					
Massive	0.00	0.00	0.00	0.00	0.00
Submassive	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Poritidae					
Massive	1.00	3.40	0.64	1.68	0.87
Submassive	0.00	0.00	0.00	0.00	0.00
Encrusting	0.00	0.00	0.00	0.00	0.00
TOTAL	**1.0**	**3.4**	**0.6**	**1.68**	**0.87**
Merulinidae					
Massive	0.00	0.00	0.00	0.00	0.00
Submassive	0.00	0.00	0.00	0.00	0.00
Encrusting	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Mussidae					
Massive	0.00	0.00	0.00	0.00	0.00
Submassive	0.00	0.00	0.00	0.00	0.00
Encrusting	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Oculinidae					
Massive	0.00	0.00	0.00	0.00	0.00
Submassive	0.00	0.00	0.00	0.00	0.00
Encrusting	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Fungiidae					
Solitary, free-living corals	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Agariciidae					
Massive	0.00	0.00	0.00	0.00	0.00
Submassive	0.00	0.00	0.00	0.00	0.00
Encrusting	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Milleporidae					
Milleporidae	1.00	0.40	3.04	1.48	0.80
TOTAL	**1.0**	**0.4**	**3.0**	**1.48**	**0.80**

N5: TANTABIDDI

	CATEGORY PERCENTAGES				
	T1	**T2**	**T3**	**MEAN**	**S.E.**
Dendrophylliidae					
Foliose	0.00	0.00	0.00	0.00	0.00
Encrusting	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Soft Coral					
SCSIN	0.20	0.00	0.00	0.07	0.07
SCSAR	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.2**	**0.0**	**0.0**	**0.07**	**0.07**
Dead Coral					
Recently dead/bleached, white	0.00	0.00	0.00	0.00	0.00
Dead coral with relatively new algal growth, rusty brown	0.00	0.00	0.00	0.00	0.00
Standing (advanced algal growth)	19.00	14.70	13.96	15.89	1.57
Up turned plates	0.00	0.00	0.00	0.00	0.00
Broken coral fragments	0.00	0.00	0.00	0.00	0.00
TOTAL	**19.0**	**14.7**	**14.0**	**15.89**	**1.57**
Algae					
Assemblage >1species	0.00	0.00	0.00	0.00	0.00
Coralline	0.00	0.00	0.00	0.00	0.00
Halimeda	0.00	0.00	0.00	0.00	0.00
Macroalgae	0.00	0.00	0.00	0.00	0.00
Turf	0.00	0.00	0.00	0.00	0.00
Filamentous blue-green	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Seagrass					
Halophila ovalis	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Other Lifeforms					
Sponges	0.20	0.00	0.00	0.07	0.07
Molluscs	0.00	0.00	0.00	0.00	0.00
Holothurians	0.00	0.00	0.00	0.00	0.00
Urchins	0.00	0.00	0.05	0.02	0.02
Other Lifeforms Total	0.00	0.10	0.00	0.03	0.03
TOTAL	**0.2**	**0.1**	**0.1**	**0.12**	**0.04**
Coral Predators					
Crown of thorns starfish	0.00	0.00	0.00	0.00	0.00
Drupella	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Abiotic					
Rubble	8.40	38.30	2.90	16.53	11.00
Sand	3.80	2.00	1.40	2.40	0.72
Silt	0.00	0.00	0.00	0.00	0.00
Rock/limestone	55.60	36.70	74.60	55.63	10.94
TOTAL	**67.8**	**77.0**	**78.9**	**74.57**	**3.43**

N6: NED'S CAMP/MESA

	CATEGORY PERCENTAGES				
	T1	**T2**	**T3**	**MEAN**	**S.E.**
Acroporidae					
Digitate	2.80	0.80	0.80	1.47	0.67
Tabular	1.00	0.10	0.00	0.37	0.32
Submassive	0.00	0.20	0.00	0.07	0.07
Branching	3.50	0.00	0.00	1.17	1.17
Foliose	0.00	0.00	0.00	0.00	0.00
Encrusting	0.40	0.10	0.00	0.17	0.12
TOTAL	**7.7**	**1.2**	**0.8**	**3.23**	**2.24**
Faviidae					
Massive	0.20	0.00	0.00	0.07	0.07
Submassive	0.80	1.88	0.98	1.22	0.33
Encrusting	0.00	0.00	0.00	0.00	0.00
TOTAL	**1.0**	**1.9**	**1.0**	**1.29**	**0.30**
Pocilloporidae					
Massive	0.00	0.00	0.00	0.00	0.00
Submassive	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Poritidae					
Massive	0.00	0.00	0.00	0.00	0.00
Submassive	0.00	0.00	0.00	0.00	0.00
Encrusting	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Merulinidae					
Massive	0.00	0.00	0.00	0.00	0.00
Submassive	0.00	0.00	0.00	0.00	0.00
Encrusting	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Mussidae					
Massive	0.00	0.00	0.00	0.00	0.00
Submassive	0.00	0.00	0.00	0.00	0.00
Encrusting	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Oculinidae					
Massive	0.00	0.00	0.00	0.00	0.00
Submassive	0.00	0.00	0.00	0.00	0.00
Encrusting	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Fungiidae					
Solitary, free-living corals	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Agariciidae					
Massive	0.00	0.00	0.00	0.00	0.00
Submassive	0.00	0.00	0.00	0.00	0.00
Encrusting	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Milleporidae					
Milleporidae	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**

N6: NED'S CAMP/MESA

	CATEGORY PERCENTAGES				
	T1	**T2**	**T3**	**MEAN**	**S.E.**
Dendrophylliidae					
Foliose	0.00	0.00	0.00	0.00	0.00
Encrusting	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Soft Coral					
SCSIN	0.00	0.00	0.60	0.20	0.20
SCSAR	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.6**	**0.20**	**0.20**
Dead Coral					
Recently dead/bleached, white	0.00	0.00	0.00	0.00	0.00
Dead coral with relatively new algal growth, rusty brown	0.00	0.00	0.00	0.00	0.00
Standing (advanced algal growth)	16.50	44.00	34.60	31.70	8.07
Up turned plates	0.00	0.00	0.00	0.00	0.00
Broken coral fragments	0.00	0.00	0.00	0.00	0.00
TOTAL	**16.5**	**44.0**	**34.6**	**31.70**	**8.07**
Algae					
Assemblage >1species	0.00	4.40	0.00	1.47	1.47
Coralline	0.00	0.00	0.00	0.00	0.00
Halimeda	0.00	0.00	0.00	0.00	0.00
Macroalgae	2.10	6.10	0.00	2.73	1.79
Turf	0.00	0.00	9.36	3.12	3.12
Filamentous blue-green	0.00	0.80	0.00	0.27	0.27
TOTAL	**2.1**	**11.3**	**9.4**	**7.59**	**2.80**
Seagrass					
Halophila ovalis	5.20	0.20	0.00	1.80	1.70
TOTAL	**5.2**	**0.2**	**0.0**	**1.8**	**1.7**
Other Lifeforms					
Sponges	0.00	0.00	0.00	0.00	0.00
Molluscs	0.00	0.60	0.00	0.20	0.20
Holothurians	0.00	0.00	0.00	0.00	0.00
Urchins	0.00	0.00	0.00	0.00	0.00
Other Lifeforms Total	0.00	0.00	0.10	0.03	0.03
TOTAL	**0.0**	**0.6**	**0.1**	**0.23**	**0.19**
Coral Predators					
Crown of thorns starfish	0.00	0.00	0.00	0.00	0.00
Drupella	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Abiotic					
Rubble	1.60	0.80	0.00	0.80	0.46
Sand	37.70	15.40	7.66	20.25	9.00
Silt	0.00	0.00	0.00	0.00	0.00
Rock/limestone	27.00	24.26	45.90	32.39	6.80
TOTAL	**66.3**	**40.5**	**53.6**	**53.44**	**7.46**

N7: TURQUOISE BAY

	CATEGORY PERCENTAGES				
	T1	**T2**	**T3**	**MEAN**	**S.E.**
Acroporidae					
Digitate	9.30	11.20	6.90	9.13	1.24
Tabular	7.80	5.90	1.60	5.10	1.83
Submassive	0.80	1.20	0.00	0.67	0.35
Branching	0.00	0.00	0.00	0.00	0.00
Foliose	0.00	0.00	0.00	0.00	0.00
Encrusting	0.00	0.20	0.00	0.07	0.07
TOTAL	**17.9**	**18.5**	**8.5**	**14.97**	**3.24**
Faviidae					
Massive	0.00	0.00	0.20	0.07	0.07
Submassive	0.68	0.20	0.20	0.36	0.16
Encrusting	0.00	0.20	0.00	0.07	0.07
TOTAL	**0.7**	**0.4**	**0.4**	**0.49**	**0.09**
Pocilloporidae					
Massive	0.00	0.00	0.00	0.00	0.00
Submassive	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Poritidae					
Massive	0.00	0.00	0.00	0.00	0.00
Submassive	0.00	0.00	0.00	0.00	0.00
Encrusting	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Merulinidae					
Massive	0.00	0.00	0.00	0.00	0.00
Submassive	0.00	0.00	0.00	0.00	0.00
Encrusting	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Mussidae					
Massive	0.00	0.00	0.00	0.00	0.00
Submassive	0.00	0.00	0.00	0.00	0.00
Encrusting	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Oculinidae					
Massive	0.00	0.00	0.00	0.00	0.00
Submassive	0.00	0.00	0.00	0.00	0.00
Encrusting	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Fungiidae					
Solitary, free-living corals	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Agariciidae					
Massive	0.00	0.00	0.00	0.00	0.00
Submassive	0.00	0.00	0.00	0.00	0.00
Encrusting	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Milleporidae					
Milleporidae	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**

N7: TURQUOISE BAY

	CATEGORY PERCENTAGES				
	T1	**T2**	**T3**	**MEAN**	**S.E.**
Dendrophylliidae					
Foliose	0.00	0.00	0.00	0.00	0.00
Encrusting	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Soft Coral					
SCSIN	0.00	0.90	0.00	0.30	0.30
SCSAR	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.9**	**0.0**	**0.30**	**0.30**
Dead Coral					
Recently dead/bleached, white	0.32	0.04	0.00	0.12	0.10
Dead coral with relatively new algal growth, rusty brown	0.78	0.16	0.00	0.31	0.24
Standing (advanced algal growth)	61.20	70.90	46.20	59.43	7.18
Up turned plates	0.00	0.00	0.00	0.00	0.00
Broken coral fragments	0.00	0.00	0.00	0.00	0.00
TOTAL	**62.3**	**71.1**	**46.2**	**59.87**	**7.29**
Algae					
Assemblage >1species	0.00	0.00	1.40	0.47	0.47
Coralline	0.00	0.00	0.00	0.00	0.00
Halimeda	0.00	0.00	0.00	0.00	0.00
Macroalgae	2.20	1.80	0.60	1.53	0.48
Turf	0.00	0.00	0.00	0.00	0.00
Filamentous blue-green	0.00	0.00	0.00	0.00	0.00
TOTAL	**2.2**	**1.8**	**2.0**	**2.00**	**0.12**
Seagrass					
Halophila ovalis	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Other Lifeforms					
Sponges	0.00	0.00	0.00	0.00	0.00
Molluscs	0.00	0.00	0.00	0.00	0.00
Holothurians	0.00	0.00	0.40	0.13	0.13
Urchins	0.00	0.00	0.00	0.00	0.00
Other Lifeforms Total	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.4**	**0.13**	**0.13**
Coral Predators					
Crown of thorns starfish	0.00	0.00	0.00	0.00	0.00
Drupella	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Abiotic					
Rubble	0.50	0.00	1.40	0.63	0.41
Sand	4.80	6.00	4.60	5.13	0.44
Silt	0.00	0.00	0.00	0.00	0.00
Rock/limestone	11.70	0.40	36.50	16.20	10.66
TOTAL	**17.0**	**6.4**	**42.5**	**21.97**	**10.71**

N8: OSPREY

	CATEGORY PERCENTAGES				
	T1	**T2**	**T3**	**MEAN**	**S.E.**
Acroporidae					
Digitate	2.40	0.40	0.20	1.00	0.70
Tabular	0.00	1.00	0.00	0.33	0.33
Submassive	0.60	0.00	0.00	0.20	0.20
Branching	0.00	0.00	0.00	0.00	0.00
Foliose	0.00	0.00	0.00	0.00	0.00
Encrusting	0.00	0.00	0.00	0.00	0.00
TOTAL	**3.0**	**1.4**	**0.2**	**1.53**	**0.81**
Faviidae					
Massive	0.60	0.00	0.00	0.20	0.20
Submassive	0.40	0.24	0.26	0.30	0.05
Encrusting	0.00	0.00	0.00	0.00	0.00
TOTAL	**1.0**	**0.2**	**0.3**	**0.50**	**0.25**
Pocilloporidae					
Massive	0.00	0.00	0.00	0.00	0.00
Submassive	0.00	0.00	0.40	0.13	0.23
TOTAL	**0.0**	**0.0**	**0.4**	**0.13**	**0.13**
Poritidae					
Massive	0.00	0.00	0.00	0.00	0.00
Submassive	0.00	0.00	0.00	0.00	0.00
Encrusting	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Merulinidae					
Massive	0.00	0.00	0.00	0.00	0.00
Submassive	0.00	0.00	0.00	0.00	0.00
Encrusting	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Mussidae					
Massive	0.00	0.00	0.00	0.00	0.00
Submassive	0.00	0.00	0.00	0.00	0.00
Encrusting	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Oculinidae					
Massive	0.00	0.00	0.00	0.00	0.00
Submassive	0.00	0.00	0.00	0.00	0.00
Encrusting	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Fungiidae					
Solitary, free-living corals	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Agariciidae					
Massive	0.00	0.00	0.00	0.00	0.00
Submassive	0.00	0.00	0.00	0.00	0.00
Encrusting	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Milleporidae					
Milleporidae	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**

N8: OSPREY

	CATEGORY PERCENTAGES				
	T1	**T2**	**T3**	**MEAN**	**S.E.**
Dendrophylliidae					
Foliose	0.00	0.00	0.00	0.00	0.00
Encrusting	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Soft Coral					
SCSIN	0.00	0.00	0.00	0.00	0.00
SCSAR	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Dead Coral					
Recently dead/bleached, white	0.00	0.10	0.00	0.03	0.03
Dead coral with relatively new algal growth, rusty brown	0.00	0.10	0.00	0.03	0.03
Standing (advanced algal growth)	77.00	80.20	50.84	69.35	9.30
Up turned plates	0.00	0.00	0.00	0.00	0.00
Broken coral fragments	0.00	0.00	0.00	0.00	0.00
TOTAL	**77.0**	**80.4**	**50.8**	**69.41**	**9.34**
Algae					
Assemblage >1species	1.80	0.00	0.00	0.60	0.60
Coralline	0.00	0.00	0.00	0.00	0.00
Halimeda	0.00	0.00	0.00	0.00	0.00
Macroalgae	1.00	0.60	0.20	0.60	0.23
Turf	0.00	0.00	0.00	0.00	0.00
Filamentous blue-green	0.00	0.00	0.00	0.00	0.00
TOTAL	**2.8**	**0.6**	**0.2**	**1.20**	**0.81**
Seagrass					
Halophila ovalis	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Other Lifeforms					
Sponges	0.00	0.00	0.00	0.00	0.00
Molluscs	0.00	0.00	0.00	0.00	0.00
Holothurians	0.40	0.00	0.00	0.13	0.13
Urchins	0.00	0.00	0.00	0.00	0.00
Other Lifeforms Total	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.4**	**0.0**	**0.0**	**0.13**	**0.13**
Coral Predators					
Crown of thorns starfish	0.00	0.00	0.00	0.00	0.00
Drupella	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Abiotic					
Rubble	0.40	3.16	28.00	10.52	8.78
Sand	14.00	5.80	6.30	8.70	2.65
Silt	0.00	0.00	0.00	0.00	0.00
Rock/limestone	0.60	3.40	13.80	5.93	4.02
TOTAL	**15.0**	**12.4**	**48.1**	**25.15**	**11.50**

N21: YARDIE CREEK

	CATEGORY PERCENTAGES				
	T1	**T2**	**T3**	**MEAN**	**S.E.**
Acroporidae					
Digitate	1.60	3.14	2.44	2.39	0.45
Tabular	0.00	0.00	0.20	0.07	0.07
Submassive	0.00	0.20	0.00	0.07	0.07
Branching	0.00	0.00	0.00	0.00	0.00
Foliose	0.00	0.00	0.00	0.00	0.00
Encrusting	0.00	1.20	2.40	1.20	0.69
TOTAL	**1.6**	**4.5**	**5.0**	**3.73**	**1.07**
Faviidae					
Massive	0.00	0.00	0.74	0.25	0.25
Submassive	1.00	0.00	0.00	0.33	0.33
Encrusting	0.00	0.00	0.00	0.00	0.00
TOTAL	**1.0**	**0.0**	**0.7**	**0.58**	**0.30**
Pocilloporidae					
Massive	0.00	0.00	0.00	0.00	0.00
Submassive	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Poritidae					
Massive	0.00	0.00	0.00	0.00	0.00
Submassive	0.00	0.00	0.00	0.00	0.00
Encrusting	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Merulinidae					
Massive	0.00	0.00	0.00	0.00	0.00
Submassive	0.00	0.00	0.00	0.00	0.00
Encrusting	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Mussidae					
Massive	0.00	0.00	0.00	0.00	0.00
Submassive	0.00	0.00	0.00	0.00	0.00
Encrusting	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Oculinidae					
Massive	0.00	0.00	0.00	0.00	0.00
Submassive	0.00	0.00	0.00	0.00	0.00
Encrusting	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Fungiidae					
Solitary, free-living corals	0.00	0.20	0.00	0.07	0.07
TOTAL	**0.0**	**0.2**	**0.0**	**0.07**	**0.07**
Agariciidae					
Massive	0.00	0.00	0.00	0.00	0.00
Submassive	0.00	0.00	0.00	0.00	0.00
Encrusting	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Milleporidae					
Milleporidae	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**

N21: YARDIE CREEK

	CATEGORY PERCENTAGES				
	T1	**T2**	**T3**	**MEAN**	**S.E.**
Dendrophylliidae					
Foliose	0.00	0.00	0.00	0.00	0.00
Encrusting	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Soft Coral					
SCSIN	0.00	0.20	0.00	0.07	0.07
SCSAR	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.2**	**0.0**	**0.07**	**0.07**
Dead Coral					
Recently dead/bleached, white	0.00	0.00	0.00	0.00	0.00
Dead coral with relatively new algal growth, rusty brown	0.00	0.00	0.04	0.01	0.01
Standing (advanced algal growth)	86.80	77.66	89.08	84.51	3.49
Up turned plates	0.00	0.00	0.00	0.00	0.00
Broken coral fragments	0.00	0.00	0.00	0.00	0.00
TOTAL	**86.8**	**77.7**	**89.1**	**84.53**	**3.50**
Algae					
Assemblage >1species	0.00	0.00	0.40	0.13	0.13
Coralline	0.00	0.00	0.00	0.00	0.00
Halimeda	0.00	0.00	0.00	0.00	0.00
Macroalgae	0.20	0.20	0.40	0.27	0.07
Turf	0.00	0.00	0.00	0.00	0.00
Filamentous blue-green	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.2**	**0.2**	**0.8**	**0.40**	**0.20**
Seagrass					
Halophila ovalis	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Other Lifeforms					
Sponges	0.00	0.00	0.00	0.00	0.00
Molluscs	0.00	0.00	0.00	0.00	0.00
Holothurians	0.00	0.00	0.00	0.00	0.00
Urchins	0.00	0.00	0.00	0.00	0.00
Other Lifeforms Total	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Coral Predators					
Crown of thorns starfish	0.00	0.00	0.00	0.00	0.00
Drupella	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Abiotic					
Rubble	0.00	0.00	0.00	0.00	0.00
Sand	0.60	0.20	0.30	0.37	0.12
Silt	0.00	0.00	0.00	0.00	0.00
Rock/limestone	9.80	17.00	5.36	10.72	3.39
TOTAL	**10.4**	**17.2**	**5.7**	**11.09**	**3.35**

N10: LEFROY BAY

	CATEGORY PERCENTAGES				
	T1	**T2**	**T3**	**MEAN**	**S.E.**
Acroporidae					
Digitate	1.00	2.90	2.80	2.23	0.62
Tabular	3.60	1.60	0.20	1.80	0.99
Submassive	0.60	0.00	0.00	0.20	0.20
Branching	0.00	0.00	0.00	0.00	0.00
Foliose	0.00	0.00	0.00	0.00	0.00
Encrusting	0.60	0.70	0.20	0.50	0.15
TOTAL	**5.8**	**5.2**	**3.2**	**4.73**	**0.79**
Faviidae					
Massive	2.64	2.40	1.15	2.06	0.46
Submassive	3.04	0.40	0.00	1.15	0.95
Encrusting	0.00	0.00	0.40	0.13	0.13
TOTAL	**5.7**	**2.8**	**1.6**	**3.34**	**1.22**
Pocilloporidae					
Massive	0.00	0.00	0.00	0.00	0.00
Submassive	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Poritidae					
Massive	0.00	0.00	0.00	0.00	0.00
Submassive	0.00	0.00	0.00	0.00	0.00
Encrusting	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Merulinidae					
Massive	0.00	0.00	0.00	0.00	0.00
Submassive	0.00	0.00	0.00	0.00	0.00
Encrusting	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Mussidae					
Massive	0.00	0.00	0.00	0.00	0.00
Submassive	0.00	0.00	0.00	0.00	0.00
Encrusting	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Oculinidae					
Massive	0.00	0.00	0.00	0.00	0.00
Submassive	0.00	0.00	0.00	0.00	0.00
Encrusting	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Fungiidae					
Solitary, free-living corals	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Agariciidae					
Massive	0.00	0.00	0.00	0.00	0.00
Submassive	0.00	0.00	0.00	0.00	0.00
Encrusting	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Milleporidae					
Milleporidae	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**

N10: LEFROY BAY

	CATEGORY PERCENTAGES				
	T1	**T2**	**T3**	**MEAN**	**S.E.**
Dendrophylliidae					
Foliose	0.00	0.00	0.00	0.00	0.00
Encrusting	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Soft Coral					
SCSIN	3.00	16.50	3.60	7.70	4.40
SCSAR	0.00	0.00	0.00	0.00	0.00
TOTAL	**3.0**	**16.5**	**3.6**	**7.70**	**4.40**
Dead Coral					
Recently dead/bleached, white	0.00	0.00	0.00	0.00	0.00
Dead coral with relatively new algal growth, rusty brown	0.00	0.00	0.00	0.00	0.00
Standing (advanced algal growth)	59.66	50.00	81.30	63.65	9.25
Up turned plates	0.00	0.00	0.00	0.00	0.00
Broken coral fragments	0.00	0.00	0.00	0.00	0.00
TOTAL	**59.7**	**50.0**	**81.3**	**63.65**	**9.25**
Algae					
Assemblage >1species	0.00	0.40	0.00	0.13	0.13
Coralline	0.00	0.00	0.00	0.00	0.00
Halimeda	0.00	0.00	0.00	0.00	0.00
Macroalgae	3.90	7.40	5.00	5.43	1.03
Turf	0.00	0.00	0.00	0.00	0.00
Filamentous blue-green	0.00	0.00	0.00	0.00	0.00
TOTAL	**3.9**	**7.8**	**5.0**	**5.57**	**1.16**
Seagrass					
Halophila ovalis	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Other Lifeforms					
Sponges	0.00	0.00	0.00	0.00	0.00
Molluscs	0.00	0.00	0.20	0.07	0.07
Holothurians	0.10	0.00	0.20	0.10	0.06
Urchins	0.00	0.00	0.00	0.00	0.00
Other Lifeforms Total	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.1**	**0.0**	**0.4**	**0.17**	**0.12**
Coral Predators					
Crown of thorns starfish	0.00	0.00	0.00	0.00	0.00
Drupella	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Abiotic					
Rubble	1.60	0.00	2.20	1.27	0.66
Sand	20.80	15.70	21.60	19.37	1.85
Silt	0.00	0.00	0.00	0.00	0.00
Rock/limestone	0.60	2.00	0.00	0.87	0.59
TOTAL	**23.0**	**17.7**	**23.8**	**21.50**	**1.91**

N25: PT. BILLY

	CATEGORY PERCENTAGES				
	T1	**T2**	**T3**	**MEAN**	**S.E.**
Acroporidae					
Digitate	12.90	6.40	2.00	7.10	3.17
Tabular	3.60	3.60	0.20	2.47	1.13
Submassive	0.40	0.00	0.00	0.13	0.13
Branching	0.00	0.00	0.00	0.00	0.00
Foliose	0.00	0.00	0.20	0.07	0.07
Encrusting	0.00	0.00	0.00	0.00	0.00
TOTAL	**16.9**	**10.0**	**2.4**	**9.77**	**4.19**
Faviidae					
Massive	1.70	0.00	0.00	0.57	0.57
Submassive	0.10	0.00	0.00	0.03	0.03
Encrusting	0.80	0.00	0.00	0.27	0.27
TOTAL	**2.6**	**0.0**	**0.0**	**0.87**	**0.87**
Pocilloporidae					
Massive	0.00	0.00	0.00	0.00	0.00
Submassive	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Poritidae					
Massive	0.00	0.00	0.00	0.00	0.00
Submassive	0.00	0.00	0.00	0.00	0.00
Encrusting	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Merulinidae					
Massive	0.00	0.00	0.00	0.00	0.00
Submassive	0.00	0.00	0.00	0.00	0.00
Encrusting	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Mussidae					
Massive	0.00	0.00	0.00	0.00	0.00
Submassive	0.00	0.00	0.00	0.00	0.00
Encrusting	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Oculinidae					
Massive	0.00	0.00	0.00	0.00	0.00
Submassive	0.00	0.00	0.00	0.00	0.00
Encrusting	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Fungiidae					
Solitary, free-living corals	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Agariciidae					
Massive	0.00	0.00	0.00	0.00	0.00
Submassive	0.00	0.00	0.00	0.00	0.00
Encrusting	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Milleporidae					
Milleporidae	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**

N25: PT. BILLY

	CATEGORY PERCENTAGES				
	T1	**T2**	**T3**	**MEAN**	**S.E.**
Dendrophylliidae					
Foliose	0.00	0.00	0.00	0.00	0.00
Encrusting	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Soft Coral					
SCSIN	0.00	0.00	0.00	0.00	0.00
SCSAR	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Dead Coral					
Recently dead/bleached, white	0.00	0.00	0.00	0.00	0.00
Dead coral with relatively new algal growth, rusty brown	0.40	0.00	0.00	0.13	0.13
Standing (advanced algal growth)	77.70	75.88	69.00	74.19	2.65
Up turned plates	0.00	0.00	0.00	0.00	0.00
Broken coral fragments	0.10		0.00	0.05	0.04
TOTAL	**78.2**	**75.9**	**69.0**	**74.36**	**2.76**
Algae					
Assemblage >1species	0.00	0.00	0.00	0.00	0.00
Coralline	0.00	0.00	0.00	0.00	0.00
Halimeda	0.00	0.00	0.00	0.00	0.00
Macroalgae	0.00	0.00	0.00	0.00	0.00
Turf	0.00	0.00	0.00	0.00	0.00
Filamentous blue-green	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Seagrass					
Halophila ovalis	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Other Lifeforms					
Sponges	0.00	0.00	0.00	0.00	0.00
Molluscs	0.40	0.00	0.00	0.13	0.13
Holothurians	0.00	0.00	0.00	0.00	0.00
Urchins	0.00	0.00	0.00	0.00	0.00
Other Lifeforms Total	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.4**	**0.0**	**0.0**	**0.13**	**0.13**
Coral Predators					
Crown of thorns starfish	0.00	0.00	0.00	0.00	0.00
Drupella	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.0**	**0.0**	**0.0**	**0.00**	**0.00**
Abiotic					
Rubble	0.00	14.20	0.00	4.73	4.73
Sand	0.00	0.00	0.00	0.00	0.00
Silt	0.00	0.00	0.00	0.00	0.00
Rock/limestone	0.00	0.00	26.80	8.93	8.93
TOTAL	**0.0**	**14.2**	**26.8**	**13.67**	**7.74**

N11: PT. CLOATES

	CATEGORY PERCENTAGES				
	T1	**T2**	**T3**	***MEAN***	**S.E.**
Acroporidae					
Digitate	11.40	5.60	10.30	*9.10*	1.78
Tabular	2.50	1.90	2.80	*2.40*	0.26
Submassive	0.00	0.00	0.00	*0.00*	0.00
Branching	0.00	0.00	0.40	*0.13*	0.13
Foliose	0.00	0.00	0.00	*0.00*	0.00
Encrusting	0.00	1.40	0.00	*0.47*	0.47
TOTAL	**13.9**	**8.9**	**13.5**	***12.10***	**1.60**
Faviidae					
Massive	7.30	3.60	1.90	*4.27*	1.59
Submassive	1.00	1.50	0.00	*0.83*	0.44
Encrusting	0.00	0.90	0.40	*0.43*	0.26
TOTAL	**8.3**	**6.0**	**2.3**	***5.53***	**1.75**
Pocilloporidae					
Massive	0.00	0.00	0.00	*0.00*	0.00
Submassive	0.00	0.80	0.30	*0.37*	0.40
TOTAL	**0.0**	**0.8**	**0.3**	***0.37***	**0.23**
Poritidae					
Massive	0.40	0.00	0.00	*0.13*	0.13
Submassive	0.00	0.00	0.00	*0.00*	0.00
Encrusting	0.20	0.00	0.00	*0.07*	0.07
TOTAL	**0.6**	**0.0**	**0.0**	***0.20***	**0.20**
Merulinidae					
Massive	0.00	0.00	0.00	*0.00*	0.00
Submassive	0.00	0.00	0.00	*0.00*	0.00
Encrusting	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.00***	**0.00**
Mussidae					
Massive	0.00	0.00	0.00	*0.00*	0.00
Submassive	0.20	0.20	0.00	*0.13*	0.07
Encrusting	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.2**	**0.2**	**0.0**	***0.13***	**0.07**
Oculinidae					
Massive	0.00	0.00	0.00	*0.00*	0.00
Submassive	0.00	0.00	0.00	*0.00*	0.00
Encrusting	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.00***	**0.00**
Fungiidae					
Solitary, free-living corals	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.00***	**0.00**
Agariciidae					
Massive	0.00	0.00	0.00	*0.00*	0.00
Submassive	0.00	0.00	0.00	*0.00*	0.00
Encrusting	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.00***	**0.00**
Milleporidae					
Milleporidae	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.00***	**0.00**

N11: PT. CLOATES

	CATEGORY PERCENTAGES				
	T1	**T2**	**T3**	***MEAN***	**S.E.**
Dendrophylliidae					
Foliose	0.00	0.00	0.00	*0.00*	0.00
Encrusting	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.00***	**0.00**
Soft Coral					
SCSIN	0.40	0.00	0.00	*0.13*	0.13
SCSAR	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.4**	**0.0**	**0.0**	***0.13***	**0.13**
Dead Coral					
Recently dead/bleached, white	0.40	0.00	0.00	*0.13*	0.13
Dead coral with relatively new algal growth, rusty brown	0.60	0.00	0.00	*0.20*	0.20
Standing (advanced algal growth)	42.90	56.40	62.30	*53.87*	5.74
Up turned plates	0.00	0.00	0.00	*0.00*	0.00
Broken coral fragments	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**43.9**	**56.4**	**62.3**	***54.20***	**5.42**
Algae					
Assemblage >1species	0.80	0.00	0.00	*0.27*	0.27
Coralline	0.00	0.00	0.00	*0.00*	0.00
Halimeda	0.00	0.00	0.00	*0.00*	0.00
Macroalgae	10.00	1.50	3.40	*4.97*	2.58
Turf	0.00	0.00	0.00	*0.00*	0.00
Filamentous blue-green	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**10.8**	**1.5**	**3.4**	***5.23***	**2.84**
Seagrass					
Halophila ovalis	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.0***	**0.0**
Other Lifeforms					
Sponges	0.00	0.00	0.00	*0.00*	0.00
Molluscs	0.30	0.10	0.00	*0.13*	0.09
Holothurians	0.40	0.00	0.00	*0.13*	0.13
Urchins	0.00	0.00	0.00	*0.00*	0.00
Other Lifeforms Total	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.7**	**0.1**	**0.0**	***0.27***	**0.22**
Coral Predators					
Crown of thorns starfish	0.00	0.00	0.00	*0.00*	0.00
Drupella	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.00***	**0.00**
Abiotic					
Rubble	1.00	0.00	0.00	*0.33*	0.33
Sand	12.20	10.20	8.80	*10.40*	0.99
Silt	0.00	0.00	0.00	*0.00*	0.00
Rock/limestone	10.00	15.90	9.40	*11.77*	2.07
TOTAL	**23.2**	**26.1**	**18.2**	***22.50***	**2.31**

N12: DUGONG SANCTUARY

	CATEGORY PERCENTAGES				
	T1	**T2**	**T3**	***MEAN***	**S.E.**
Acroporidae					
Digitate	8.80	9.40	24.50	*14.23*	5.14
Tabular	6.70	5.20	4.00	*5.30*	0.78
Submassive	0.80	1.10	0.00	*0.63*	0.33
Branching	0.00	3.20	0.00	*1.07*	1.07
Foliose	0.00	0.00	0.00	*0.00*	0.00
Encrusting	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**16.3**	**18.9**	**28.5**	***21.23***	**3.71**
Faviidae					
Massive	0.00	1.90	1.00	*0.97*	0.55
Submassive	0.00	1.20	0.90	*0.70*	0.36
Encrusting	0.50	0.80	0.10	*0.47*	0.20
TOTAL	**0.5**	**3.9**	**2.0**	***2.13***	**0.98**
Pocilloporidae					
Massive	0.00	0.00	0.00	*0.00*	0.00
Submassive	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.00***	**0.00**
Poritidae					
Massive	0.00	0.00	0.00	*0.00*	0.00
Submassive	0.00	0.00	0.00	*0.00*	0.00
Encrusting	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.00***	**0.00**
Merulinidae					
Massive	0.00	0.00	0.00	*0.00*	0.00
Submassive	0.00	0.00	0.00	*0.00*	0.00
Encrusting	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.00***	**0.00**
Mussidae					
Massive	0.00	0.00	0.00	*0.00*	0.00
Submassive	0.00	0.00	0.00	*0.00*	0.00
Encrusting	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.00***	**0.00**
Oculinidae					
Massive	0.00	0.00	0.00	*0.00*	0.00
Submassive	0.00	0.00	0.00	*0.00*	0.00
Encrusting	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.00***	**0.00**
Fungiidae					
Solitary, free-living corals	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.00***	**0.00**
Agariciidae					
Massive	0.00	0.00	0.00	*0.00*	0.00
Submassive	0.00	0.00	0.00	*0.00*	0.00
Encrusting	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.00***	**0.00**
Milleporidae					
Milleporidae	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.00***	**0.00**

N12: DUGONG SANCTUARY

	CATEGORY PERCENTAGES				
	T1	**T2**	**T3**	***MEAN***	**S.E.**
Dendrophylliidae					
Foliose	0.00	0.00	0.00	*0.00*	0.00
Encrusting	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.00***	**0.00**
Soft Coral					
SCSIN	0.20	0.00	0.40	*0.20*	0.12
SCSAR	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.2**	**0.0**	**0.4**	***0.20***	**0.12**
Dead Coral					
Recently dead/bleached, white	0.00	0.00	0.00	*0.00*	0.00
Dead coral with relatively new algal growth, rusty brown	0.00	0.00	0.00	*0.00*	0.00
Standing (advanced algal growth)	71.00	66.40	63.40	*66.93*	2.21
Up turned plates	0.00	0.00	0.00	*0.00*	0.00
Broken coral fragments	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**71.0**	**66.4**	**63.4**	***66.93***	**2.21**
Algae					
Assemblage >1species	0.00	0.00	0.00	*0.00*	0.00
Coralline	0.00	0.00	0.00	*0.00*	0.00
Halimeda	0.00	0.00	0.00	*0.00*	0.00
Macroalgae	2.00	1.20	1.00	*1.40*	0.31
Turf	0.00	0.00	0.00	*0.00*	0.00
Filamentous blue-green	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**2.0**	**1.2**	**1.0**	***1.40***	**0.31**
Seagrass					
Halophila ovalis	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.0***	**0.0**
Other Lifeforms					
Sponges	0.20	0.00	0.00	*0.07*	0.07
Molluscs	0.00	0.00	0.00	*0.00*	0.00
Holothurians	0.00	0.00	0.00	*0.00*	0.00
Urchins	0.10	0.00	0.00	*0.03*	0.03
Other Lifeforms Total	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.3**	**0.0**	**0.0**	***0.10***	**0.10**
Coral Predators					
Crown of thorns starfish	0.00	0.00	0.00	*0.00*	0.00
Drupella	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.00***	**0.00**
Abiotic					
Rubble	0.00	0.00	0.00	*0.00*	0.00
Sand	2.60	0.60	0.00	*1.07*	0.79
Silt	0.00	0.00	0.00	*0.00*	0.00
Rock/limestone	6.00	9.40	4.70	*6.70*	1.40
TOTAL	**8.6**	**10.0**	**4.7**	***7.77***	**1.59**

N13: BRUBOODIJO PT.

	CATEGORY PERCENTAGES				
	T1	**T2**	**T3**	***MEAN***	**S.E.**
Acroporidae					
Digitate	0.60	4.10	1.20	*1.97*	1.08
Tabular	4.60	1.80	13.90	*6.77*	3.66
Submassive	0.00	0.60	0.00	*0.20*	0.20
Branching	1.60	1.60	2.00	*1.73*	0.13
Foliose	0.60	0.00	0.00	*0.20*	0.20
Encrusting	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**7.4**	**8.1**	**17.1**	***10.87***	**3.12**
Faviidae					
Massive	0.00	0.00	0.00	*0.00*	0.00
Submassive	0.00	0.00	0.00	*0.00*	0.00
Encrusting	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.00***	**0.00**
Pocilloporidae					
Massive	0.00	0.00	0.00	*0.00*	0.00
Submassive	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.00***	**0.00**
Poritidae					
Massive	0.00	0.00	0.00	*0.00*	0.00
Submassive	0.00	0.00	0.00	*0.00*	0.00
Encrusting	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.00***	**0.00**
Merulinidae					
Massive	0.00	0.00	0.00	*0.00*	0.00
Submassive	0.00	0.00	0.00	*0.00*	0.00
Encrusting	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.00***	**0.00**
Mussidae					
Massive	0.00	0.00	0.00	*0.00*	0.00
Submassive	0.00	0.00	0.00	*0.00*	0.00
Encrusting	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.00***	**0.00**
Oculinidae					
Massive	0.00	0.00	0.00	*0.00*	0.00
Submassive	0.00	0.00	0.00	*0.00*	0.00
Encrusting	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.00***	**0.00**
Fungiidae					
Solitary, free-living corals	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.00***	**0.00**
Agariciidae					
Massive	0.00	0.00	0.00	*0.00*	0.00
Submassive	0.00	0.00	0.00	*0.00*	0.00
Encrusting	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.00***	**0.00**
Milleporidae					
Milleporidae	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.00***	**0.00**

N13: BRUBOODIJO PT.

	CATEGORY PERCENTAGES				
	T1	**T2**	**T3**	***MEAN***	**S.E.**
Dendrophylliidae					
Foliose	0.00	0.00	0.00	*0.00*	0.00
Encrusting	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.00***	**0.00**
Soft Coral					
SCSIN	0.00	0.00	0.00	*0.00*	0.00
SCSAR	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.00***	**0.00**
Dead Coral					
Recently dead/bleached, white	0.10	0.00	0.00	*0.03*	0.03
Dead coral with relatively new algal growth, rusty brown	1.20	1.00	0.40	*0.87*	0.24
Standing (advanced algal growth)	78.00	74.70	68.90	*73.87*	2.66
Up turned plates	0.00	0.00	0.00	*0.00*	0.00
Broken coral fragments	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**79.3**	**75.7**	**69.3**	***74.77***	**2.92**
Algae					
Assemblage >1species	0.00	0.00	1.60	*0.53*	0.53
Coralline	0.00	0.00	0.00	*0.00*	0.00
Halimeda	0.00	0.00	0.00	*0.00*	0.00
Macroalgae	1.30	11.80	5.00	*6.03*	3.07
Turf	0.00	0.00	0.00	*0.00*	0.00
Filamentous blue-green	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**1.3**	**11.8**	**6.6**	***6.57***	**3.03**
Seagrass					
Halophila ovalis	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.0***	**0.0**
Other Lifeforms					
Sponges	0.00	0.00	0.00	*0.00*	0.00
Molluscs	0.20	0.00	0.00	*0.07*	0.07
Holothurians	0.00	0.00	0.00	*0.00*	0.00
Urchins	0.00	0.00	0.00	*0.00*	0.00
Other Lifeforms Total	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.2**	**0.0**	**0.0**	***0.07***	**0.07**
Coral Predators					
Crown of thorns starfish	0.00	0.00	0.00	*0.00*	0.00
Drupella	0.10	0.20	0.00	*0.10*	0.06
TOTAL	**0.1**	**0.2**	**0.0**	***0.10***	**0.06**
Abiotic					
Rubble	0.00	0.00	5.00	*1.67*	1.67
Sand	0.00	4.20	2.00	*2.07*	1.21
Silt	0.00	0.00	0.00	*0.00*	0.00
Rock/limestone	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**4.2**	**7.0**	***3.73***	**2.03**

N14: BILL'S BAY

	CATEGORY PERCENTAGES				
	T1	**T2**	**T3**	***MEAN***	**S.E.**
Acroporidae					
Digitate	6.70	3.10	2.00	*3.93*	1.42
Tabular	0.00	0.00	0.20	*0.07*	0.07
Submassive	0.00	1.50	3.60	*1.70*	1.04
Branching	2.00	0.00	0.00	*0.67*	0.67
Foliose	0.00	0.00	2.00	*0.67*	0.67
Encrusting	0.20	0.40	0.00	*0.20*	0.12
TOTAL	**8.9**	**5.0**	**7.8**	***7.23***	**1.16**
Faviidae					
Massive	2.80	2.60	5.10	*3.50*	0.80
Submassive	0.80	0.80	0.00	*0.53*	0.27
Encrusting	0.30	0.00	0.00	*0.10*	0.10
TOTAL	**3.9**	**3.4**	**5.1**	***4.13***	**0.50**
Pocilloporidae					
Massive	0.00	0.00	0.00	*0.00*	0.00
Submassive	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.00***	**0.00**
Poritidae					
Massive	0.00	0.00	0.00	*0.00*	0.00
Submassive	0.00	0.00	0.00	*0.00*	0.00
Encrusting	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.00***	**0.00**
Merulinidae					
Massive	0.00	0.00	0.00	*0.00*	0.00
Submassive	0.00	0.00	0.00	*0.00*	0.00
Encrusting	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.00***	**0.00**
Mussidae					
Massive	0.00	0.00	0.00	*0.00*	0.00
Submassive	0.00	0.80	0.00	*0.27*	0.27
Encrusting	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.8**	**0.0**	***0.27***	**0.27**
Oculinidae					
Massive	0.00	0.00	0.00	*0.00*	0.00
Submassive	0.00	0.00	0.00	*0.00*	0.00
Encrusting	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.00***	**0.00**
Fungiidae					
Solitary, free-living corals	0.00	0.00	0.60	*0.20*	0.20
TOTAL	**0.0**	**0.0**	**0.6**	***0.20***	**0.20**
Agariciidae					
Massive	0.00	0.00	0.00	*0.00*	0.00
Submassive	0.00	0.00	0.00	*0.00*	0.00
Encrusting	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.00***	**0.00**
Milleporidae					
Milleporidae	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.00***	**0.00**

N14: BILL'S BAY

	CATEGORY PERCENTAGES				
	T1	**T2**	**T3**	***MEAN***	**S.E.**
Dendrophylliidae					
Foliose	0.00	0.00	0.00	*0.00*	0.00
Encrusting	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.00***	**0.00**
Soft Coral					
SCSIN	0.00	2.20	0.20	*0.80*	0.70
SCSAR	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**2.2**	**0.2**	***0.80***	**0.70**
Dead Coral					
Recently dead/bleached, white	0.00	0.00	0.00	*0.00*	0.00
Dead coral with relatively new algal growth, rusty brown	0.00	0.00	0.00	*0.00*	0.00
Standing (advanced algal growth)	6.80	55.90	63.10	*41.93*	17.69
Up turned plates	0.00	0.00	0.00	*0.00*	0.00
Broken coral fragments	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**6.8**	**55.9**	**63.1**	***41.93***	**17.69**
Algae					
Assemblage >1species	0.00	0.00	0.00	*0.00*	0.00
Coralline	0.00	0.00	0.00	*0.00*	0.00
Halimeda	0.00	0.00	0.00	*0.00*	0.00
Macroalgae	0.00	1.20	0.40	*0.53*	0.35
Turf	0.00	0.00	0.00	*0.00*	0.00
Filamentous blue-green	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**1.2**	**0.4**	***0.53***	**0.35**
Seagrass					
Halophila ovalis	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.0***	**0.0**
Other Lifeforms					
Sponges	0.00	0.00	0.00	*0.00*	0.00
Molluscs	0.20	0.70	0.00	*0.30*	0.21
Holothurians	0.00	0.00	0.00	*0.00*	0.00
Urchins	0.00	0.00	0.00	*0.00*	0.00
Other Lifeforms Total	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.2**	**0.7**	**0.0**	***0.30***	**0.21**
Coral Predators					
Crown of thorns starfish	0.00	0.00	0.00	*0.00*	0.00
Drupella	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.00***	**0.00**
Abiotic					
Rubble	10.00	10.30	5.60	*8.63*	1.52
Sand	0.40	20.30	16.80	*12.50*	6.13
Silt	0.00	0.00	0.00	*0.00*	0.00
Rock/limestone	15.50	0.20	0.00	*5.23*	5.13
TOTAL	**25.9**	**30.8**	**22.4**	***26.37***	**2.44**

N22: NORTH CORAL BAY

	CATEGORY PERCENTAGES				
	T1	**T2**	**T3**	***MEAN***	**S.E.**
Acroporidae					
Digitate	6.80	3.00	6.70	*5.50*	1.25
Tabular	0.00	1.00	0.00	*0.33*	0.33
Submassive	0.00	0.00	0.40	*0.13*	0.13
Branching	0.00	0.00	0.00	*0.00*	0.00
Foliose	0.80	0.00	1.20	*0.67*	0.35
Encrusting	0.00	0.00	0.60	*0.20*	0.20
TOTAL	**7.6**	**4.0**	**8.9**	***6.83***	**1.47**
Faviidae					
Massive	0.00	0.90	3.50	*1.47*	1.05
Submassive	0.00	0.00	0.00	*0.00*	0.00
Encrusting	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.9**	**3.5**	***1.47***	**1.05**
Pocilloporidae					
Massive	0.00	0.00	0.00	*0.00*	0.00
Submassive	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.00***	**0.00**
Poritidae					
Massive	0.00	0.00	0.00	*0.00*	0.00
Submassive	0.00	0.00	0.00	*0.00*	0.00
Encrusting	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.00***	**0.00**
Merulinidae					
Massive	0.00	0.00	0.00	*0.00*	0.00
Submassive	0.00	0.00	0.00	*0.00*	0.00
Encrusting	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.00***	**0.00**
Mussidae					
Massive	0.00	0.00	0.00	*0.00*	0.00
Submassive	0.00	0.00	0.40	*0.13*	0.13
Encrusting	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.4**	***0.13***	**0.13**
Oculinidae					
Massive	0.00	0.00	0.00	*0.00*	0.00
Submassive	0.00	0.00	0.00	*0.00*	0.00
Encrusting	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.00***	**0.00**
Fungiidae					
Solitary, free-living corals	0.20	0.00	0.00	*0.07*	0.07
TOTAL	**0.2**	**0.0**	**0.0**	***0.07***	**0.07**
Agariciidae					
Massive	0.00	0.00	0.00	*0.00*	0.00
Submassive	0.00	0.00	0.00	*0.00*	0.00
Encrusting	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.00***	**0.00**
Milleporidae					
Milleporidae	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.00***	**0.00**

N22: NORTH CORAL BAY

	CATEGORY PERCENTAGES				
	T1	**T2**	**T3**	***MEAN***	**S.E.**
Dendrophylliidae					
Foliose	0.00	0.00	0.00	*0.00*	0.00
Encrusting	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.00***	**0.00**
Soft Coral					
SCSIN	0.00	0.00	0.70	*0.23*	0.23
SCSAR	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.7**	***0.23***	**0.23**
Dead Coral					
Recently dead/bleached, white	0.00	0.00	0.00	*0.00*	0.00
Dead coral with relatively new algal growth, rusty brown	0.00	0.00	0.00	*0.00*	0.00
Standing (advanced algal growth)	84.10	88.70	65.60	*79.47*	7.06
Up turned plates	0.00	0.00	0.00	*0.00*	0.00
Broken coral fragments	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**84.1**	**88.7**	**65.6**	***79.47***	**7.06**
Algae					
Assemblage >1species	0.00	0.00	0.00	*0.00*	0.00
Coralline	0.00	0.00	0.00	*0.00*	0.00
Halimeda	0.00	0.00	0.00	*0.00*	0.00
Macroalgae	0.20	4.60	2.80	*2.53*	1.28
Turf	0.00	0.00	0.00	*0.00*	0.00
Filamentous blue-green	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.2**	**4.6**	**2.8**	***2.53***	**1.28**
Seagrass					
Halophila ovalis	0.00	0.00	0.84	*0.28*	0.28
TOTAL	**0.0**	**0.0**	**0.8**	***0.3***	**0.3**
Other Lifeforms					
Sponges	0.00	0.00	0.00	*0.00*	0.00
Molluscs	0.20	1.00	1.30	*0.83*	0.33
Holothurians	0.00	0.00	0.00	*0.00*	0.00
Urchins	0.00	0.00	0.00	*0.00*	0.00
Other Lifeforms Total	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.2**	**1.0**	**1.3**	***0.83***	**0.33**
Coral Predators					
Crown of thorns starfish	0.00	0.00	0.00	*0.00*	0.00
Drupella	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.00***	**0.00**
Abiotic					
Rubble	7.50	0.80	0.40	*2.90*	2.30
Sand	0.00	0.00	15.56	*5.19*	5.19
Silt	0.00	0.00	0.00	*0.00*	0.00
Rock/limestone	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**7.5**	**0.8**	**16.0**	***8.09***	**4.39**

N24: PELICAN PT.

	CATEGORY PERCENTAGES				
	T1	**T2**	**T3**	***MEAN***	**S.E.**
Acroporidae					
Digitate	1.00	1.40	1.20	*1.20*	0.12
Tabular	29.40	63.76	58.70	*50.62*	10.71
Submassive	0.00	0.00	0.00	*0.00*	0.00
Branching	0.00	0.00	0.80	*0.27*	0.27
Foliose	0.00	0.00	0.00	*0.00*	0.00
Encrusting	0.00	0.00	1.60	*0.53*	0.53
TOTAL	**30.4**	**65.2**	**62.3**	***52.62***	**11.14**
Faviidae					
Massive	0.00	0.00	0.00	*0.00*	0.00
Submassive	0.00	0.00	0.00	*0.00*	0.00
Encrusting	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.00***	**0.00**
Pocilloporidae					
Massive	0.00	0.00	0.00	*0.00*	0.00
Submassive	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.00***	**0.00**
Poritidae					
Massive	0.00	0.00	0.00	*0.00*	0.00
Submassive	0.00	0.00	0.00	*0.00*	0.00
Encrusting	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.00***	**0.00**
Merulinidae					
Massive	0.00	0.00	0.00	*0.00*	0.00
Submassive	0.00	0.00	0.00	*0.00*	0.00
Encrusting	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.00***	**0.00**
Mussidae					
Massive	0.00	0.00	0.00	*0.00*	0.00
Submassive	0.00	0.00	0.00	*0.00*	0.00
Encrusting	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.00***	**0.00**
Oculinidae					
Massive	0.00	0.00	0.00	*0.00*	0.00
Submassive	0.00	0.00	0.00	*0.00*	0.00
Encrusting	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.00***	**0.00**
Fungiidae					
Solitary, free-living corals	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.00***	**0.00**
Agariciidae					
Massive	0.00	0.00	0.00	*0.00*	0.00
Submassive	0.00	0.00	0.00	*0.00*	0.00
Encrusting	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.00***	**0.00**
Milleporidae					
Milleporidae	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.00***	**0.00**

N24: PELICAN PT.

	CATEGORY PERCENTAGES				
	T1	**T2**	**T3**	***MEAN***	**S.E.**
Dendrophylliidae					
Foliose	0.00	0.00	0.00	*0.00*	0.00
Encrusting	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.00***	**0.00**
Soft Coral					
SCSIN	0.00	0.00	0.00	*0.00*	0.00
SCSAR	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.00***	**0.00**
Dead Coral					
Recently dead/bleached, white	0.04	0.28	0.40	*0.24*	0.11
Dead coral with relatively new algal growth, rusty brown	1.56	0.96	0.70	*1.07*	0.25
Standing (advanced algal growth)	58.40	29.80	30.60	*39.60*	9.40
Up turned plates	0.00	0.00	0.00	*0.00*	0.00
Broken coral fragments	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**60.0**	**31.0**	**31.7**	***40.91***	**9.55**
Algae					
Assemblage >1species	0.00	0.00	0.00	*0.00*	0.00
Coralline	0.00	0.00	0.00	*0.00*	0.00
Halimeda	0.00	0.00	0.00	*0.00*	0.00
Macroalgae	1.80	0.00	0.40	*0.73*	0.55
Turf	0.00	0.00	0.00	*0.00*	0.00
Filamentous blue-green	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**1.8**	**0.0**	**0.4**	***0.73***	**0.55**
Seagrass					
Halophila ovalis	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.0***	**0.0**
Other Lifeforms					
Sponges	0.00	0.00	0.00	*0.00*	0.00
Molluscs	0.00	0.00	0.00	*0.00*	0.00
Holothurians	0.00	0.00	0.00	*0.00*	0.00
Urchins	0.00	0.00	0.00	*0.00*	0.00
Other Lifeforms Total	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.00***	**0.00**
Coral Predators					
Crown of thorns starfish	0.00	0.00	0.00	*0.00*	0.00
Drupella	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.00***	**0.00**
Abiotic					
Rubble	0.00	3.40	0.00	*1.13*	1.13
Sand	4.20	0.40	5.60	*3.40*	1.55
Silt	0.00	0.00	0.00	*0.00*	0.00
Rock/limestone	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**4.2**	**3.8**	**5.6**	***4.53***	**0.55**

N17: CAPE FARQUHAR

	CATEGORY PERCENTAGES				
	T1	**T2**	**T3**	***MEAN***	**S.E.**
Acroporidae					
Digitate	5.10	0.00	6.40	*3.83*	1.95
Tabular	40.80	39.60	42.80	*41.07*	0.93
Submassive	0.00	0.40	0.00	*0.13*	0.13
Branching	16.80	28.60	6.00	*17.13*	6.53
Foliose	0.80	1.20	0.00	*0.67*	0.35
Encrusting	1.30	0.00	2.00	*1.10*	0.59
TOTAL	**64.8**	**69.8**	**57.2**	***63.93***	**3.66**
Faviidae					
Massive	0.00	0.00	0.00	*0.00*	0.00
Submassive	0.40	0.00	0.00	*0.13*	0.13
Encrusting	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.4**	**0.0**	**0.0**	***0.13***	**0.13**
Pocilloporidae					
Massive	0.00	0.00	0.00	*0.00*	0.00
Submassive	0.20	0.20	0.00	*0.13*	0.12
TOTAL	**0.2**	**0.2**	**0.0**	***0.13***	**0.07**
Poritidae					
Massive	0.00	0.00	0.00	*0.00*	0.00
Submassive	0.00	0.00	0.00	*0.00*	0.00
Encrusting	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.00***	**0.00**
Merulinidae					
Massive	0.00	0.00	0.00	*0.00*	0.00
Submassive	0.00	0.00	0.00	*0.00*	0.00
Encrusting	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.00***	**0.00**
Mussidae					
Massive	3.40	0.00	0.00	*1.13*	1.13
Submassive	0.00	0.00	0.00	*0.00*	0.00
Encrusting	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**3.4**	**0.0**	**0.0**	***1.13***	**1.13**
Oculinidae					
Massive	0.00	0.00	0.00	*0.00*	0.00
Submassive	0.00	0.00	0.00	*0.00*	0.00
Encrusting	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.00***	**0.00**
Fungiidae					
Solitary, free-living corals	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.00***	**0.00**
Agariciidae					
Massive	0.00	0.00	0.00	*0.00*	0.00
Submassive	0.00	0.00	0.00	*0.00*	0.00
Encrusting	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.00***	**0.00**
Milleporidae					
Milleporidae	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.00***	**0.00**

N17: CAPE FARQUHAR

	CATEGORY PERCENTAGES				
	T1	**T2**	**T3**	***MEAN***	**S.E.**
Dendrophylliidae					
Foliose	0.00	0.00	0.00	*0.00*	0.00
Encrusting	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.00***	**0.00**
Soft Coral					
SCSIN	1.00	0.80	0.80	*0.87*	0.07
SCSAR	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**1.0**	**0.8**	**0.8**	***0.87***	**0.07**
Dead Coral					
Recently dead/bleached, white	0.00	0.00	0.00	*0.00*	0.00
Dead coral with relatively new algal growth, rusty brown	0.00	0.00	0.00	*0.00*	0.00
Standing (advanced algal growth)	21.11	26.40	34.60	*27.37*	3.92
Up turned plates	0.00	0.00	0.00	*0.00*	0.00
Broken coral fragments	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**21.1**	**26.4**	**34.6**	***27.37***	**3.92**
Algae					
Assemblage >1species	0.00	0.00	0.00	*0.00*	0.00
Coralline	0.00	0.00	0.00	*0.00*	0.00
Halimeda	0.00	0.00	0.00	*0.00*	0.00
Macroalgae	0.00	0.00	0.00	*0.00*	0.00
Turf	0.00	0.00	0.00	*0.00*	0.00
Filamentous blue-green	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.00***	**0.00**
Seagrass					
Halophila ovalis	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.0***	**0.0**
Other Lifeforms					
Sponges	0.00	0.00	0.00	*0.00*	0.00
Molluscs	0.00	0.00	0.00	*0.00*	0.00
Holothurians	0.00	0.00	0.00	*0.00*	0.00
Urchins	0.00	0.00	0.00	*0.00*	0.00
Other Lifeforms Total	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.00***	**0.00**
Coral Predators					
Crown of thorns starfish	0.00	0.00	0.00	*0.00*	0.00
Drupella	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.00***	**0.00**
Abiotic					
Rubble	5.20	0.00	0.00	*1.73*	1.73
Sand	3.20	2.80	7.40	*4.47*	1.47
Silt	0.00	0.00	0.00	*0.00*	0.00
Rock/limestone	0.20	0.00	0.00	*0.07*	0.07
TOTAL	**8.6**	**2.8**	**7.4**	***6.27***	**1.77**

N18: GNARRALOO BAY

	CATEGORY PERCENTAGES				
	T1	**T2**	**T3**	***MEAN***	**S.E.**
Acroporidae					
Digitate	1.50	11.60	19.60	*10.90*	5.24
Tabular	38.40	42.10	42.80	*41.10*	1.37
Submassive	2.20	0.90	0.00	*1.03*	0.64
Branching	13.20	14.20	8.20	*11.87*	1.86
Foliose	5.80	3.60	4.60	*4.67*	0.64
Encrusting	3.20	2.80	1.40	*2.47*	0.55
TOTAL	**64.3**	**75.2**	**76.6**	***72.03***	**3.89**
Faviidae					
Massive	0.00	2.60	1.80	*1.47*	0.77
Submassive	0.00	0.20	0.00	*0.07*	0.07
Encrusting	1.80	0.00	0.00	*0.60*	0.60
TOTAL	**1.8**	**2.8**	**1.8**	***2.13***	**0.33**
Pocilloporidae					
Massive	0.00	0.00	0.00	*0.00*	0.00
Submassive	0.60	0.00	0.00	*0.20*	0.35
TOTAL	**0.6**	**0.0**	**0.0**	***0.20***	**0.20**
Poritidae					
Massive	0.00	0.00	0.00	*0.00*	0.00
Submassive	0.00	0.00	0.00	*0.00*	0.00
Encrusting	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.00***	**0.00**
Merulinidae					
Massive	0.00	0.00	0.00	*0.00*	0.00
Submassive	0.00	0.00	0.00	*0.00*	0.00
Encrusting	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.00***	**0.00**
Mussidae					
Massive	0.00	0.20	0.00	*0.07*	0.07
Submassive	0.00	0.00	0.00	*0.00*	0.00
Encrusting	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.2**	**0.0**	***0.07***	**0.07**
Oculinidae					
Massive	0.00	0.00	0.00	*0.00*	0.00
Submassive	0.00	0.00	0.00	*0.00*	0.00
Encrusting	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.00***	**0.00**
Fungiidae					
Solitary, free-living corals	0.00	0.20	0.00	*0.07*	0.07
TOTAL	**0.0**	**0.2**	**0.0**	***0.07***	**0.07**
Agariciidae					
Massive	0.00	0.00	0.00	*0.00*	0.00
Submassive	0.00	0.00	0.00	*0.00*	0.00
Encrusting	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.00***	**0.00**
Milleporidae					
Milleporidae	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.00***	**0.00**

N18: GNARRALOO BAY

	CATEGORY PERCENTAGES				
	T1	**T2**	**T3**	***MEAN***	**S.E.**
Dendrophylliidae					
Foliose	0.00	0.00	0.00	*0.00*	0.00
Encrusting	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.00***	**0.00**
Soft Coral					
SCSIN	0.60	0.00	0.00	*0.20*	0.20
SCSAR	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.6**	**0.0**	**0.0**	***0.20***	**0.20**
Dead Coral					
Recently dead/bleached, white	0.00	0.00	0.00	*0.00*	0.00
Dead coral with relatively new algal growth, rusty brown	0.00	0.00	0.00	*0.00*	0.00
Standing (advanced algal growth)	24.80	12.70	15.60	*17.70*	3.65
Up turned plates	0.00	0.00	0.00	*0.00*	0.00
Broken coral fragments	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**24.8**	**12.7**	**15.6**	***17.70***	**3.65**
Algae					
Assemblage >1species	0.00	0.00	0.00	*0.00*	0.00
Coralline	0.00	0.00	0.00	*0.00*	0.00
Halimeda	0.00	0.00	0.00	*0.00*	0.00
Macroalgae	0.00	0.00	0.00	*0.00*	0.00
Turf	0.00	0.00	0.00	*0.00*	0.00
Filamentous blue-green	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.00***	**0.00**
Seagrass					
Halophila ovalis	0.00	0.10	0.00	*0.03*	0.03
TOTAL	**0.0**	**0.1**	**0.0**	***0.0***	**0.0**
Other Lifeforms					
Sponges	0.00	0.00	0.00	*0.00*	0.00
Molluscs	0.00	0.00	0.00	*0.00*	0.00
Holothurians	0.00	0.00	0.00	*0.00*	0.00
Urchins	0.00	0.00	0.00	*0.00*	0.00
Other Lifeforms Total	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.00***	**0.00**
Coral Predators					
Crown of thorns starfish	0.00	0.00	0.00	*0.00*	0.00
Drupella	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**0.0**	**0.0**	***0.00***	**0.00**
Abiotic					
Rubble	0.00	3.60	5.20	*2.93*	1.54
Sand	0.00	4.00	0.80	*1.60*	1.22
Silt	0.00	0.00	0.00	*0.00*	0.00
Rock/limestone	0.00	0.00	0.00	*0.00*	0.00
TOTAL	**0.0**	**7.6**	**6.0**	***4.53***	**2.31**

APPENDIX 6: Summary of Line Intercept Transect analysed data

	Category Percentages				
	T1	**T2**	**T3**	***Mean***	**S.E.**
N19 BUNDEGI SANCTUARY					
Live Coral	23.9	22.3	19.3	***21.84***	1.34
Hard Coral	23.9	22.3	19.3	***21.84***	1.34
Soft Coral	0.0	0.0	0.0	***0.00***	0.00
Dead Coral	21.6	29.5	65.5	***38.86***	13.50
Algae	0.4	0.2	0.0	***0.20***	0.12
Abiotic	54.0	52.6	15.2	***40.63***	12.72
N1 Bundegi					
Live Coral	35.3	10.5	14.8	***20.23***	7.65
Hard Coral	35.3	10.5	14.8	***20.23***	7.65
Soft Coral	0.0	0.0	0.0	***0.00***	0.00
Dead Coral	49.7	62.3	50.7	***54.23***	4.04
Algae	4.2	10.5	3.2	***5.97***	2.28
Abiotic	10.9	16.9	32.2	***19.99***	6.33
N2: Mildura Wreck					
Live Coral	2.6	1.2	2.2	***2.00***	0.42
Hard Coral	2.4	1.2	1.8	***1.80***	0.35
Soft Coral	0.2	0.0	0.4	***0.20***	0.12
Dead Coral	0.0	0.0	0.0	***0.00***	0.00
Algae	9.5	22.0	72.1	***34.55***	19.12
Abiotic	79.5	76.2	25.1	***60.27***	17.61
N3: Vlamingh Head					
Live Coral	1.1	1.8	1.5	***1.47***	0.20
Hard Coral	1.1	1.4	0.8	***1.10***	0.17
Soft Coral	0.0	0.4	0.7	***0.37***	0.20
Dead Coral	0.7	0.0	0.0	***0.23***	0.23
Algae	0.0	0.0	0.0	***0.00***	0.00
Abiotic	97.9	97.5	96.7	***97.37***	0.35
N20: Jurabi Pt.					
Live Coral	12.7	21.0	10.8	***14.85***	3.13
Hard Coral	7.8	16.8	6.1	***10.25***	3.31
Soft Coral	4.9	4.2	4.7	***4.60***	0.21
Dead Coral	78.7	72.6	69.4	***73.55***	2.72
Algae	0.0	0.0	0.0	***0.00***	0.00
Abiotic	8.6	6.2	19.8	***11.53***	4.19

Appendix 6 cont.

	Category Percentages				
	T1	**T2**	**T3**	***Mean***	**S.E.**
N5: Tantabiddi					
Live Coral	13.0	8.2	6.8	***9.33***	1.88
Hard Coral	12.8	8.2	6.8	***9.26***	1.82
Soft Coral	0.2	0.0	0.0	***0.07***	0.07
Dead Coral	19.0	14.7	14.0	***15.89***	1.57
Algae	0.0	0.0	0.0	***0.00***	0.00
Abiotic	67.8	77.0	78.9	***74.57***	3.43
N6: NED'S CAMP/MESA					
Live Coral	8.7	3.1	2.4	***4.72***	2.00
Hard Coral	8.7	3.1	1.8	***4.52***	2.12
Soft Coral	0.0	0.0	0.6	***0.20***	0.20
Dead Coral	16.5	44.0	34.6	***31.70***	8.07
Algae	2.1	11.3	9.4	***7.59***	2.80
Abiotic	66.3	40.5	53.6	***53.44***	7.46
N7: TURQUOISE BAY					
Live Coral	18.6	19.8	8.9	***15.76***	3.45
Hard Coral	18.6	18.9	8.9	***15.46***	3.28
Soft Coral	0.0	0.9	0.0	***0.30***	0.30
Dead Coral	62.3	71.1	46.2	***59.87***	7.29
Algae	2.2	1.8	2.0	***2.00***	0.12
Abiotic	17.0	6.4	42.5	***21.97***	10.71
N8: OSPREY					
Live Coral	4.0	1.6	0.9	***2.17***	0.94
Hard Coral	4.0	1.6	0.9	***2.17***	0.94
Soft Coral	0.0	0.0	0.0	***0.00***	0.00
Dead Coral	77.0	80.4	50.8	***69.41***	9.34
Algae	2.8	0.6	0.2	***1.20***	0.81
Abiotic	15.0	12.4	48.1	***25.15***	11.50
N21: YARDIE CREEK					
Live Coral	2.6	4.9	5.8	***4.44***	0.95
Hard Coral	2.6	4.7	5.8	***4.37***	0.94
Soft Coral	0.0	0.2	0.0	***0.07***	0.07
Dead Coral	86.8	77.7	89.1	***84.53***	3.50
Algae	0.2	0.2	0.8	***0.40***	0.20
Abiotic	10.4	17.2	5.7	***11.09***	3.35
N9: BUNDERRA					
Live Coral	27.2	17.4	20.3	***21.65***	2.90
Hard Coral	15.4	16.4	16.9	***16.25***	0.44
Soft Coral	11.8	1.0	3.4	***5.40***	3.27
Dead Coral	43.4	60.8	38.5	***47.55***	6.75
Algae	3.1	6.4	0.1	***3.20***	1.82
Abiotic	26.3	14.2	40.9	***27.13***	7.72

Appendix 6 cont.

	Category Percentages				
	T1	**T2**	**T3**	***Mean***	**S.E.**
N10: LEFROY BAY					
Live Coral	14.5	24.5	8.4	***15.78***	4.71
Hard Coral	11.5	8.0	4.8	***8.08***	1.94
Soft Coral	3.0	16.5	3.6	***7.70***	4.40
Dead Coral	59.7	50.0	81.3	***63.65***	9.25
Algae	3.9	7.8	5.0	***5.57***	1.16
Abiotic	23.0	17.7	23.8	***21.50***	1.91
N25: PT BILLY					
Live Coral	19.5	10.0	2.4	***10.63***	4.95
Hard Coral	19.5	10.0	2.4	***10.63***	4.95
Soft Coral	0.0	0.0	0.0	***0.00***	0.00
Dead Coral	78.2	75.9	69.0	***74.36***	2.76
Algae	0.0	0.0	0.0	***0.00***	0.00
Abiotic	0.0	14.2	26.8	***13.67***	7.74
N11: PT. CLOATES					
Live Coral	23.4	15.9	16.1	***18.47***	2.47
Hard Coral	23.0	15.9	16.1	***18.33***	2.33
Soft Coral	0.4	0.0	0.0	***0.13***	0.13
Dead Coral	43.9	56.4	62.3	***54.20***	5.42
Algae	10.8	1.5	3.4	***5.23***	2.84
Abiotic	23.2	26.1	18.2	***22.50***	2.31
N12: DUGONG SANCTUARY					
Live Coral	17.0	22.8	30.9	***23.57***	4.03
Hard Coral	16.8	22.8	30.5	***23.37***	3.96
Soft Coral	0.2	0.0	0.4	***0.20***	0.12
Dead Coral	71.0	66.4	63.4	***66.93***	2.21
Algae	2.0	1.2	1.0	***1.40***	0.31
Abiotic	8.6	10.0	4.7	***7.77***	1.59
N13 BRUBOODIJO PT.					
Live Coral	7.4	8.1	17.1	***10.87***	3.12
Hard Coral	7.4	8.1	17.1	***10.87***	3.12
Soft Coral	0.0	0.0	0.0	***0.00***	0.00
Dead Coral	79.3	75.7	69.3	***74.77***	2.92
Algae	1.3	11.8	6.6	***6.57***	3.03
Abiotic	0.0	4.2	7.0	***3.73***	2.03
N14: BILL'S BAY					
Live Coral	12.8	11.4	13.7	***12.63***	0.67
Hard Coral	12.8	9.2	13.5	***11.83***	1.33
Soft Coral	0.0	2.2	0.2	***0.80***	0.70
Dead Coral	6.8	55.9	63.1	***41.93***	17.69
Algae	0.0	1.2	0.4	***0.53***	0.35
Abiotic	25.9	30.8	22.4	***26.37***	2.44

Appendix 6 cont.

	Category Percentages				
	T1	**T2**	**T3**	***Mean***	**S.E.**
N22: NORTH CORAL BAY					
Live Coral	7.8	4.9	13.5	***8.73***	2.53
Hard Coral	7.8	4.9	12.8	***8.50***	2.31
Soft Coral	0.0	0.0	0.7	***0.23***	0.23
Dead Coral	84.1	88.7	65.6	***79.47***	7.06
Algae	0.2	4.6	2.8	***2.53***	1.28
Abiotic	7.5	0.8	16.0	***8.09***	4.39
N24: PELICAN PT.					
Live Coral	30.4	65.2	62.3	***52.62***	11.14
Hard Coral	30.4	65.2	62.3	***52.62***	11.14
Soft Coral	0.0	0.0	0.0	***0.00***	0.00
Dead Coral	60.0	31.0	31.7	***40.91***	9.55
Algae	1.8	0.0	0.4	***0.73***	0.55
Abiotic	4.2	3.8	5.6	***4.53***	0.55
N17: CAPE FARQUHAR					
Live Coral	69.8	70.8	58.0	***66.20***	4.11
Hard Coral	68.8	70.0	57.2	***65.33***	4.08
Soft Coral	1.0	0.8	0.8	***0.87***	0.07
Dead Coral	21.1	26.4	34.6	***27.37***	3.92
Algae	0.0	0.0	0.0	***0.00***	0.00
Abiotic	8.6	2.8	7.4	***6.27***	1.77
N18: GNARRALOO BAY					
Live Coral	67.3	78.4	78.4	***74.70***	3.70
Hard Coral	66.7	78.4	78.4	***74.50***	3.90
Soft Coral	0.6	0.0	0.0	***0.20***	0.20
Dead Coral	24.8	12.7	15.6	***17.70***	3.65
Algae	0.0	0.0	0.0	***0.00***	0.00
Abiotic	0.0	7.6	6.0	***4.53***	2.31

APPENDIX 7: DATA FROM THE LINE INTERCEPT TRANSECT METHOD AND AIMS VIDEO TRANSECT ANALYSIS SYSTEM

Percentage cover of live hard corals, dead coral, abiotic and algae at long term monitoring 'transect' sites established in May 1998: Comparison of AVTAS and LIT methods.

		LIT	AVTAS	LIT	AVTAS	LIT	AVTAS	LIT	AVTAS
SITE		HARD CORALS	HARD CORALS	DEAD CORAL	DEAD CORAL	ABIOTIC	ABIOTIC	ALGAE	ALGAE
N 19	Bundegi Sanctuary	21.84	23.33	38.86	9.83	40.63	16.33	0.20	48.34
N1	Bundegi	20.23	23.50	54.23	40.00	19.99	15.67	5.97	19.00
N2	Mildura	1.80	2.33	0.00	0.00	60.27	19.00	34.55	73.66
N3	Vlamingh Head	1.10	3.83	0.23	0.00	97.37	59.67	0.00	30.83
N20	Jurabi	10.25	7.00	73.55	0.00	11.53	9.00	0.00	77.83
N5	Tantabiddi	9.26	10.50	15.89	0.83	74.57	62.00	0.00	22.17
N6	Neds Camp	4.52	3.67	31.70	1.00	53.44	50.33	7.59	42.67
N7	Turquoise Bay	15.46	22.67	59.87	3.00	21.97	39.67	2.00	31.34
N8	Osprey	2.17	1.33	69.41	0.00	25.15	53.67	1.20	42.34
N21	Yardie Creek	4.37	2.83	84.53	0.17	11.09	40.67	0.40	53.16
N9	Bundera	16.25	15.17	47.55	1.00	27.13	37.17	3.20	41.00
N10	Lefroy bay	8.08	8.83	63.65	0.17	21.50	30.00	5.57	54.17
N25	Point Billy	10.63	10.67	74.36	0.67	13.67	37.5	0.00	47.34
N11	Point Cloates	18.33	13.83	54.20	0.00	22.50	35.00	5.23	49.84
N12	Dugong Sanctuary	23.37	19.00	66.93	0.17	7.77	27.83	1.40	48.66
N13	Bruboodijoo	10.87	11.50	74.77	2.83	3.73	0.00	6.57	74.49
N22	Outer reef/Bill's Bay	8.50	9.17	79.47	0.67	8.09	27.50	2.53	57.50
N14	Coral Bay	11.83	8.50	41.93	2.33	26.37	47.17	0.53	37.17
N24	Pelican Point	52.62	52.5	40.91	15.5.	4.53	10.17	0.73	15.17
N17	Cape Farquhar	65.33	56.67	27.30	13.17	6.27	10.00	0.00	0.00
N18	Gnarraloo	74.50	67.50	17.70	1.83	4.53	12.17	0.00	14.83

APPENDIX 8: COMPARISON BETWEEN PERCENT COVER OF LIVE HARD CORAL DETERMINED BY THE LIT AND AVTAS METHODS