

Ocean Barramundi Project - Baseline Marine Environmental Quality Study



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1 Approach

The original baseline water and sediment quality monitoring program was conducted between February-August 2021, which was considered to be a 'typical' year though the monitoring period did not capture any extreme events which are known to occur. An additional baseline program was conducted between January-March 2024 to supplement the original baseline. The purpose of the baseline program was to effectively capture the seasonal and spatial variability in the collected parameters across the area of interest. This has provided a comprehensive baseline to set the boundary conditions of the water quality and particle tracking models, and allow comparison against the EPA's criteria for high, moderate and low ecological protection. Field work associated with the program was undertaken by Tassal staff, with data analysis and interpretation undertaken by BMT.

1.1 Program design

Water samples were originally taken at a total of 29 locations, comprising of 16 lease locations and 13 model-boundary locations either on the outer (oceanic) or inner (nearshore) boundary of the Buccaneer Archipelago in proximity to the proposed leases (Table 1.1). Sediment samples were collected at the 16 lease locations, only. The number of locations was revised for the additional baseline program after Tassal reduced the scale of the Proposal (as per the approved Amendment under Section 43(a) of the EP Act), while further reference locations were included. The revised baseline dataset as such comprises a total of 27 locations, consisting of 7 lease locations, 7 reference locations and 13 model-boundary reference locations. The analysis presented here focuses only on the locations relevant to the revised proposal.

Locations were positioned to provide coverage of all the proposed sites, while also providing an indication of any gradients in water quality from offshore to nearshore regions, which may affect baseline conditions. The additional reference locations were also selected to be near the lease locations, but distant enough such that they are not predicted to be impacted by any activities associated with the Proposal or any other operations. In addition to the water quality samples collected, physical spot samples of water temperature and dissolved oxygen at the seabed were also collected using a CTD profiler.

The water and sediment quality parameters that were collected in this program are detailed in Table 1.1, with the sampling schedule detailed in Table 1.2.

Table 1.1 Water and sediment quality parameters collected for chemical analysis

Water quality parameters	Sediment quality parameters
Chlorophyll-a	Copper
Phaeophytin-a	Zinc
Particulate Organic Carbon	Total Kjeldahl Nitrogen
Ortho-phosphate (PO ₄ -P)	Total Phosphorous
Ammonia (NH ₄ -N)	Total Organic Carbon
Nitrate and Nitrite (NO _x -N)	Particle Size Distribution
Total Nitrogen	Infauna
Total Phosphorous	

Water quality parameters	Sediment quality parameters
Silicate	
Total suspended solids	

Water samples were collected using an electric submersible pump 0.5 m below the surface, at each of the 27 water quality locations. Once retrieved, the water samples were divided into the aliquots required for each analysis, and placed into the respective sample bottles which were then put into an esky with ice or ice bricks. Once back on land, samples were appropriately stored prior to transportation to the laboratory.

Sediment samples were collected using a modified sediment corer. At each location, four cores (equating to four replicate samples) were collected of which the top 5 cm of each core was used to form a combined and homogenised sample. Each sample were placed either into respective sample bags or jars and placed into an esky with ice or ice bricks. Once back on land samples were appropriately stored prior to transportation to the laboratory.

Infauna samples were collected using a Petite Ponar grab. Four replicate grabs were collected at each location. The content of each grab was carefully rinsed through a series of graded sieves (to a minimum of 1 mm). Any material greater than 1 mm was fixed in formalin prior to transportation to the laboratory. Infauna were carefully picked from the samples and retained for identification to species level.

1.1.2 Schedule

The schedule for the collection of the baseline dataset was designed such that sampling events provided coverage for two primary sources of temporal variation; a) neap and spring tidal events, and b) wet and dry seasons. Tidal variation is extreme within the Kimberley region, and as such it has a major impact on the natural variation in water quality. The Kimberley region also experiences two major seasons, the wet and the dry. These two seasons peak in February and June/July respectively, as such capturing data across this period generally captures the greatest level of temporal variation in any given year for the region.

The original baseline dataset captured six sampling events in the wet and dry respectively between February-August 2021. The additional baseline dataset captured seven sampling events between January-April 2023, and a further seven sampling events between October 2023-March 2024. As such, the water quality baseline dataset comprises of a total of 26 individual sampling events, providing coverage of both natural tidal variation and natural seasonal variation for the region. The recommendation in ANZG (2018) for the collection of two years of monthly baseline data results in a total of 24 individual sampling events. However, this recommendation is typically for temperate environments where natural temporal variation is primarily driven by changes between the four seasons of summer, autumn, winter and spring; and not by tides or by variation between two seasons (wet vs dry). For the Kimberley region, two years of monthly data would not capture the natural variation associated with changes between neap and spring tides. As such, though the baseline dataset here does not technically comprise of two years of continuous monthly data, it does provide coverage for the two key drivers of temporal variation for the region.

The gap in the additional dataset was a result of a change in the Proposal owner, and not part of the initial design of the sampling campaign.

Bottom water samples were only collected in the wet and dry season on neap tides, with samples unable to be collected during the dry season on spring tides.

Table 1.2 Water and sediment quality sampling program schedule

Year	2021												2023												2024						
Month	Feb	Feb	Mar	Mar	Apr	Apr	Jun	Jun	Jul	Jul	Aug	Aug	Jan	Feb	Feb	Mar	Mar	Mar	Apr	Oct	Nov	Dec	Dec	Feb	Feb	Mar					
Sample Event	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	1	2	3	4	5	6	7					
Water quality parameters																															
Dissolved Oxygen (in-situ)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓					
Temperature (in-situ)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓					
Chlorophyll 'a'	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓					
Phaeophytin-a	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓					
Particulate Organic Carbon	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓					
Ortho-phosphate (PO ₄ -P)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓					
Ammonia (NH ₄ -N)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓					
Nitrate and Nitrite (NO _x -N)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓					

Year	2021												2023												2024						
Month	Feb	Feb	Mar	Mar	Apr	Apr	Jun	Jun	Jul	Jul	Aug	Aug	Jan	Feb	Feb	Mar	Mar	Mar	Apr	Oct	Nov	Dec	Dec	Feb	Feb	Mar					
Sample Event	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	1	2	3	4	5	6	7					
Water quality parameters																															
Total Nitrogen	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓					
Total Phosphorous	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓					
Silicate	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓					
Sediment quality parameters																															
Copper	✓								✓									✓													
Zinc	✓								✓									✓													
Total Kjedah Nitrogen	✓								✓									✓													
Total Phosphorous	✓								✓									✓													
Total Organic Carbon	✓								✓									✓													
Particle Size Distribution	✓								✓									✓													
Infauna	✓								✓									✓													

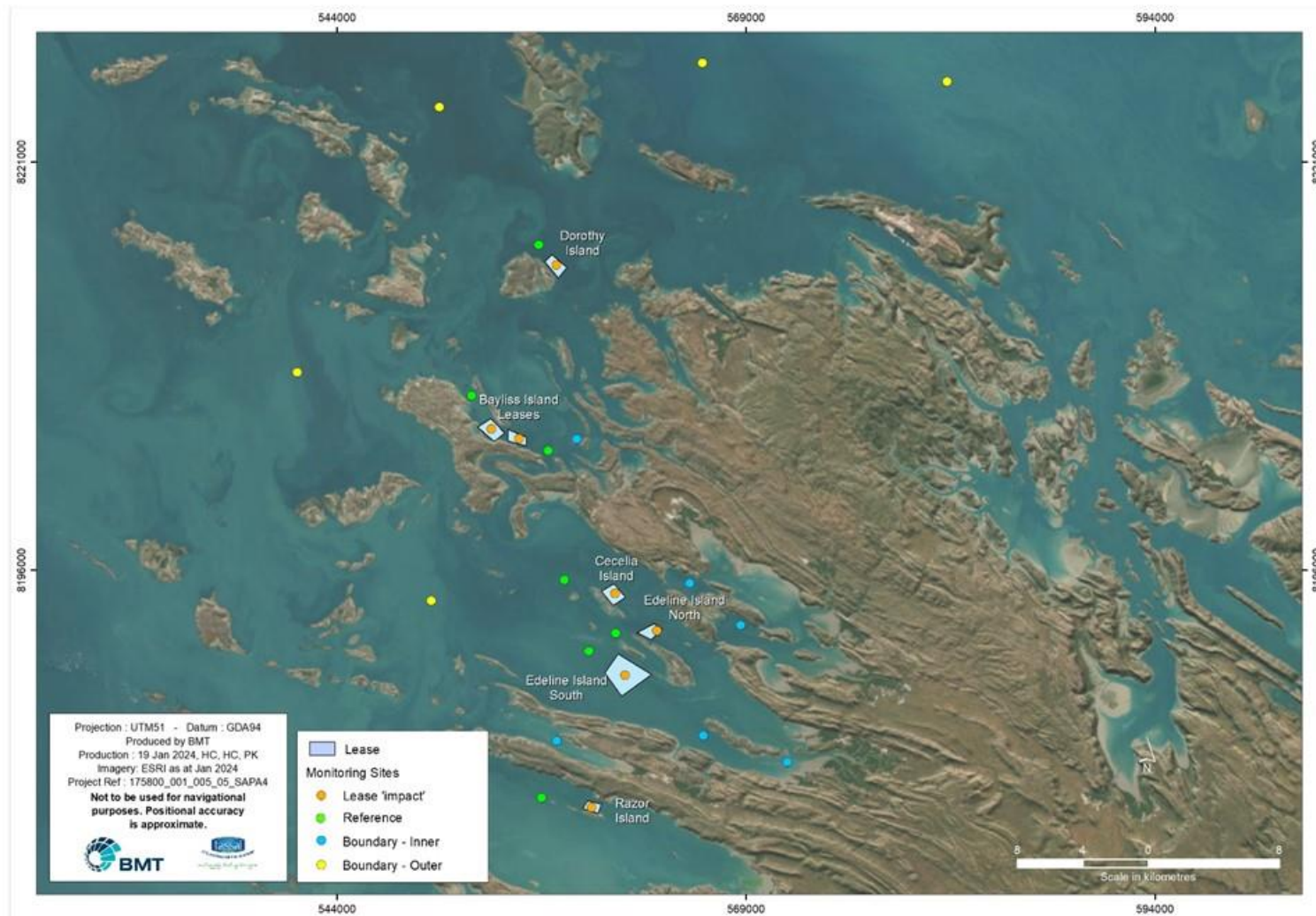


Figure 1.1 Water and sediment quality baseline monitoring locations

2 Statistical analysis

2.1 Water quality

The median concentrations within water samples were compared to the IMCRA mesoscale bioregions (Australia) default guideline values for physical and chemical (PC) stressors for the Kimberley region, where available (ANZG 2018). To derive guideline values for impact assessment, the 80th and 95th percentiles for each parameter were also calculated using the baseline data. For samples with concentrations below the laboratory LoR, values were assumed to be equivalent to the LoR in order to calculate the 80th and 95th percentile.

Multivariate analyses tested the difference in overall environment characteristics, as defined by the collected water quality parameters, between the various locations. A Euclidean resemblance matrix was applied on untransformed data prior to analysis with PERMANOVA (non-parametric analysis of variance, Version 7.0.21, Primer-E Ltd) (Anderson et al. 2008). Post-hoc pair wise comparisons were then used to test for differences among locations.

This testing was required to verify how similar the environmental characteristics at each lease location, as well as each reference location, were to each other. The reasoning for this was two-fold. Firstly, testing was conducted to determine whether the data for any of the lease locations could be pooled. The EQC for the impact assessment would subsequently be calculated from each set of pooled data, and applied to the particular geographical area or region where the PERMANOVA testing has verified that the baseline environmental conditions are not statistically significantly different. Secondly, testing was conducted to verify that the reference locations are not statistically significantly different from the lease locations that they would be compared against for ongoing monitoring within the EMMP (Annex A).

2.2 Sediment

The 95th percentile of dissolved metal and ammonia concentrations within sediment samples were compared to the ANZG (2018) default guideline values (DGVs) for 99% species protection for a high ecological/conservation area (Table 2.6). For samples with concentrations below the LoR, values were halved in order to calculate the 95th percentile. Sediment analyte concentrations were compared to ANZG (2018) DGVs for non-toxicant analytes (Table 2.6).

2.3 Infauna

For the analysis of infauna, a two-factor statistical design was used: (1) Season (fixed factor, two levels [wet & dry]); (2) Site (fixed factor). The benthic infauna assemblage (multivariate dataset) were first sorted to species level, before being consolidated to the phyla level due to the generally low diversity recorded at a class or family level. Multivariate assemblage data were square-root transformed to down-weight the contribution of dominant infauna and to allow intermediate or rarer groups to play a part in the analyses (Clarke 1993). A Bray-Curtis dissimilarity matrix was generated and the data were analysed using PERMANOVA.

Results of multivariate analysis were presented graphically using nMDS. This enabled the top benthic infauna phyla that had the strongest correlations with the patterns in the multivariate data to be determined. For univariate analyses of infauna abundance and family richness, a Euclidean distance measure was applied on untransformed data, allowing PERMANOVA to return an equivalent test statistic to a standard ANOVA (Anderson et al. 2008). Post-hoc pair wise comparisons were used to test for differences among levels within significant factors. Results from family richness and abundance analyses were presented using bar graphs of means and standard errors for each location.

To examine the relationship between infauna community assemblage and sediment parameters (grain sizes, trace metals, nutrients), a nMDS plot of the community assemblage were graphed with vectors overlayed on the nMDS plot of sediment parameters. This enabled the top sediment parameters that had the strongest correlations with the patterns in the multivariate infauna data to be determined.

3 Results

3.1 Water quality

3.1.1 Pooling data

Results of the PERMANOVA testing for the pooling of lease and reference location data (not model boundary data) are summarised in Table 3.1 and Table 3.2. The only lease location which reported a significant difference in overall environmental characteristics, as defined by the collected water quality parameters, to the other lease locations was Razor Island and its respective reference location. No other lease location reported a significant difference to any other lease location. This supports the pooling of the baseline data across the remaining lease locations, excluding Razor Island, for the derivation of water quality thresholds for use in the modelled impact assessment (as per BMT 2024a).

Testing of the reference locations also found that none of the selected reference locations showed a significant difference to the lease location they would be compared too under ongoing monitoring. This supports the selection of these reference locations and provides evidence that they are appropriate for comparison to the lease locations in the EMMP (BMT 2024b). Some of the proposed reference locations did show a significant difference to other reference locations in different areas of the Archipelago, however, as reference location data are not being pooled across areas for assessment in the EMMP this is of no consequence. Exclusion of the Dorothy Island Reference Site, which was the only reference location to show a significant difference to other reference locations, also had no effect on the calculation of 80th and 95th percentiles as presented for certain water quality parameters (chlorophyll-a, dissolved inorganic nitrogen) which were included for model interrogation (BMT 2024a).

Table 3.1 Results of a one factor PERMANOVA examining differences among locations across all water quality parameters

Source	Df	MS	P(perm)
Location	27	23.748	0.0001
Residual	922	8.422	
Total	949		

Table 3.2 Results of PERMANOVA pairwise comparisons examining differences among locations across all water quality parameters

	By	Ce	Do	EIN	EIS	Rz	By E	SB R 1	SB R 2	SB R 3	SB R 4	By R 1	By R 2	Do R 1
Ce	0.266													
Do	0.277	0.0624												
EIN	0.5199	0.9185	0.1734											
EIS	0.2788	0.4267	0.7173	0.396										
Rz	0.0016	0.0321	0.0452	0.0502	0.5017									
By E	0.9361	0.5428	0.1939	0.4528	0.1485	0.0032								
SB R 1	0.32	0.0623	0.9537	0.2708	0.6032	0.044	0.0419							
SB R 2	0.2079	0.5372	0.4592	0.6043	0.4839	0.3081	0.2524	0.3219						
SB R 3	0.2665	0.2798	0.6145	0.3911	0.8909	0.917	0.1091	0.4055	0.6453					
SB R 4	0.3125	0.9358	0.444	0.8753	0.5717	0.1721	0.3827	0.1836	0.9755	0.5591				
By R 1	0.3823	0.087	0.4917	0.0931	0.1692	0.0014	0.2269	0.0981	0.3559	0.0486	0.1529			
By R 2	0.3366	0.3061	0.4174	0.2276	0.2333	0.0178	0.4588	0.0532	0.8189	0.1955	0.5986	0.6167		
Do R 1	0.0667	0.0012	0.8904	0.0111	0.1008	0.0005	0.0081	0.4627	0.1179	0.031	0.0216	0.3515	0.0638	
Rz R 1	0.0521	0.0189	0.6969	0.0753	0.6699	0.3591	0.0061	0.6019	0.2402	0.7281	0.1118	0.0058	0.0146	0.0384

Notes:

1. By = Bayliss, Ce = Cecelia, Do = Dorothy, EIN = Edeline Island North, EIS = Edeline Island South, Rz = Razor, E = Extra, Str = Strickland, Ref = Reference
2. **Bold** = p-values with alpha < 0.05

3.1.2 Dissolved oxygen

Median dissolved oxygen saturation ranged between 96.65% to 102.79% in the wet season, and 84% to 100.2% in the dry season (0). Concentrations were generally lower during the spring tides compared to neap tides. At an area level, dissolved oxygen saturation was lowest particularly at the inner and outer boundary locations, however this was only the case during the dry season, with saturation otherwise consistent during the wet season across most locations.

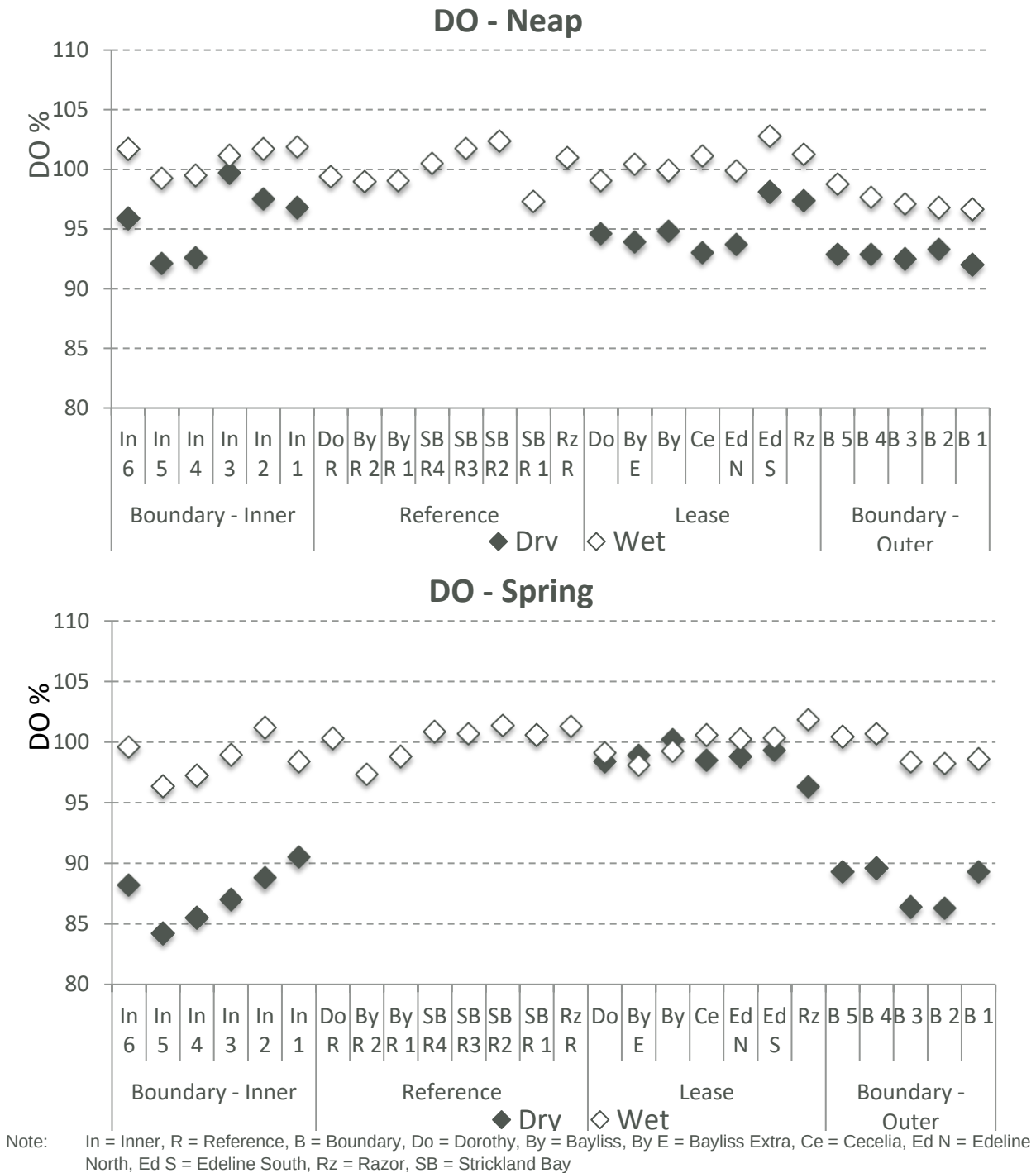
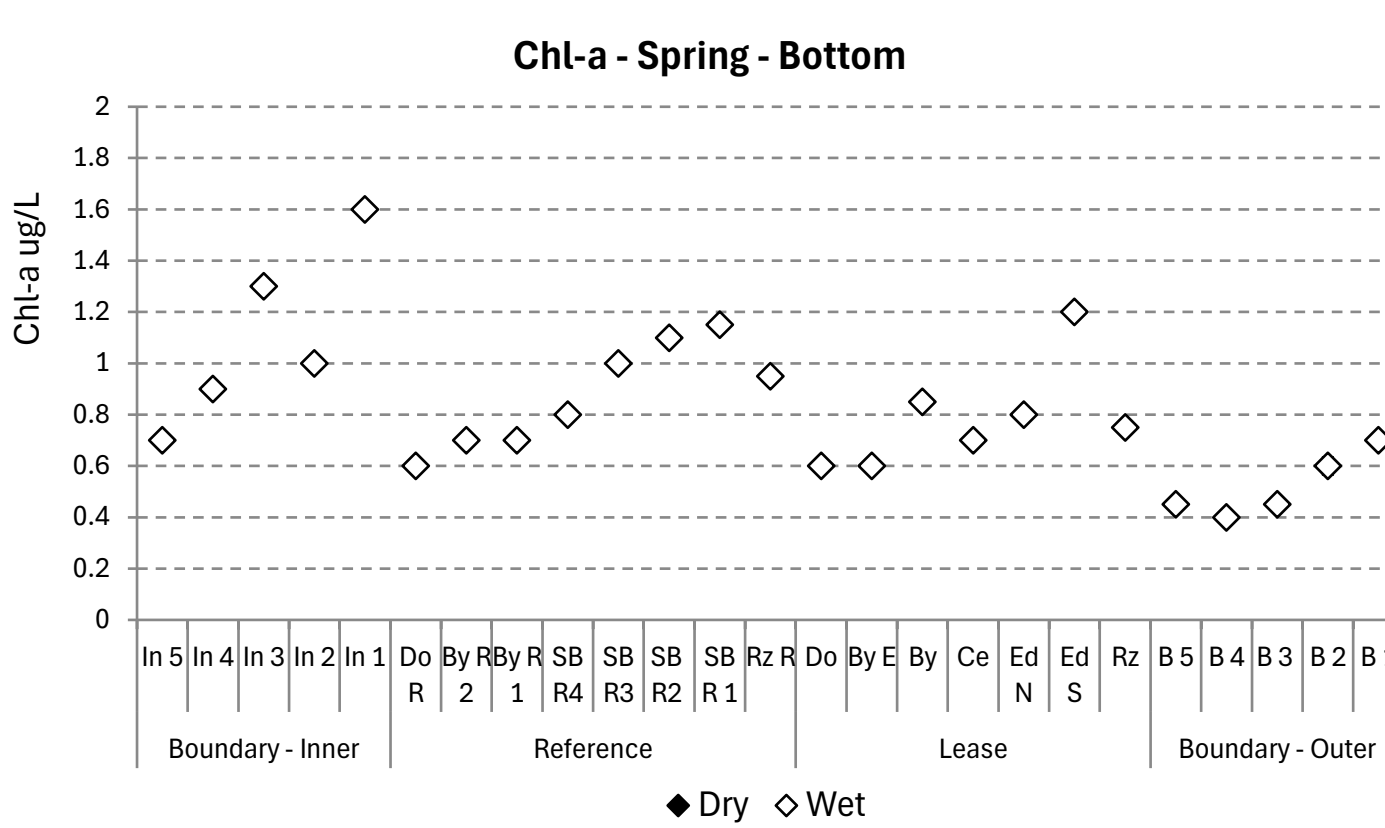
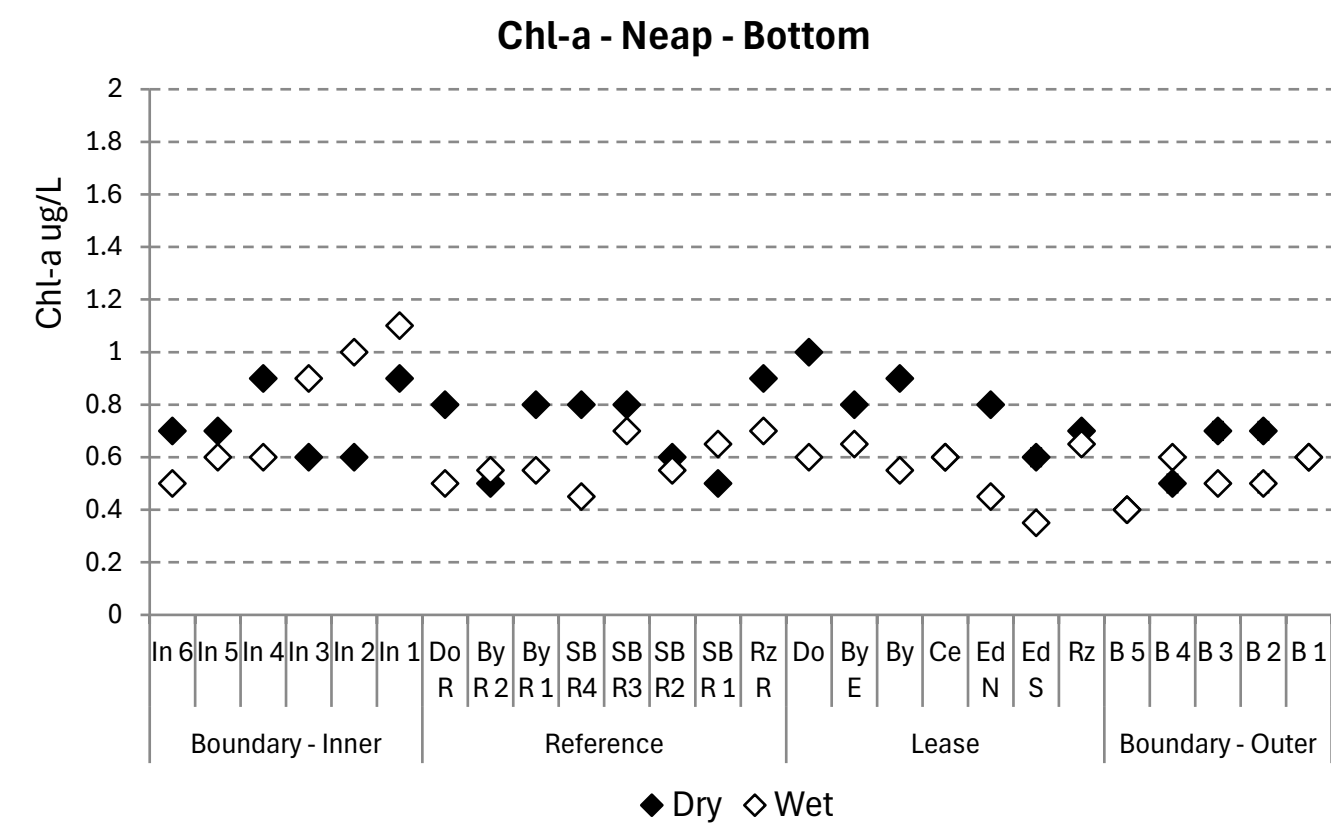
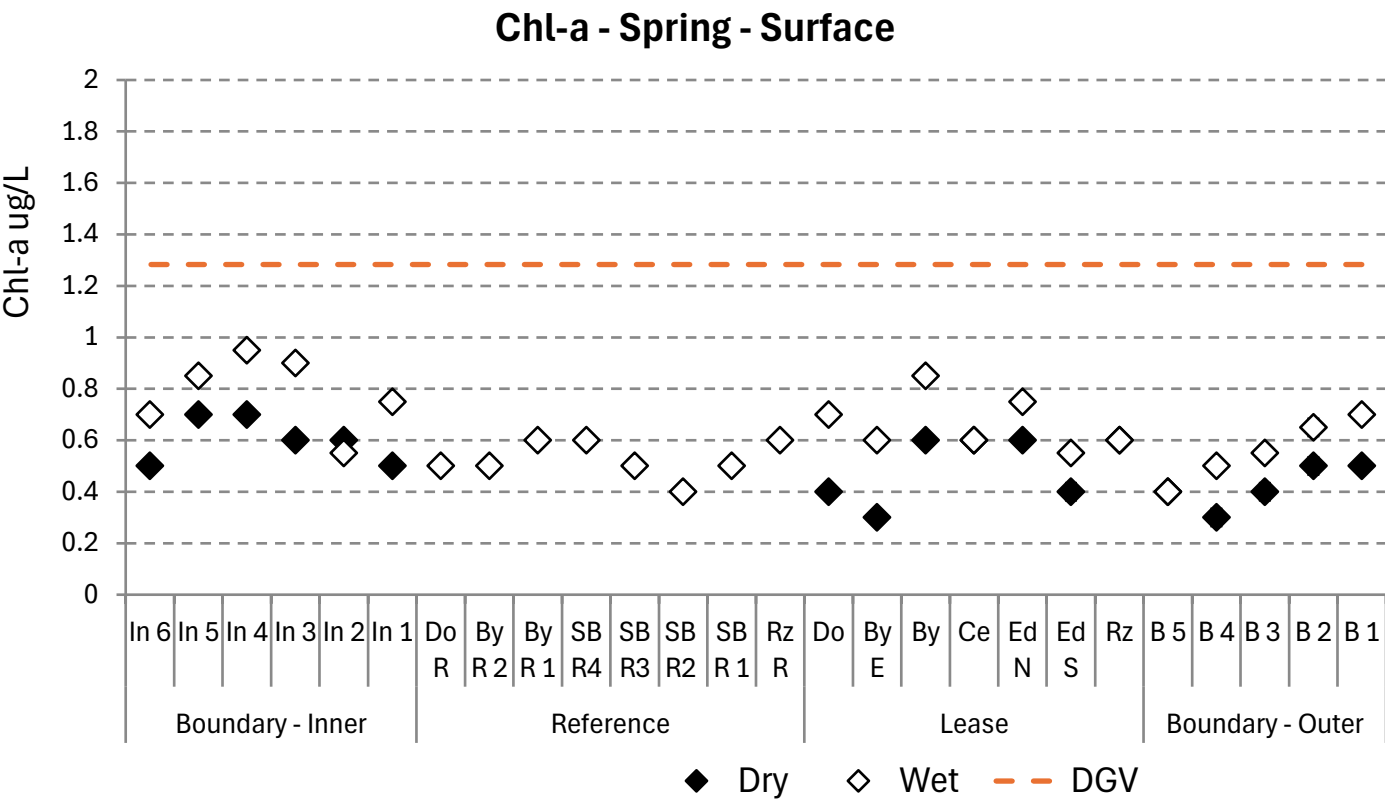
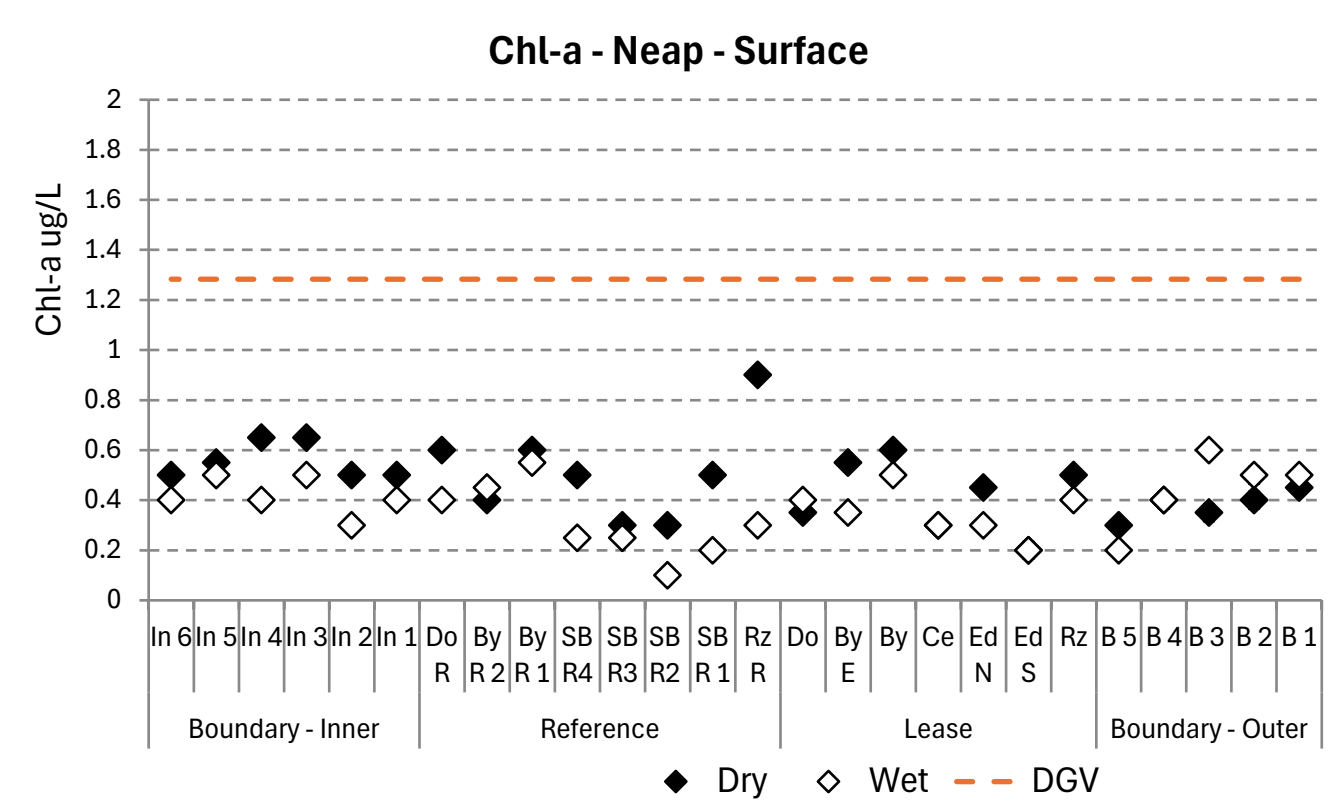


Figure 3.1 Median dissolved oxygen saturation (depth-averaged) across boundary (inner and outer), lease and reference locations for wet and dry seasons and neap and spring tides

3.1.3 Chlorophyll-a

Median chlorophyll-a concentrations were below the ANZG (2018) default guideline value (averaged across seasons) for all locations in all seasons (0). At the surface, median concentrations ranged between 0.1 ug/L to 0.95 ug/L in the wet season, and 0.2 ug/L to 0.9 ug/L in the dry season. Concentrations were substantially greater in the bottom of the water column across all seasons and both tidal cycles, potentially due to resuspension of material with tidal fluctuations. Concentrations were generally higher during the spring tides compared to neap tides across all locations no matter the depth.

At an area level, the inner locations closest to the nearshore regions of the Archipelago tended to report higher median chlorophyll-a concentrations than the other locations, particularly during spring tides. Concentrations at the reference and lease locations were relatively consistent. Boundary locations reported the lowest median concentrations overall.



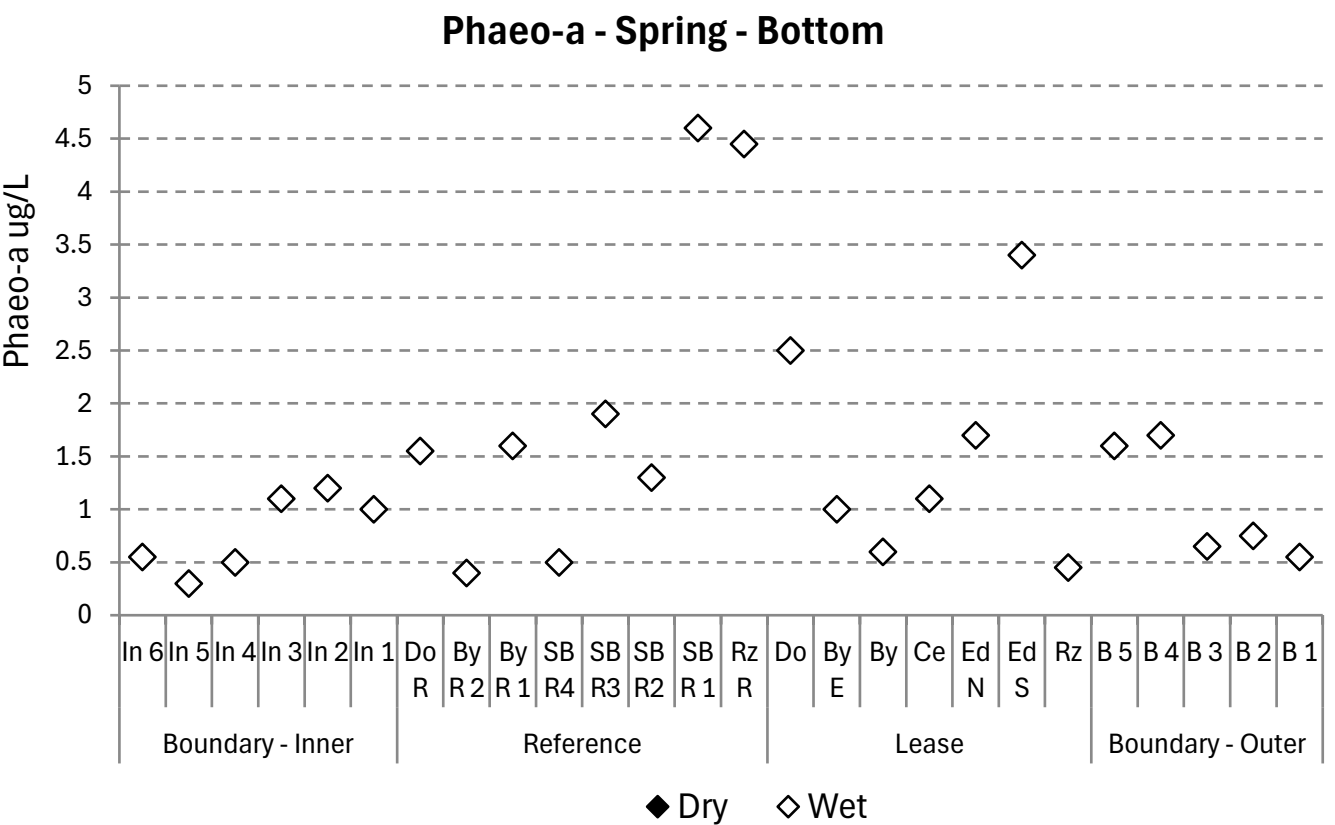
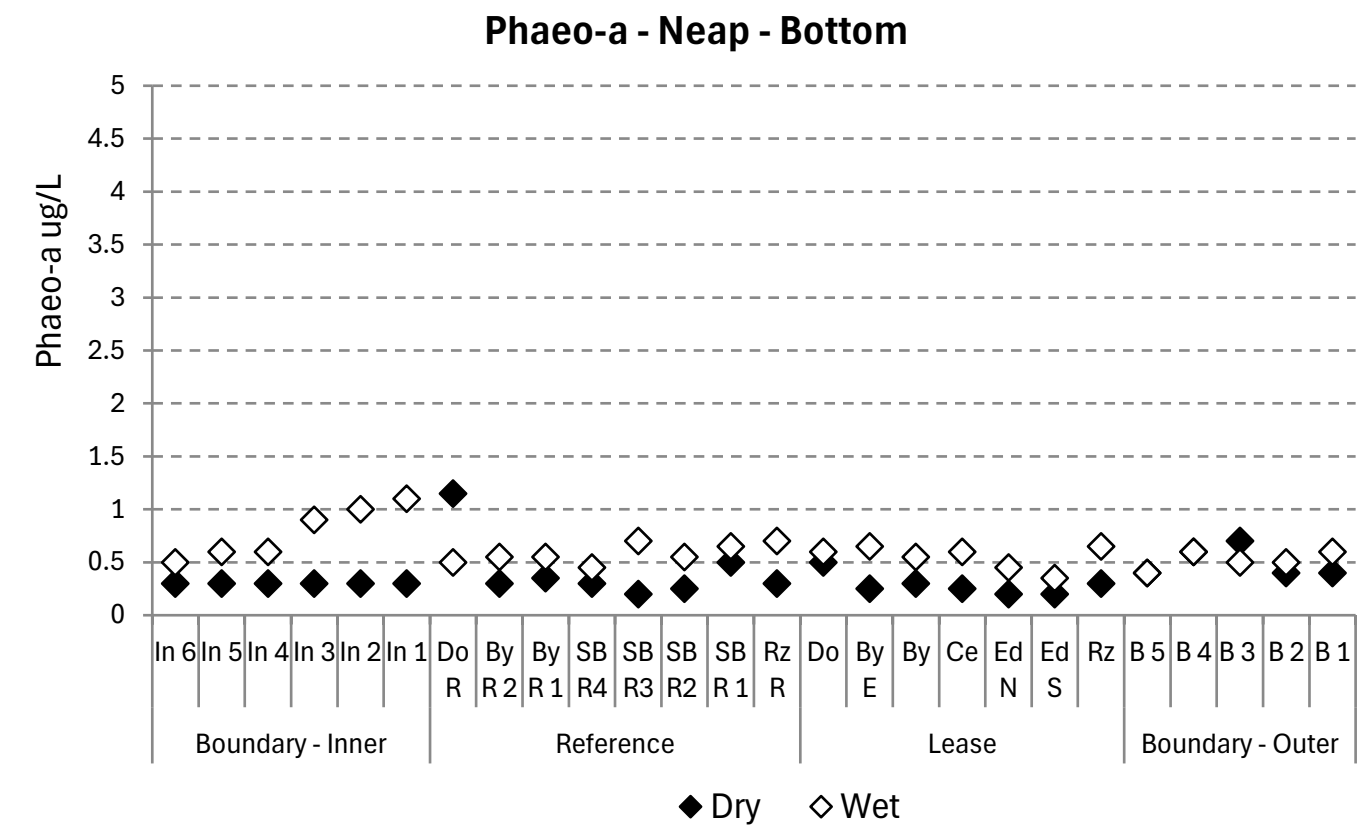
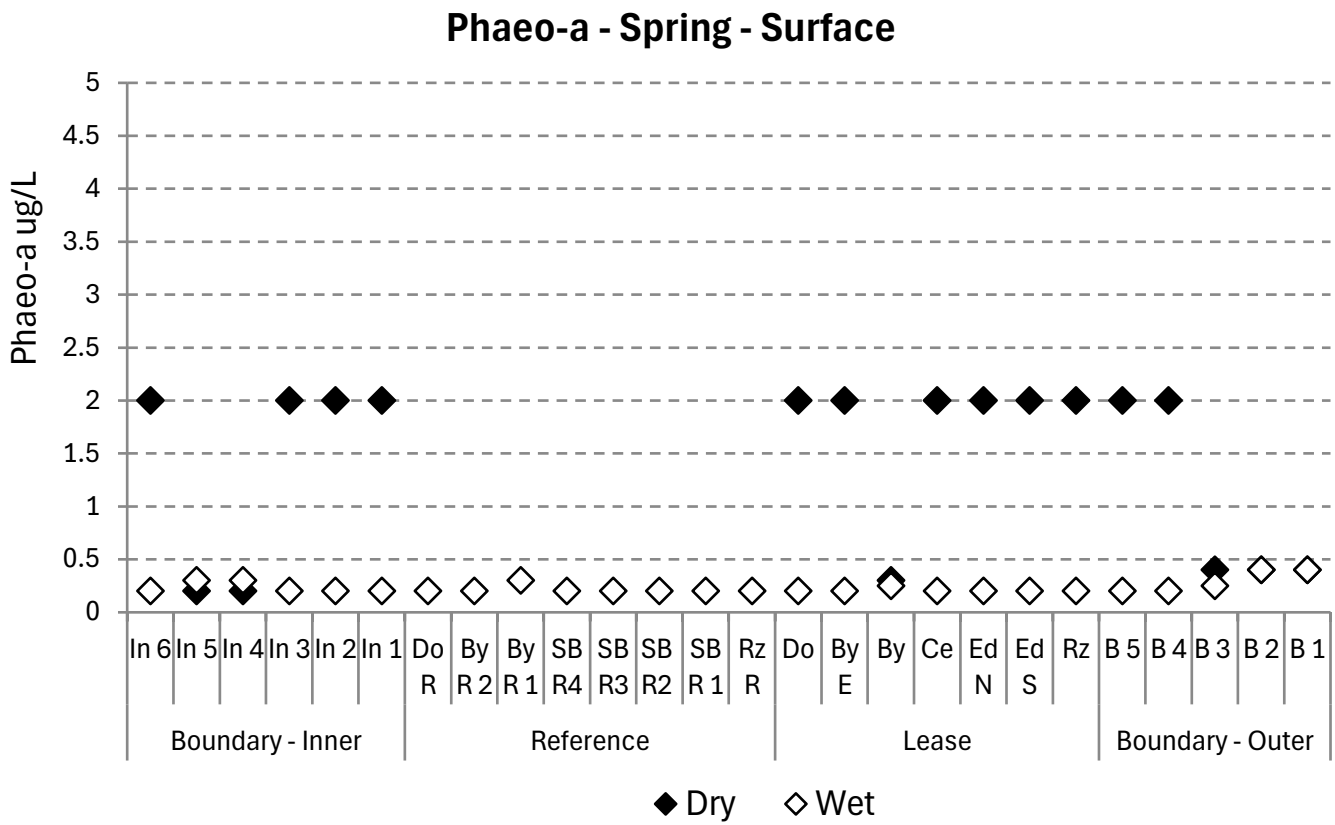
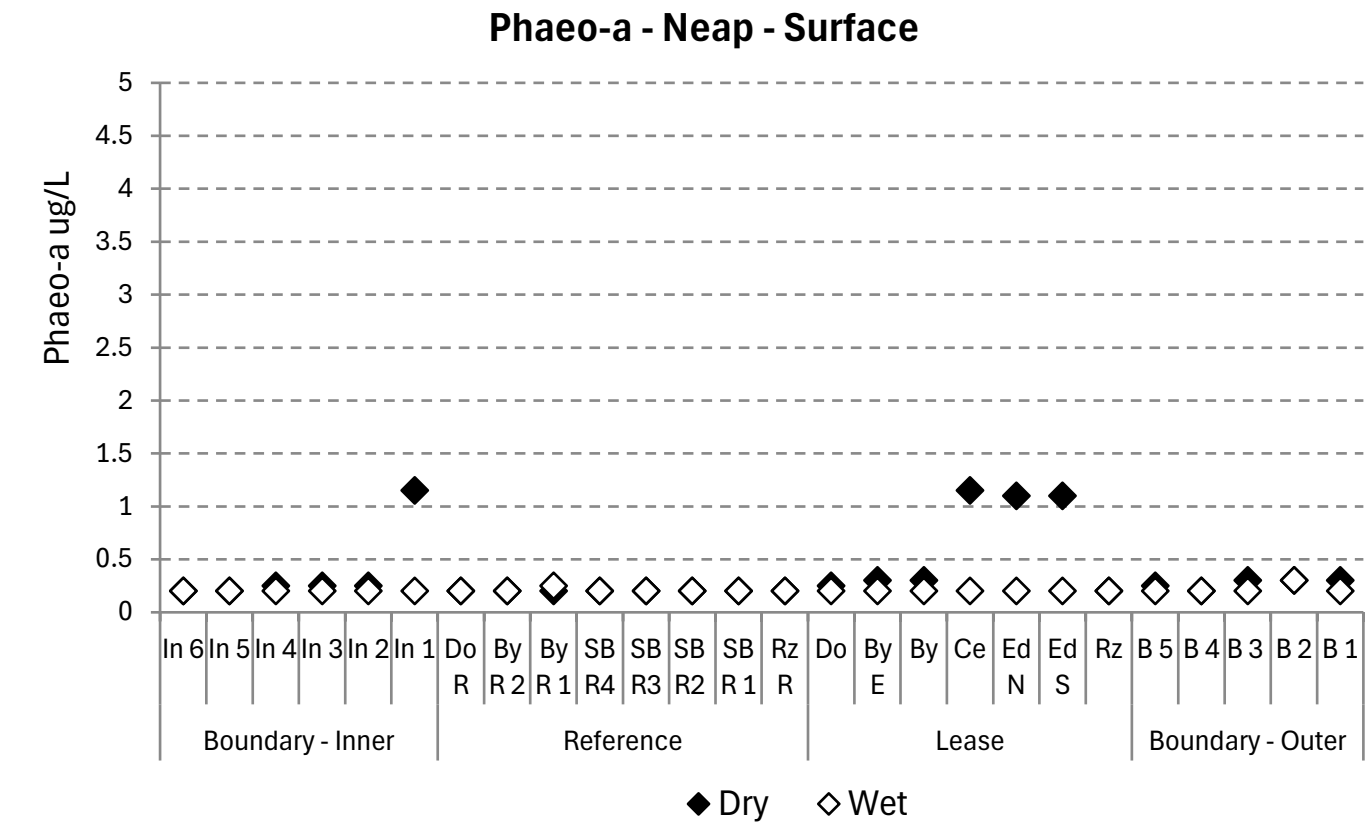
Note: In = Inner, R = Reference, B = Boundary, Do = Dorothy, By = Bayliss, By E = Bayliss Extra, Ce = Cecelia, Ed N = Edeline North, Ed S = Edeline South, Rz = Razor, SB = Strickland Bay

Figure 3.2 Median surface and bottom chlorophyll-a concentrations across boundary (inner and outer), lease and reference locations for wet and dry seasons and neap and spring tides, against the default guideline value for chlorophyll-a for the Kimberley region for surface waters (averaged across seasons; ANZG 2018)

3.1.4 Phaeophytin-a

Median phaeophytin-a concentrations at the surface ranged between 0.2 ug/L to 0.4 ug/L in the wet season, and 0.2 ug/L to 2 ug/L in the dry season (0). Median concentrations were substantially greater in the bottom of the water column across all seasons and both tidal cycles. Concentrations were generally higher during the spring tides compared to neap tides across all locations no matter the depth.

At an area level, the inner locations and the lease locations closest to the nearshore regions of the Archipelago tended to report higher median chlorophyll-a concentrations than the other locations, particularly during spring tides. Boundary locations reported the lowest median concentrations overall.



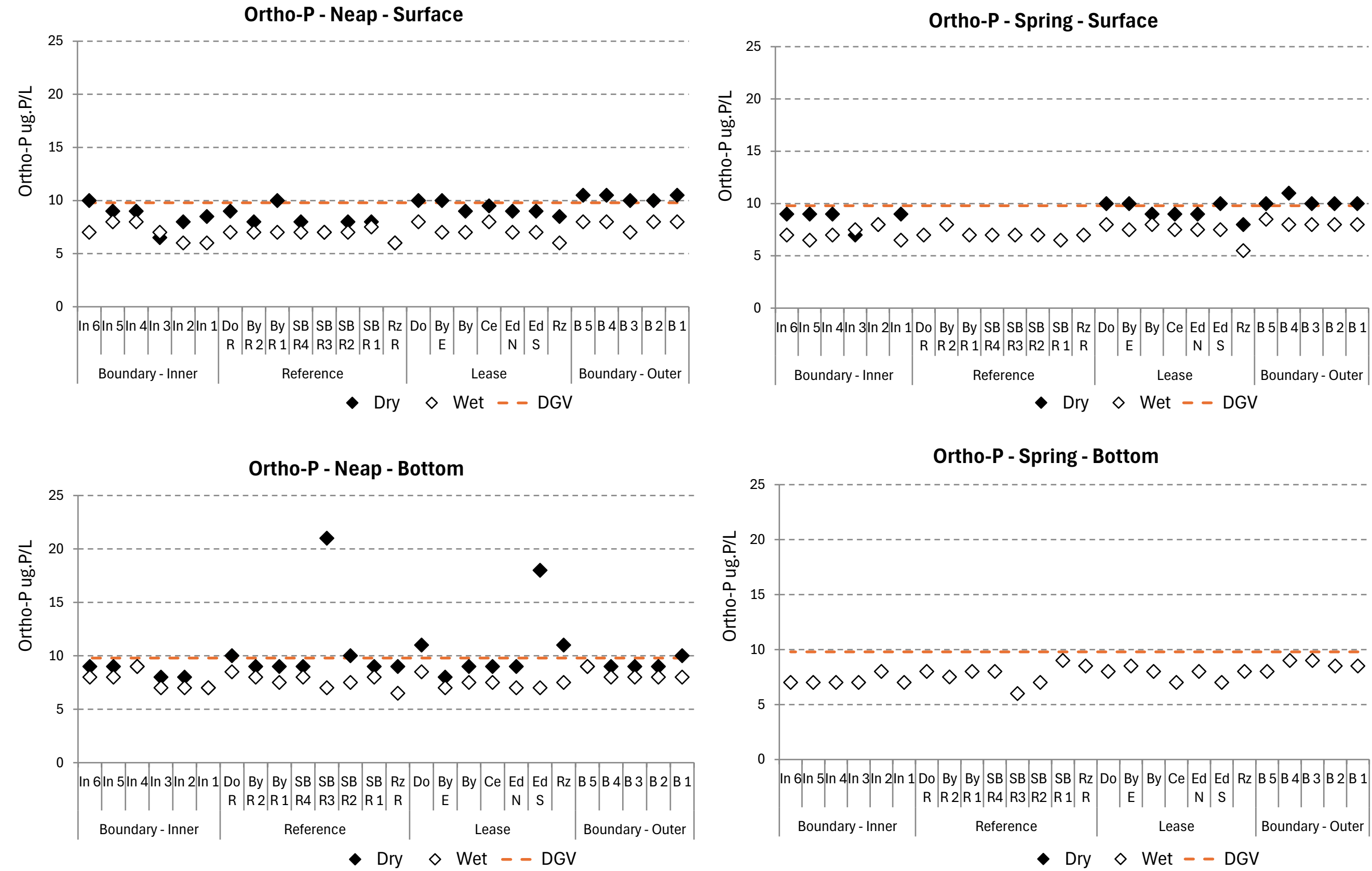
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Figure 3.3 Median surface and bottom phaeophytin-a concentrations across boundary (inner and outer), lease and reference locations for wet and dry seasons and neap and spring tides

3.1.5 Orthophosphate

Median orthophosphate concentrations were close to or exceeded the ANZECC ARMCANZ (2000) default guideline value (averaged across seasons), particularly on the neap tide for bottom samples (0). At the surface, median concentrations ranged between 5.5 ug.P/L to 8.5 ug.P/L in the wet season, and 6 ug.P/L to 10.5 ug.P/L in the dry season. Concentrations were substantially greater in the bottom of the water column across all seasons and both tidal cycles, with the highest reported median of 21 ug.P/L at location Strickland Bay Reference 3 in the dry season. Concentrations were generally higher during the neap tides compared to spring tides across all locations no matter the depth.

At an area level, concentrations were relatively consistent across all areas, with little to no major fluctuation that varies depending on the area.



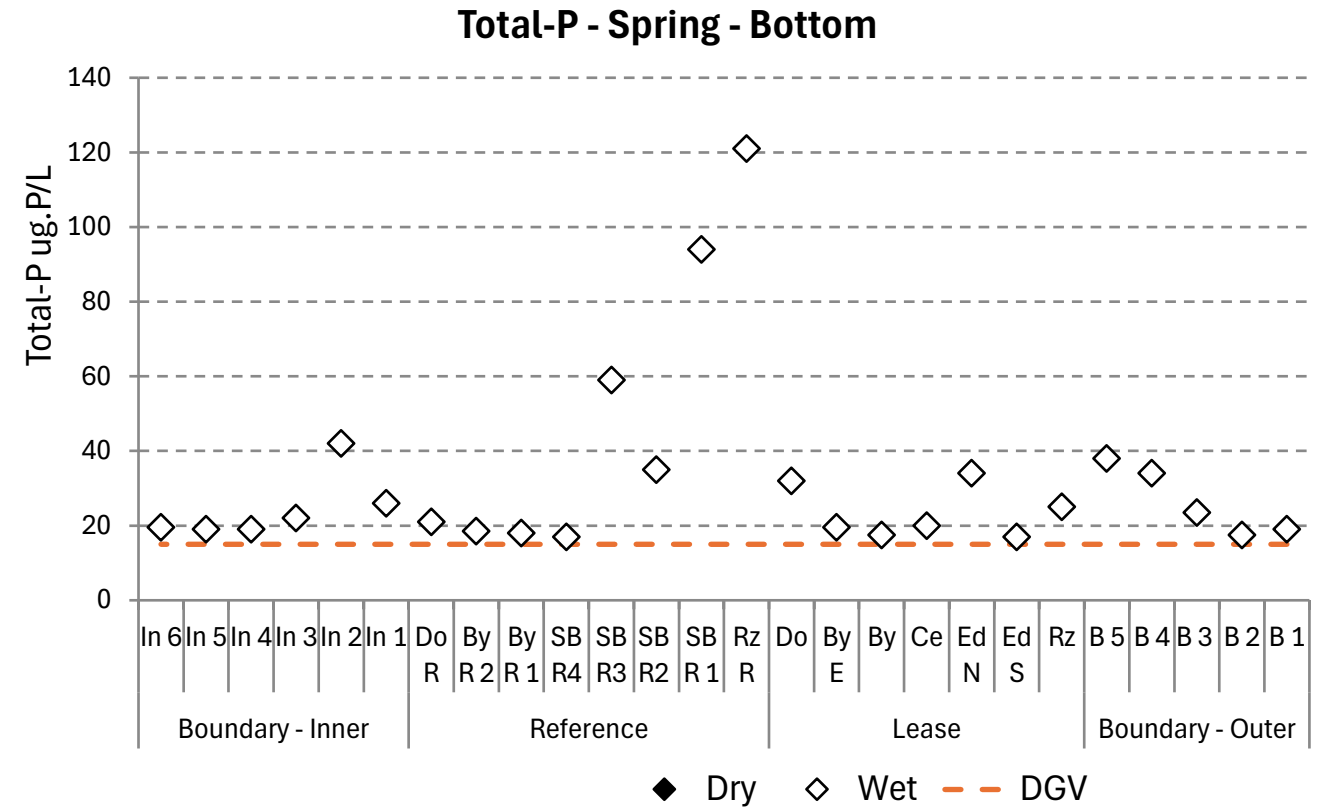
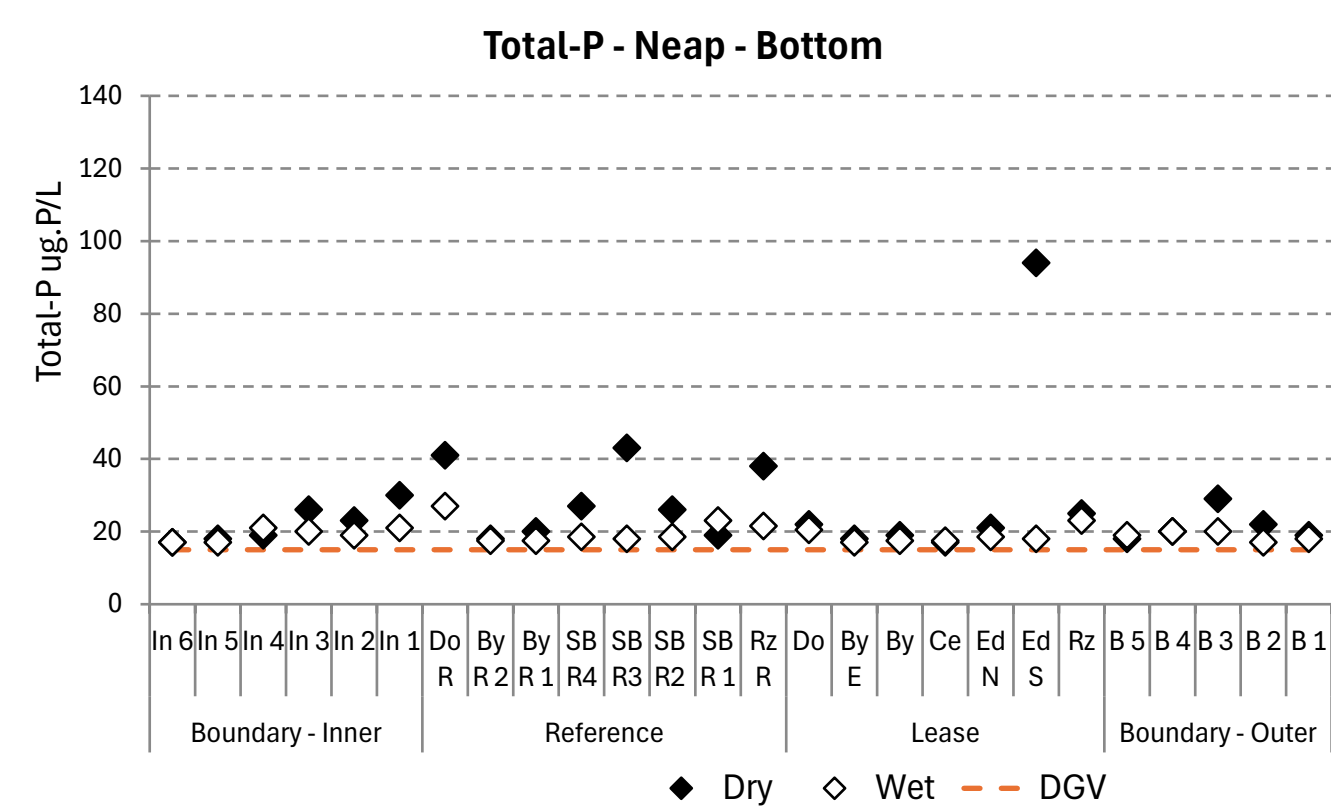
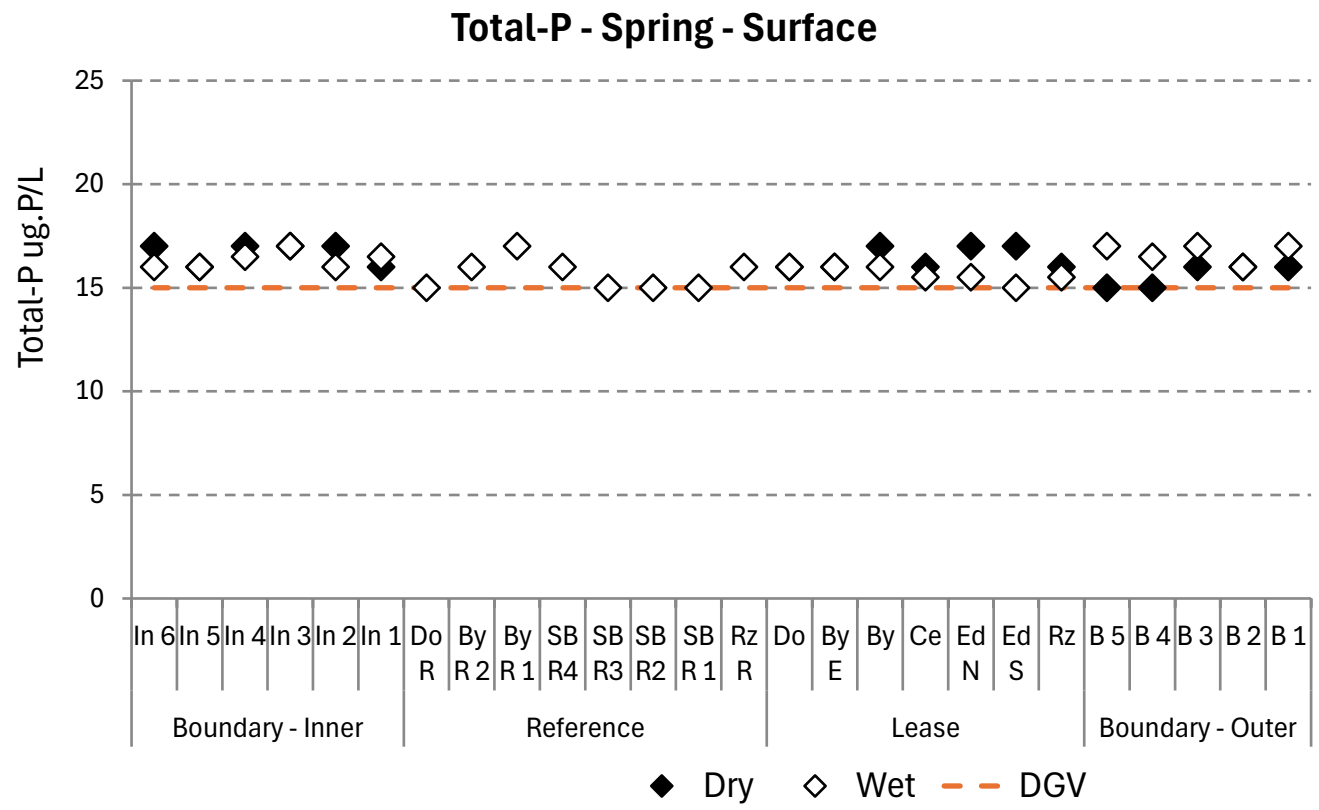
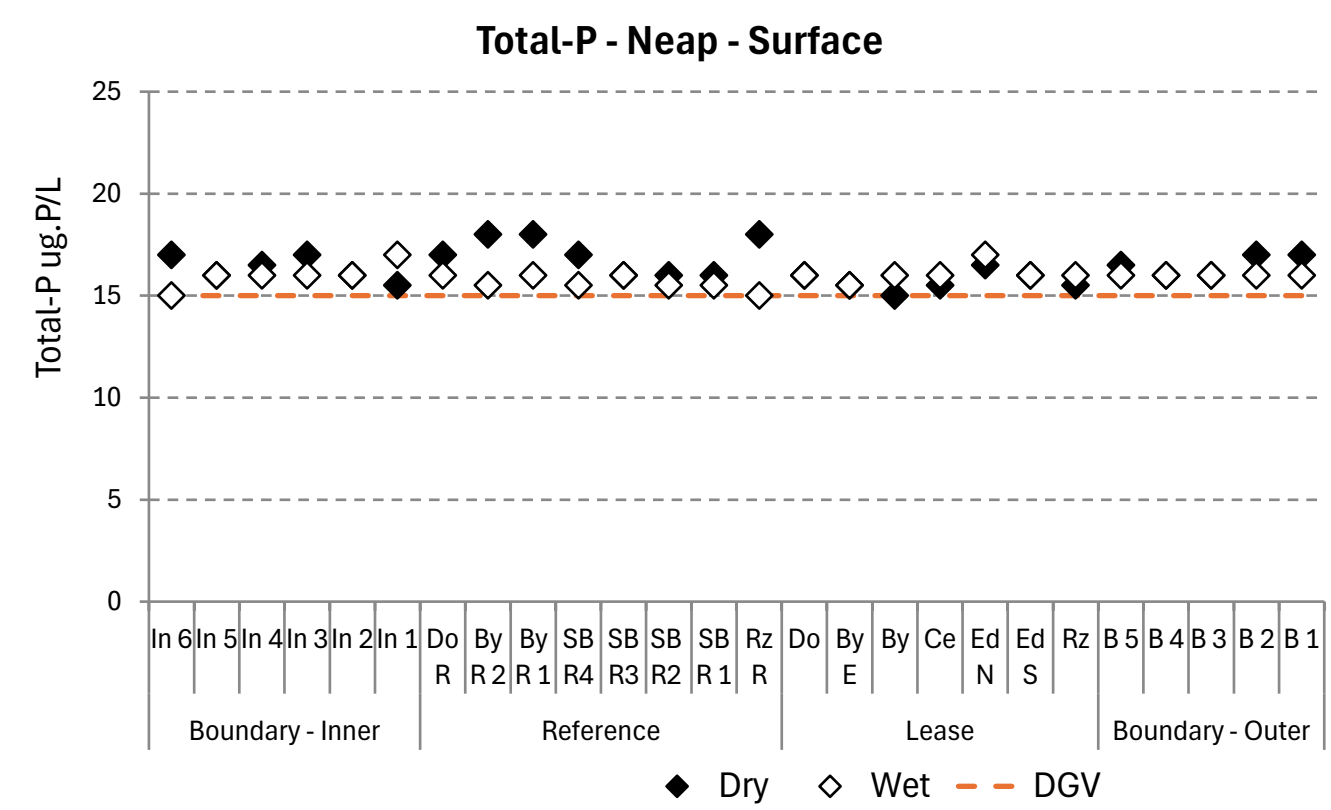
Note: In = Inner, R = Reference, B = Boundary, Do = Dorothy, By = Bayliss, By E = Bayliss Extra, Ce = Cecelia, Ed N = Edeline North, Ed S = Edeline South, Rz = Razor, SB = Strickland Bay

Figure 3.4 Median surface and bottom orthophosphate concentrations across boundary (inner and outer), lease and reference locations for wet and dry seasons and neap and spring tides, against the default guideline value for orthophosphate for the Kimberley region (averaged across seasons; ARMCANZ & ANZECC 2000)

3.1.6 Total Phosphorous

Median total phosphorous concentrations exceeded the ANZECC ARMCANZ (2000) default guideline value (averaged across seasons) across all locations, seasons and tides (0). At the surface, median concentrations ranged between 15.5 ug.P/L to 17 ug.P/L in the wet season, and 15.5 ug.P/L to 18 ug.P/L in the dry season. Concentrations were substantially greater in the bottom of the water column across all seasons and both tidal cycles, with the highest reported median of 121 ug.P/L at location Razor Island Reference in the wet season. Concentrations were generally higher during the neap tides compared to spring tides across all locations no matter the depth.

At an area level, concentrations were relatively consistent across all areas, though the reference locations did report higher medians more often.



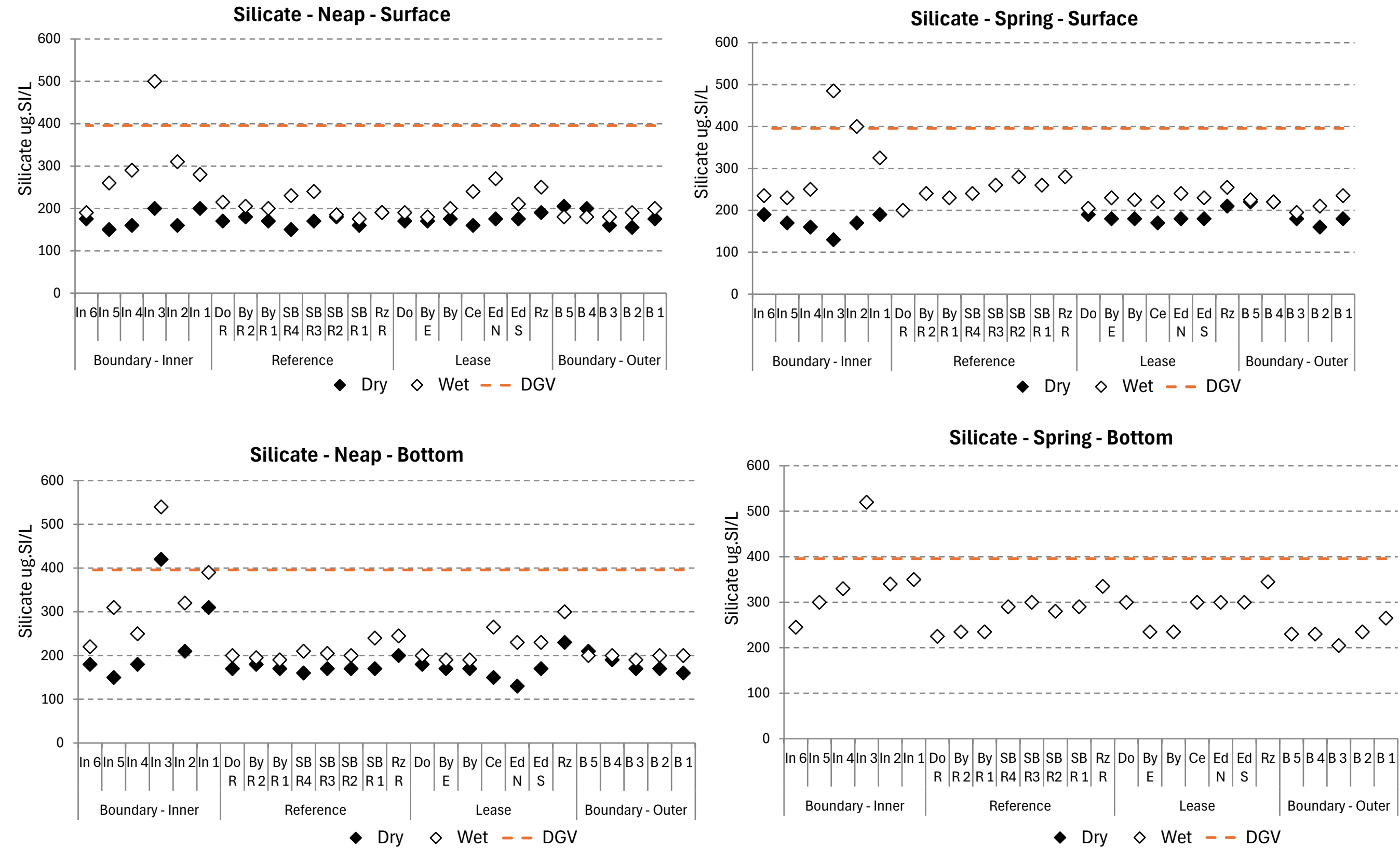
Note: In = Inner, R = Reference, B = Boundary, Do = Dorothy, By = Bayliss, By E = Bayliss Extra, Ce = Cecelia, Ed N = Edeline North, Ed S = Edeline South, Rz = Razor, SB = Strickland Bay

Figure 3.5 Median surface and bottom total phosphorous concentrations across boundary (inner and outer), lease and reference locations for wet and dry seasons and neap and spring tides, against the default guideline value for total phosphorous for the Kimberley region (averaged across seasons; ARMCANZ & ANZECC 2000)

3.1.7 Silicate

Median silicate concentrations were below the ANZG (2018) default guideline value (averaged across seasons) for all locations, except for boundary location Inner 3 where concentrations exceeded the threshold across all seasons and tides (0). At the surface, median concentrations ranged between 175 ug.Si/L to 500 ug.Si/L in the wet season, and 155 ug.Si/L to 205 ug.Si/L in the dry season. Median concentrations were substantially greater in the bottom of the water column across all seasons and both tidal cycles. Median concentrations were consistent during the neap tides and spring tides across all locations no matter the depth.

At an area level, concentrations were greatest at the inner boundary locations, and relatively consistent across all others.



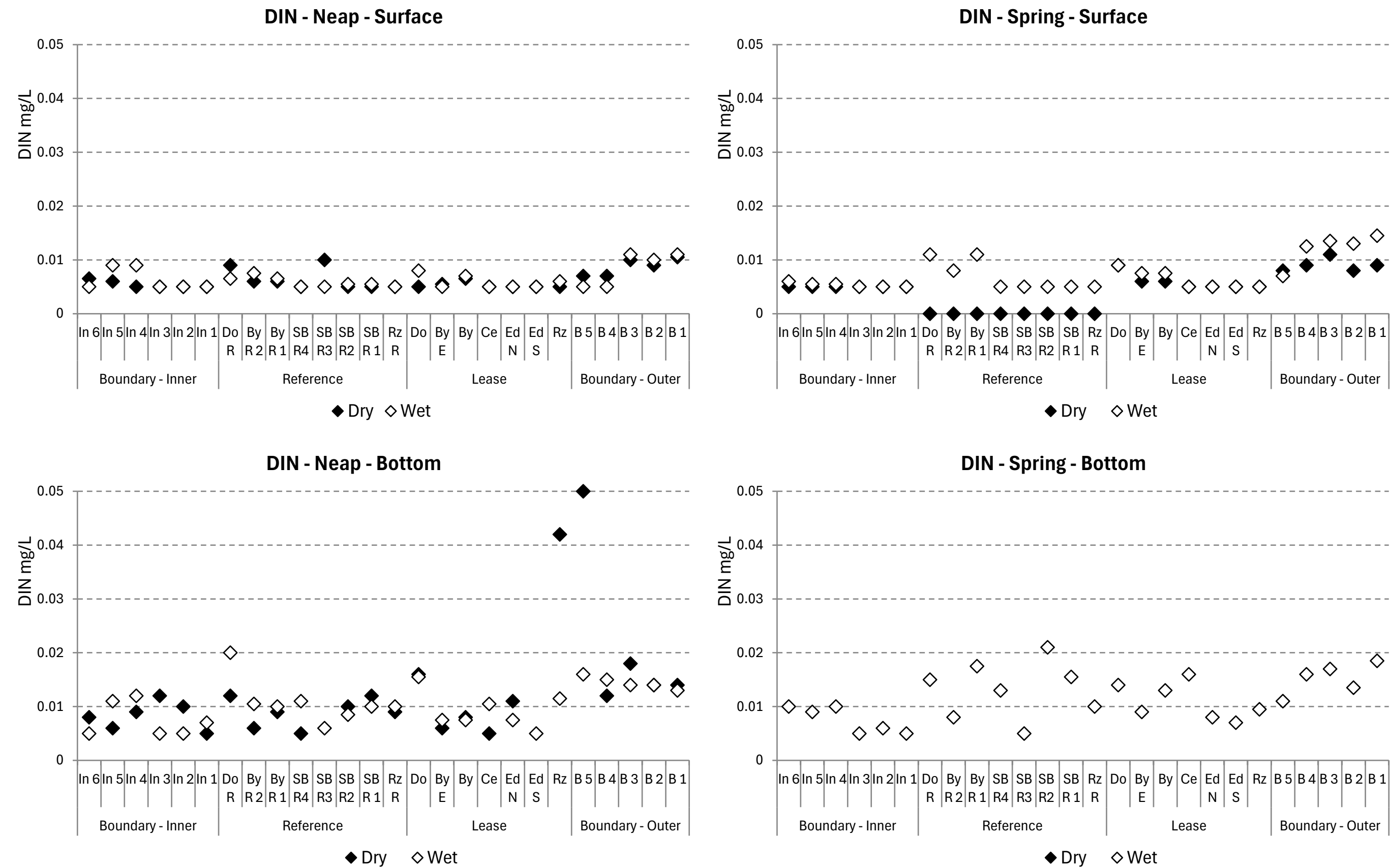
Note: In = Inner, R = Reference, B = Boundary, Do = Dorothy, By = Bayliss, By E = Bayliss Extra, Ce = Cecelia, Ed N = Edeline North, Ed S = Edeline South, Rz = Razor, SB = Strickland Bay

Figure 3.6 Median surface and bottom silicate concentrations across boundary (inner and outer), lease and reference locations for wet and dry seasons and neap and spring tides, against the default guideline value for silicate for the Kimberley region (averaged across seasons; ANZG 2018)

3.1.8 Dissolved inorganic nitrogen

Median dissolved inorganic nitrogen concentrations at the surface ranged between 0.005 mg/L to 0.015 mg/L in the wet season, and 0.005 mg/L to 0.011 mg/L in the dry season (0). Median concentrations were substantially greater in the bottom of the water column across all seasons and both tidal cycles. Median concentrations were generally greater during the spring than neap tides across all locations no matter the depth.

At an area level, concentrations were greatest at the outer boundary locations, and relatively consistent across all others.



Note: In = Inner, R = Reference, B = Boundary, Do = Dorothy, By = Bayliss, By E = Bayliss Extra, Ce = Cecelia, Ed N = Edeline North, Ed S = Edeline South, Rz = Razor, SB = Strickland Bay

Figure 3.7 Median surface and bottom dissolved inorganic nitrogen concentrations across boundary (inner and outer), lease and reference locations for wet and dry seasons and neap and spring tides

3.1.9 Total Nitrogen

Median total nitrogen concentrations exceeded the ANZECC ARMCANZ (2000) default guideline value (averaged across seasons) across all locations seasons and tides in bottom waters, and approached or exceeded the threshold in surface waters (0). Across locations in the surface waters, median concentrations ranged between 80 ug.N/L mg/L to 110 ug.N/L in the wet season, and 65 ug.N/L to 100 ug.N/L in the dry season. Median concentrations were substantially greater in the bottom of the water column across all seasons and both tidal cycles. Median concentrations were generally greater during the spring than neap tides across all locations no matter the depth.

At an area level, concentrations were consistent between locations, however, in bottom waters concentrations were substantially greater at the reference locations in the dry season, though this was likely due to a few individual outliers (e.g. Strickland Bay Reference 2, 3 and 4 reported median concentrations above 300 ug.N/L while most other locations reported median concentrations below 200 ug.N/L).

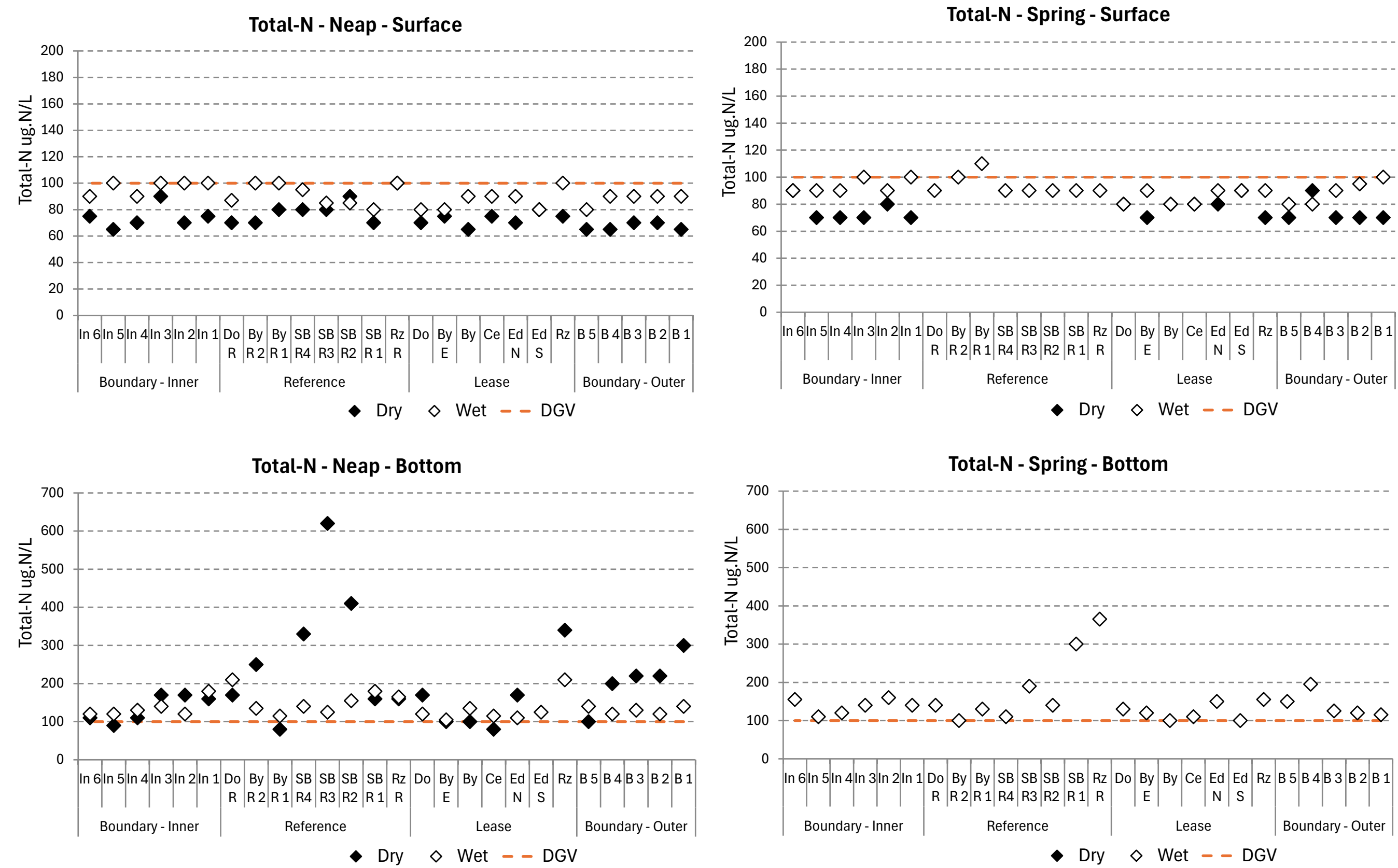
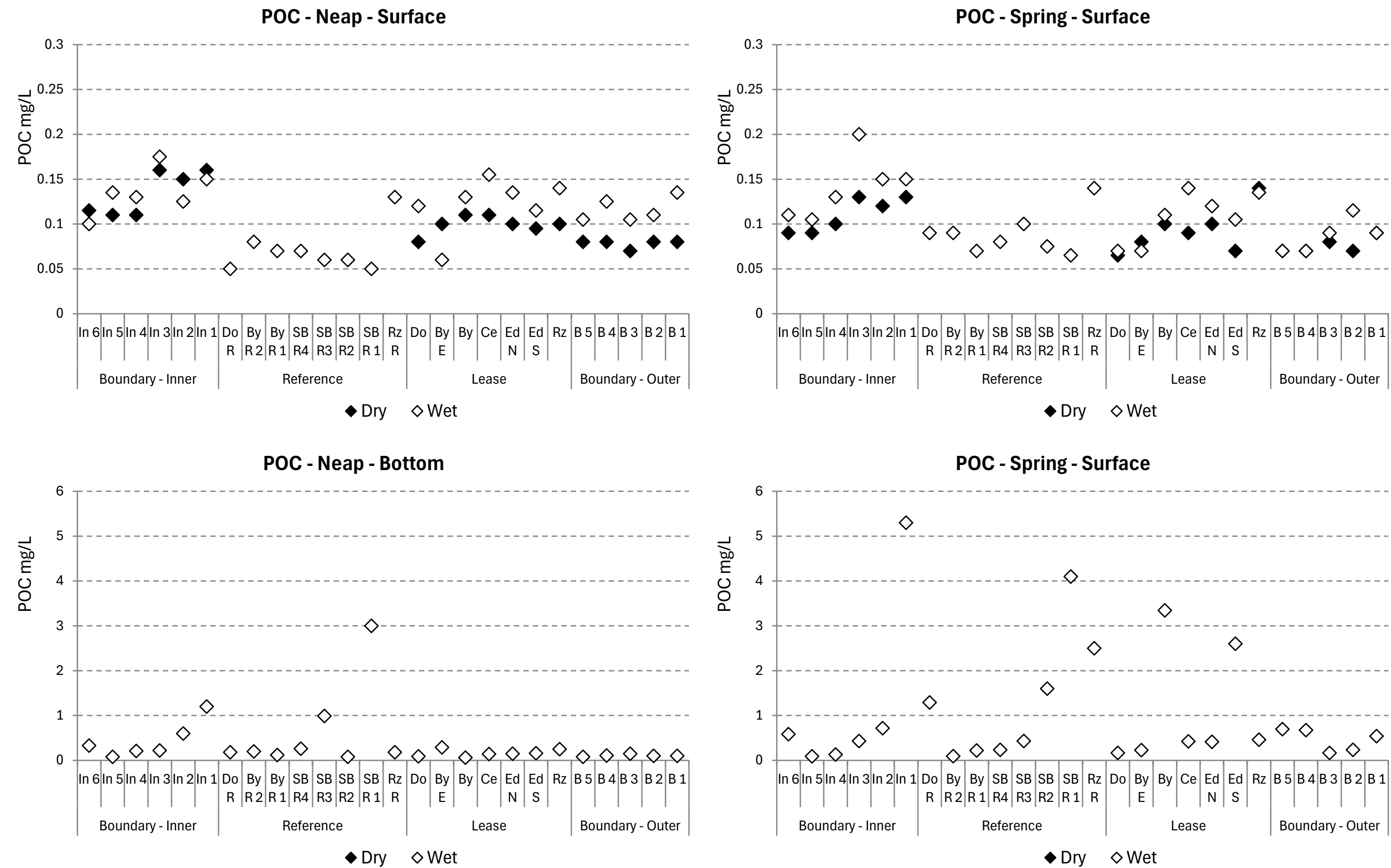


Figure 3.8 Median surface and bottom total nitrogen concentrations across boundary (inner and outer), lease and reference locations for wet and dry seasons and neap and spring tides, against the default guideline value for total nitrogen for the Kimberley region (averaged across seasons; ANZECC & ARMCANZ 2000)

3.1.10 Particulate Organic Carbon (POC)

Median POC concentrations at the surface ranged between 0.05 mg/L to 0.175 mg/L in the wet season, and 0.07 mg/L to 0.14 mg/L in the dry season (Figure 3.10). Median concentrations were substantially greater in the bottom of the water column across all seasons and both tidal cycles. Median concentrations were generally greater during the spring than neap tides across all locations no matter the depth.

At an area level, concentrations were greatest at the inner boundary locations, and relatively consistent across all others.



Note: In = Inner, R = Reference, B = Boundary, Do = Dorothy, By = Bayliss, By E = Bayliss Extra, Ce = Cecelia, Ed N = Edeline North, Ed S = Edeline South, Rz = Razor, SB = Strickland Bay

Figure 3.17 Median surface and bottom particulate organic carbon concentrations across boundary (inner and outer), lease and reference locations for wet and dry seasons and neap and spring tides

3.2 Sediment quality

3.2.1 Nutrients

Nutrient concentrations were similar across sediment locations (Table 3.3). Phosphorus concentrations ranged from 0.37-0.56 mg.P/g. Total Kjeldahl nitrogen (TKN) ranged from 0.3-1.3 mg.N/g. Total organic carbon content ranged from 0.2-0.9%. There are no ANZG (2018) DGVs for nutrients in sediments. No north south gradient was reported in total nutrient concentrations across the lease locations.

Table 3.3 Nutrient concentrations in sediment samples at lease locations

Location	TKN (mg.N/g)	Total Phosphorous (mg.P/g)	TOC (%)
Wet season (February 2021)			
Cec. Is.	1.00	0.56	0.30
Ede. Is. North	1.20	0.41	0.70
Ede. Is. South	0.60	0.37	0.70
Dor. Is.	1.20	0.43	0.60
Bay. Is.	0.30	0.43	0.40
Bay. Is. Ex.	-	-	-
Raz. Is.	1.00	0.40	0.40
Dry season (June 2021)			
Cec. Is.	0.30	0.57	0.20
Ede. Is. North	1.00	0.43	0.70
Ede. Is. South	1.20	0.43	0.80
Dor. Is.	1.20	0.46	0.80
Bay. Is.	0.60	0.40	0.40
Bay. Is. Ex.	1.00	0.51	0.60
Raz. Is.	1.00	0.40	0.40
Wet season (February 2023)			
Cec. Is.	0.5	0.52	0.4
Ede. Is. North	0.7	0.43	0.5
Ede. Is. South	0.6	0.37	0.8
Dor. Is.	1	0.46	0.8
Dor. Is. Ref Site 1	1.3	0.45	0.9
Bay. Is.	0.6	0.45	0.4
Bay. Is. Ref Site 1	0.6	0.35	0.7
Bay. Is. Ref Site 2	0.8	0.38	0.5
Bay. Is. Ex.	0.9	0.44	0.6

Raz. Is.	0.5	0.41	0.3
Raz. Is. Ref Site 1	0.7	0.43	0.5
Str. Bay Ref Site 1	0.9	0.49	0.6
Str. Bay Ref Site 2	1.1	0.41	0.7
Str. Bay Ref Site 3	1.1	0.41	0.8
Str. Bay Ref Site 4	0.3	0.72	0.2

Notes:

1. Bay = Bayliss, Cec = Cecelia, Is = Island, Dor = Dorothy, Ede = Edeline, Raz = Razor, Ex = Extra, Str = Strickland, Ref = Reference

3.2.2 Trace Metals

Trace metals of copper and zinc were variable temporally and spatially particularly zinc, however both were in relatively low concentrations throughout (well below ANZG guidelines of 65 mg/kg and 200 mg/kg for copper and zinc respectively; Table 3.4). Wet season data reported for zinc were marginally higher than for dry season. There was no clear north to south gradient in trace metal concentrations.

Table 3.4 Metal concentrations in sediment samples at lease locations

Location	Total Cu (mg/kg)	Total Zn (mg/kg)
Wet season (February 2021)		
Cec. Is.	3.20	14.00
Ede. Is. North	10.00	31.00
Ede. Is. South	11.00	33.00
Dor. Is.	8.70	24.00
Bay. Is.	6.20	19.00
Bay. Is. Ex.	-	-
Raz. Is.	6.30	21.00
Dry season (June 2021)		
Cec. Is.	3.30	10.00
Ede. Is. North	9.30	26.00
Ede. Is. South	11.00	30.00
Dor. Is.	10.00	25.00
Bay. Is.	5.10	15.00
Bay. Is. Ex.	8.80	24.00
Raz. Is.	6.30	21.00
Wet season (February 2023)		
Cec. Is.	4.70	14.00
Ede. Is. North	6.90	19.00
Ede. Is. South	11.00	28.00

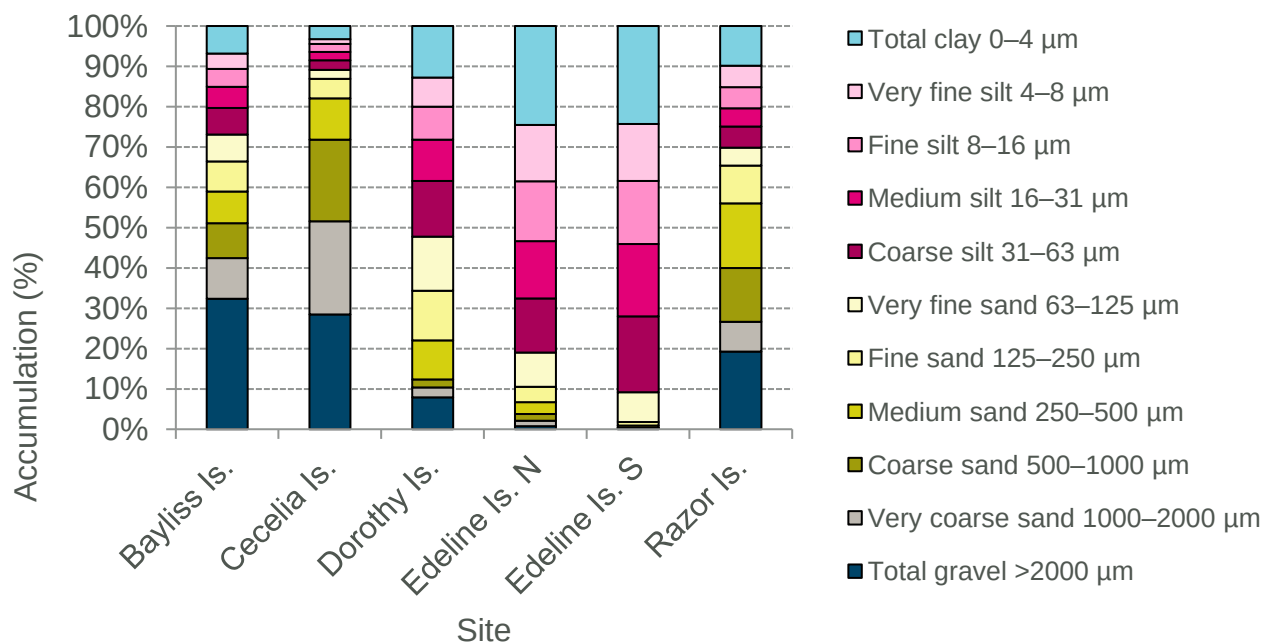
Dor. Is.	8.50	21.00
Dor. Is. Ref Site 1	10.00	26.00
Bay. Is.	5.30	15.00
Bay. Is. Ref Site 1	16.00	32.00
Bay. Is. Ref Site 2	6.10	17.00
Bay. Is. Ex.	9.00	23.00
Raz. Is.	5.10	18.00
Raz. Is. Ref Site 1	7.80	24.00
Str. Bay Ref Site 1	8.50	26.00
Str. Bay Ref Site 2	11.00	27.00
Str. Bay Ref Site 3	12.00	32.00
Str. Bay Ref Site 4	2.90	11.00

Notes:

1. Bay = Bayliss, Cec = Cecelia, Is = Island, Dor = Dorothy, Ede = Edeline, Raz = Razor, Ex = Extra, Str = Strickland, Ref = Reference

3.2.3 Particle size distribution

Results for particle size distribution indicated that there were no overall differences between season but clear separation in distribution between some locations. For example, Bayliss Island, Cecelia Island, Razor Island and Strickland Bay Reference 4 were characterised by higher concentrations of gravel and coarse sand. All other locations reported no gravel or coarse sand, and were predominantly made up of silt or fine sand. This is the case for both wet and dry seasons. The nMDS plot also showed no clear separation between seasons.



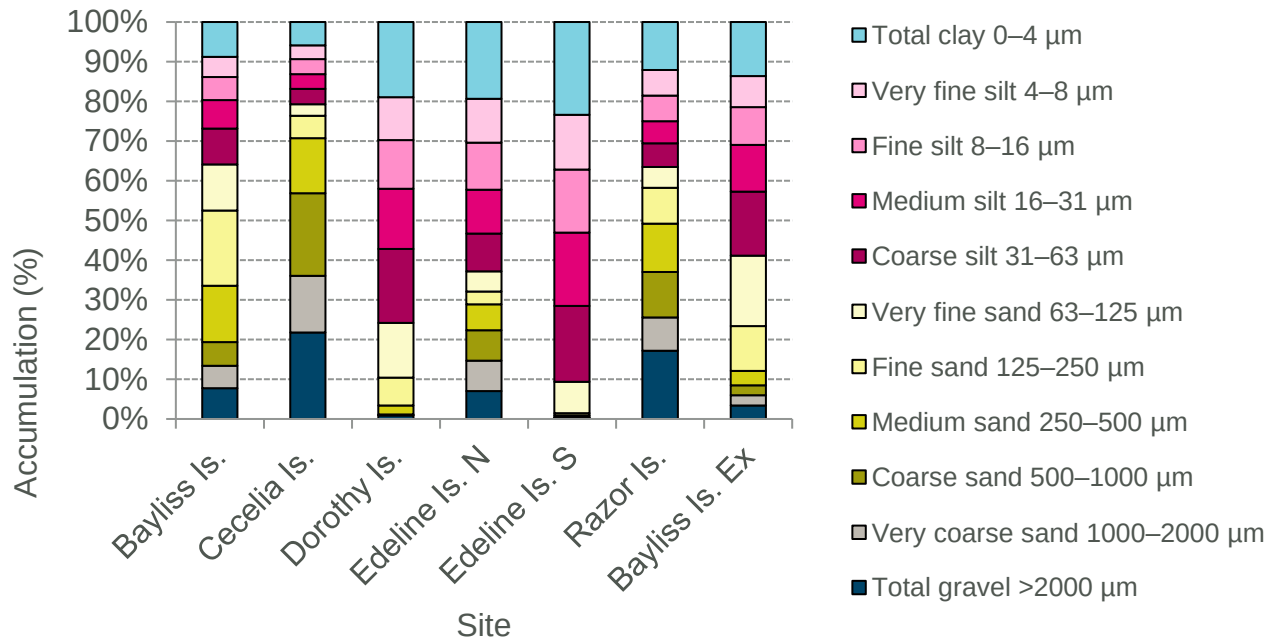


Figure 3.18 Particle size distribution results for all locations for wet and dry seasons (2021)

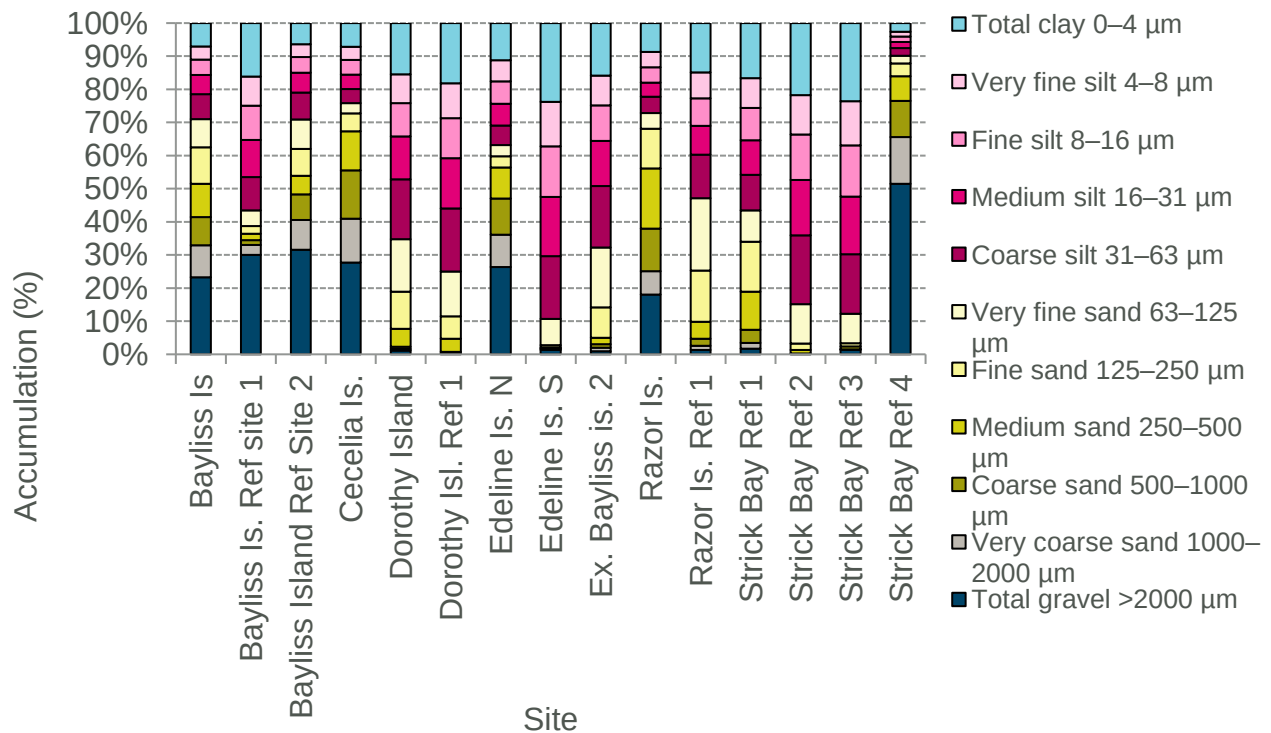
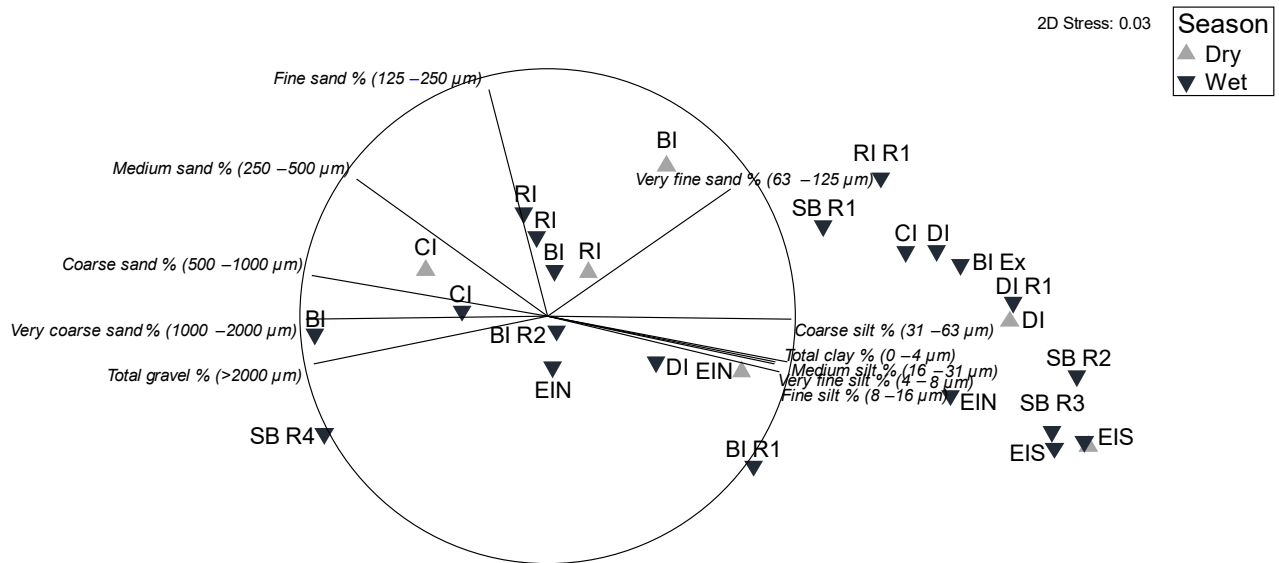


Figure 3.19 Particle size distribution results for all locations for wet season (2024)



Notes:

1. In nMDS, differences between locations are represented by the relative distance between points
2. 2D stress is a representation of the dimensionality of the ordination i.e. how much can be interpreted from constraining the ordination onto 3 or in this case 2 dimensions: stress <0.05 gives an excellent representation; stress <0.1 corresponds to a good ordination with no real prospect of a misleading interpretation; stress <0.2 gives a potentially useful 2-dimensional ordination, though for values at the upper end of this range, too much reliance should not be placed on the detail of the plot
3. Black line vectors indicate the relative importance of the individual trace metals in driving the separation between Sites.
4. EIN = Edeline Island North, EIS = Edeline Island South, RI = Razor Island, BI = Bayliss Island, CI = Cecelia Island, DI = Dorothy Island, SB = Strickland Bay, R = Reference

Figure 3.20 Non-Metric multidimensional scaling plot showing ordination of locations with overlay of particle size distribution

Table 3.5 Multivariate PERMANOVA results for particle size distribution of sediments

Source	Df	MS	P(perm)
Location	14	524.91	0.0884
Season	1	19.173	0.8152
Site x Season	5	119.51	0.7823
Residual	6	176.82	
Total	26		

Notes:

1. Df = Degrees of freedom, MS = Mean square

3.2.4 Infauna

Outcomes of univariate analyses of infauna abundance and species richness indicated no differences between season but a significant difference between locations for species richness (Table 3.6, Figure 3.21, Figure 3.22). At a location level, Razor Island, Bayliss Island and Cecelia Island recorded the highest abundance and species richness overall. Dorothy Island recorded lower abundances but higher species richness during the wet season and the opposite in the dry season.

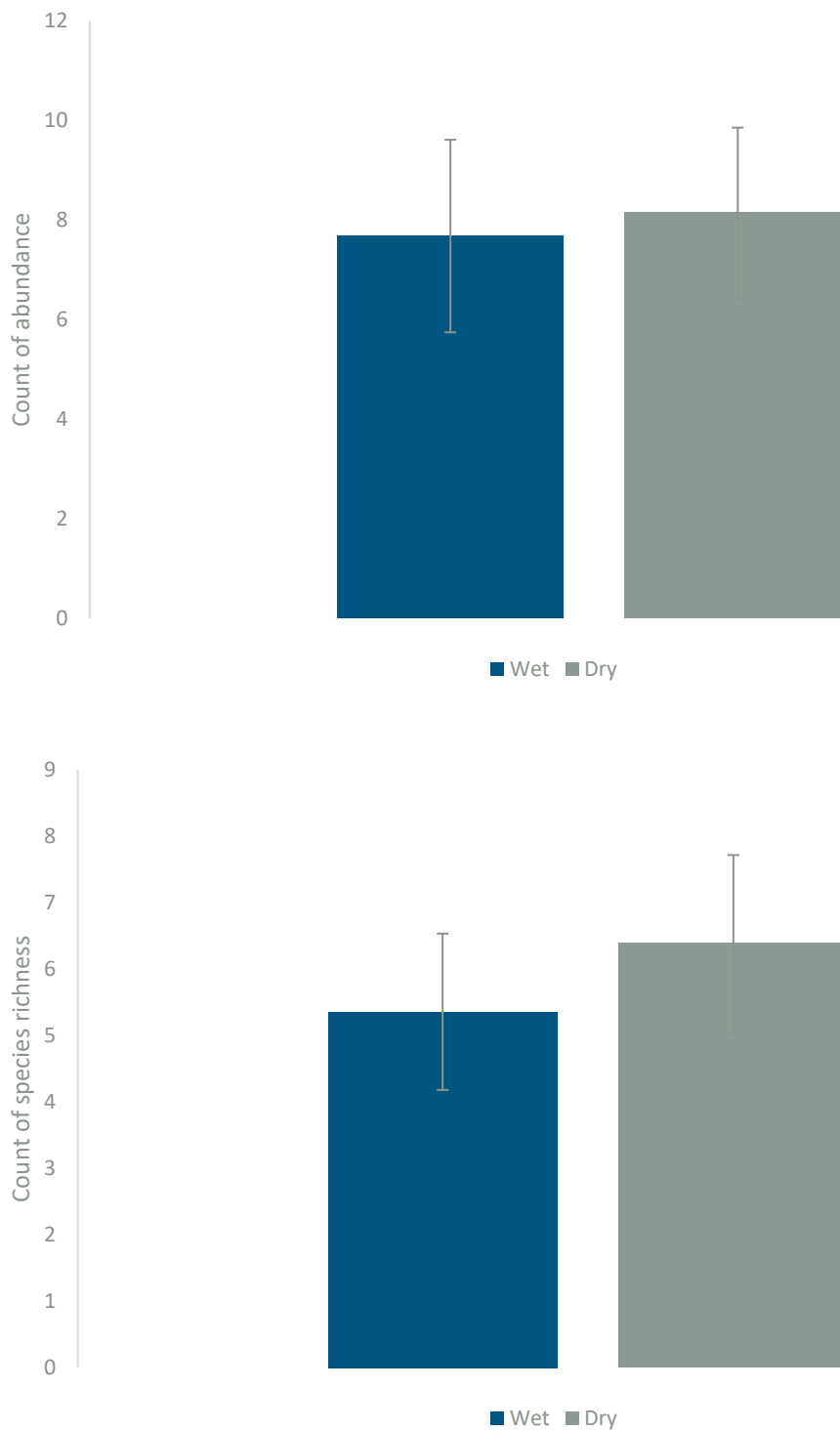


Figure 3.21 Mean ($\pm$ SE) count of infauna abundance and species richness between wet and dry seasons

Multivariate analyses of infauna data revealed a diverse community, represented by 10 phyla (Annelida, Chaetognatha, Chordata, Crustacea, Echinodermata, Mollusca, Nemertea, Porifera, Sipuncula) and 69 families. Sampling recorded 31 families of polychaetes (accounting for 35% of the infauna sampled), 35 families of crustaceans (accounting for 44% of the infauna sampled), 8 families of molluscs (accounting for 5% of the infauna sampled), 3 families of echinoderms (accounting for 5% of the

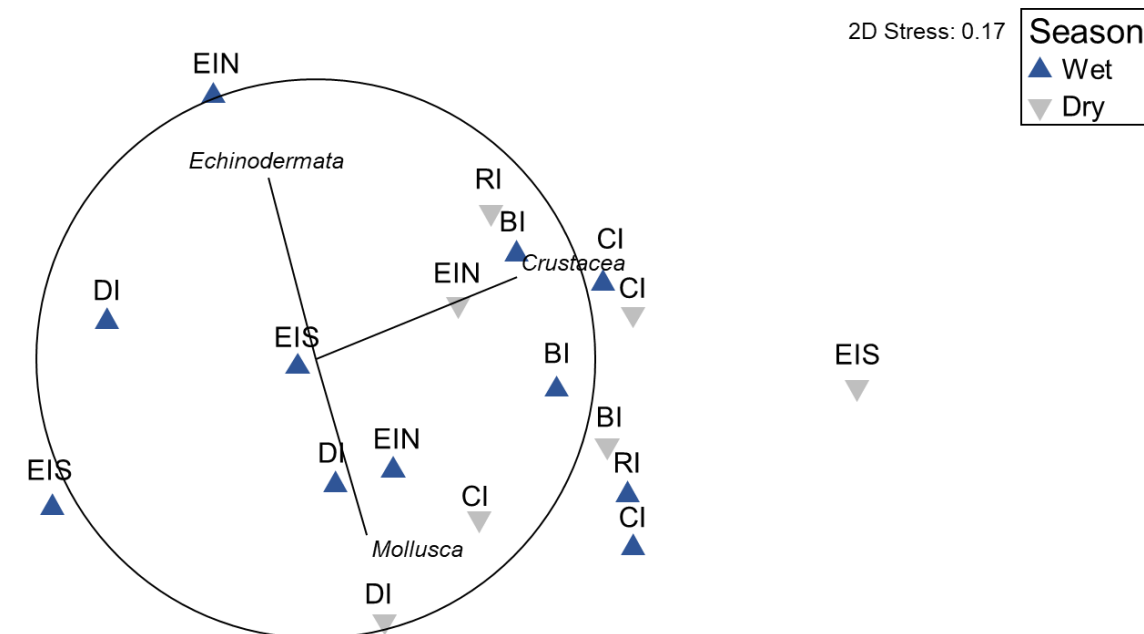
infauna sampled) and 2 families of porifera (accounting for 3% of the infauna sampled). The PERMANOVA analysis indicated no significant variation of community assemblage between locations or seasons (Table 3.6, Figure 3.22). These results are mirrored in the nMDS which shows some variation at the location level, but no clear separation nor between seasons. Overall, polychaetes were more abundant in wet season samples, while crustaceans were more abundant in dry season samples. All other phyla had relatively similar abundances and representation in both seasons. At a location level, Bayliss Island and Cecelia Island reported the highest abundances and greatest diversity due to greater representation of polychaetes and crustaceans.

Table 3.6 Results of a two-factor PERMANOVA for the community assemblage of infauna for all locations

Source	Df	MS	P(perm)
Location	9	2107.3	0.1541
Season	1	1024.2	0.6005
Site x Season	9	1114.8	0.7968
Residual	9	1486.7	
Total	28		

Notes:

1. Df = Degrees of freedom, MS = Mean square



Notes:

1. In nMDS, differences between locations are represented by the relative distance between points
2. 2D stress is a representation of the dimensionality of the ordination i.e. how much can be interpreted from constraining the ordination onto 3 or in this case 2 dimensions: stress <0.05 gives an excellent representation; stress <0.1 corresponds to a good ordination with no real prospect of a misleading interpretation; stress <0.2 gives a potentially useful 2-dimensional ordination, though for values at the upper end of this range, too much reliance should not be placed on the detail of the plot
3. Black line vectors indicate the relative importance of the individual trace metals in driving the separation between Sites.
4. EIN = Edeline Island North, EIS = Edeline Island South, RI = Razor Island, BI = Bayliss Island, CI = Cecelia Island, DI = Dorothy Island

Figure 3.22 nMDS ordination of infauna ordination of infauna community assemblage among seasons by location with vector overlays

4 References

Anderson MJ, Gorley RN, Clarke KR (2008) PERMANOVA+ for PRIMER: Guide for Software and Statistical Methods. Prepared by University of Auckland and Plymouth Marine Laboratory, Plymouth, UK

ANZECC & ARMCANZ (2000) Australian and New Zealand Guidelines for Fresh and Marine Water Quality. Volume 1: The Guidelines, Prepared by Australian and New Zealand Environment and Conservation Council, Agriculture and Resource Management Council of Australia and New Zealand, Canberra, ACT, October 2000

ANZG (2018) Australian and New Zealand Guidelines for Fresh and Marine Water Quality. Available from <<http://www.waterquality.gov.au/anz-guidelines>> [Accessed 08 September 2021]

Clarke KR (1993) Non-parametric multivariate analyses of changes in community structure. Australian Journal of Ecology 18:117–143

Underwood AJ (1997) Experiments in ecology: Their logical design and interpretation using analysis of variance. Cambridge University Press, Cambridge.

Annex A Laboratory Reports



WATER QUALITY DATA

Contact: Danny Koes

Customer: Marine Produce Australia

Address: 1 Darkan Avenue, North Coogee, WA 6163

Date of Issue: 10/03/2021

Date Received: 22/02/2021

Our Reference: MPA20-9

METHOD SAMPLE CODE	Sampling Date	2300 SILICATE µg.Si/L	2000 AMMONIA µg.N/L	4100 ORTHO-P µg.P/L	2100 NO3+NO2 µg.N/L	4700 TOTAL-P µg.P/L	2700 TOTAL-N µg.N/L	3000 CHLOROPHYLL'a' µg/L	3000 PHAEOPHYTIN'a' µg/L	6200 POC mg/L
Reporting Limit		<2	<3	<2	<2	<5	<50	<0.1	<0.2	<0.05
Analysis Date		5/03/2021		4/03/2021		23/02/2021		2/03/2021		3/03/2021
File		21030501		21030401,02,0801		21022301		21030202		21030301
Site 1: Lease	15/02/2021	200	3	9	<2	17	120	0.6	0.3	0.24
Ref1-Inner	16/02/2021	180	9	9	<2	18	90	0.7	0.2	0.15
Site 2: Lease	15/02/2021	210	<3	9	2	17	110	0.7	0.3	0.27
Ref2-Inner	17/02/2021	340	<3	8	<2	20	130	0.6	<0.2	0.12
Site 3: Lease	15/02/2021	200	<3	8	<2	17	90	0.8	0.2	0.10
Ref3-Inner	17/02/2021	440	<3	8	<2	21	100	1.3	0.3	0.22
Site 4: Lease	15/02/2021	120	<3	9	4	16	80	0.7	0.3	no result
Ref4-Inner	16/02/2021	250	<3	9	2	18	120	1.0	0.3	0.26
Site 5: Lease	15/02/2021	120	<3	9	4	17	90	0.5	0.6	0.12
Ref5-Inner	16/02/2021	220	<3	9	3	18	120	0.8	0.3	0.11
Site 6: Lease	15/02/2021	120	<3	9	3	15	70	0.5	<0.2	0.07
Ref6-Inner	16/02/2021	130	<3	9	<2	16	100	0.7	<0.2	0.11
Site 7: Lease	15/02/2021	170	<3	8	<2	16	90	0.3	<0.2	0.12
Ref7-Inner	16/02/2021	110	<3	8	2	16	80	0.6	0.2	0.07
Site 8: Lease	15/02/2021	140	7	6	<2	17	100	0.5	<0.2	0.19
Ref8-Inner	16/02/2021	110	3	9	2	17	90	0.6	0.4	0.10
Site 9: Lease	15/02/2021	130	<3	9	6	18	80	0.8	0.3	0.10
Ref1-Boundary	16/02/2021	140	6	9	8	18	100	0.7	0.4	0.08
Site 10: Lease	15/02/2021	100	6	5	<2	18	130	0.8	0.3	0.17
Ref2-Boundary	16/02/2021	130	<3	9	7	17	100	0.7	0.5	0.12
Site 11: Lease	15/02/2021	110	<3	8	2	17	80	0.6	0.3	0.10

Signatory: Jamie Woodward
Date: 10/03/2021

The results only apply to the sample as received and to the sample tested.
Spare test items will be held for two months unless otherwise requested.

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WATER QUALITY DATA

Contact: Danny Koes
Customer: Marine Produce Australia
Address: 1 Darkan Avenue, North Coogee, WA 6163

Date of Issue: 10/03/2021
Date Received: 22/02/2021
Our Reference: MPA20-9

METHOD SAMPLE CODE	Sampling Date	2300 SILICATE µg.Si/L	2000 AMMONIA µg.N/L	4100 ORTHO-P µg.P/L	2100 NO3+NO2 µg.N/L	4700 TOTAL-P µg.P/L	2700 TOTAL-N µg.N/L	3000 CHLOROPHYLL'a' µg/L	3000 PHAEOPHYTIN'a' µg/L	6200 POC mg/L
Reporting Limit		<2	<3	<2	<2	<5	<50	<0.1	<0.2	<0.05
Analysis Date		5/03/2021		4/03/2021		23/02/2021		2/03/2021		3/03/2021
File		21030501		21030401,02,0801		21022301		21030202		21030301
Ref3-boundary	16/02/2021	140	<3	9	7	17	90	0.6	0.3	0.09
Site 12: Lease	15/02/2021	130	<3	8	3	16	80	0.6	0.2	0.08
Ref4-Boundary	16/02/2021	130	<3	8	2	16	70	0.6	0.2	0.08
Site 13: Lease	15/02/2021	130	<3	7	4	16	80	0.7	0.3	0.07
Ref5-Boundary	16/02/2021	160	<3	9	2	17	80	0.3	0.2	0.07

Note: For results for compliance purposes uncertainty of measurement (MU) will sometimes affect the interpretation whether the result passes or fails the compliance limit.

Tables for measurement uncertainty are available online at www.mafrl.murdoch.edu.au

POC method is outside the scope of accreditation

Sample Condition: Sample received frozen it is recommended samples are kept frozen to protect sample integrity


Signatory: Jamie Woodward
Date: 10/03/2021

The results only apply to the sample as received and to the sample tested.
Spare test items will be held for two months unless otherwise requested.

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WATER QUALITY DATA

Contact: Donny Koes
Customer: Marine Produce Australia
Address: 1 Darken Avenue, North Coogee, WA 6163

Date of Issue: 26/03/2021
Date Received: 2/03/2021
Our Reference: MPA20-10

METHOD SAMPLE CODE	Sampling Date	2300 SILICATE µg.Si/L	2000 AMMONIA µg.N/L	4100 ORTHO-P µg.P/L	2100 NO3+NO2 µg.N/L	4700 TOTAL-P µg.P/L	2700 TOTAL-N µg.N/L	3000 CHLOROPHYLL'a' µg/L	3000 PHAEOPHYTIN'a' µg/L	6200 POC mg/L
Reporting Limit		<2	<3	<2	<2	<5	<50	<0.1	<0.2	<0.05
Analysis Date	22/03/2021	8/03/2021		10/03/2021		12/03/2021		9/03/2021		
File	21032201	21030802,1502		21031001-1702		21031201		21030901		
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Site 2: Lease	18/02/2021	190	<3	7	<2	17	90	0.8	<0.2	0.15
Site 3: Lease	18/02/2021	250	8	6	<2	17	130	0.6	0.2	0.11
Site 4: Lease	18/02/2021	160	8	7	6	16	100	0.4	<0.2	0.11
Site 5: Lease	18/02/2021	150	<3	8	5	17	130	0.8	0.3	0.13
Site 6: Lease	18/02/2021	150	<3	7	4	15	70	0.6	0.2	0.10
Site 7: Lease	18/02/2021	200	3	6	<2	15	90	0.4	<0.2	0.13
Site 8: Lease	18/02/2021	150	3	7	<2	16	80	0.4	<0.2	0.13
Site 9: Lease	18/02/2021	170	4	8	<2	16	100	1.0	0.2	0.15
Site 10: Lease	18/02/2021	120	<3	6	<2	17	100	0.5	<0.2	0.16
Site 11: Lease	18/02/2021	140	<3	7	<2	16	70	0.5	<0.2	0.08
Site 12: Lease	18/02/2021	140	9	7	<2	15	90	0.6	<0.2	0.09
Site 13: Lease	18/02/2021	110	<3	7	<2	16	80	0.6	<0.2	0.11
Inner Ref 1	18/02/2021	220	4	6	<2	17	100	0.5	<0.2	0.17
Inner Ref 2	18/02/2021	270	<3	8	<2	17	90	0.4	<0.2	0.16
Inner Ref 3	18/02/2021	410	8	6	<2	18	120	0.6	<0.2	0.24
Inner Ref 4	18/02/2021	250	8	7	3	17	90	0.9	0.3	0.14
Inner Ref 5	18/02/2021	200	3	8	3	16	90	0.8	0.3	0.14
Inner Ref 6	18/02/2021	170	5	6	<2	17	120	0.8	0.3	0.12

Signatory: Vaughan Gregory
Date: 26/03/2021

The results only apply to the sample as received and to the sample tested.
Spare test items will be held for two months unless otherwise requested.



WATER QUALITY DATA

Contact: Donny Koes
Customer: Marine Produce Australia
Address: 1 Darken Avenue, North Coogee, WA 6163

Date of Issue: 26/03/2021
Date Received: 2/03/2021
Our Reference: MPA20-10

METHOD SAMPLE CODE	Sampling Date	2300 SILICATE µg.Si/L	2000 AMMONIA µg.N/L	4100 ORTHO-P µg.P/L	2100 NO3+NO2 µg.N/L	4700 TOTAL-P µg.P/L	2700 TOTAL-N µg.N/L	3000 CHLOROPHYLL'a' µg/L	3000 PHAEOPHYTIN'a' µg/L	6200 POC mg/L
Reporting Limit		<2	<3	<2	<2	<5	<50	<0.1	<0.2	<0.05
Analysis Date		22/03/2021		8/03/2021		10/03/2021		12/03/2021		9/03/2021
File		21032201		21030802,1502		21031001-1702		21031201		21030901
Inner Ref 7	18/02/2021	160	<3	10	<2	13	70	0.5	<0.2	0.10
Inner Ref 8	18/02/2021	140	<3	7	<2	14	90	0.7	<0.2	0.10
Boundary Ref 1	18/02/2021	180	6	9	9	18	120	0.6	0.3	0.09
Boundary Ref 2	18/02/2021	170	3	9	10	18	90	0.4	0.3	0.13
Boundary Ref 3	18/02/2021	140	<3	9	7	18	90	0.6	0.4	0.12
Boundary Ref 4	18/02/2021	130	<3	8	<2	16	80	0.6	<0.2	0.11
Boundary Ref 5	18/02/2021	150	<3	8	<2	16	80	0.5	<0.2	0.08

Note: For results for compliance purposes uncertainty of measurement (MU) will sometimes affect the interpretation whether the result passes or fails the compliance limit.

Tables for measurement uncertainty are available online at www.mafri.murdoch.edu.au

POC Method is outside the scope of NATA accreditation

Silicate analysed outside of recommended hold time. Recommended hold time is 1 month.

Signatory: Vaughan Gregory
Date: 26/03/2021

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Spare test items will be held for two months unless otherwise requested.

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SEDIMENT DATA

Contact: Donny Koes
Customer: Marine Produce Australia
Address: 1 Darkan Avenue, North Coogee, WA 6163

Date of Issue: 16/03/2021
Date Received: 22/02/2021
Our Reference: MPA21-1

METHOD SAMPLE CODE	Sampling Date	2600 TKN mg.N/g	4500 TOTAL P mg.P/g	6200 TOC % C	ICP002 Total Ext Cu mg/kg	ICP002 Total Ext Zn mg/kg
Reporting Limit		<0.1	<0.05	<0.1	<0.2	<0.5
Analysis Date File		2/03/2021 21030201		15/03/2021 21031501	5/03/2021 21030501	5/03/2021 21030501
Cecelia Island	15/02/2021	0.4	0.56	0.3	3.2	14
Edeline Island East	15/02/2021	0.9	0.45	0.7	9.4	29
Edeline Island North	15/02/2021	0.8	0.41	0.7	10	31
Dorothy Island	16/02/2021	1.0	0.43	0.6	8.7	24
Bathurst Island	16/02/2021	0.9	0.45	0.5	6.5	18
Edeline Island South	15/02/2021	0.6	0.37	0.7	11	33
Mary Island	15/02/2021	1.0	0.42	0.6	9.3	28
Bayliss Island	16/02/2021	0.5	0.43	0.4	6.2	19
Razor Island	15/02/2021	0.4	0.40	0.4	6.3	21
Crocodile Creek	16/02/2021	0.7	0.45	0.5	7.8	23
Koolan Island	16/02/2021	0.7	0.44	0.4	5.5	16
Cornelius Island	16/02/2021	0.9	0.46	0.6	9.7	27

Note: Results expressed as dry weight basis.

For results for compliance purposes uncertainty of measurement (MU) will sometimes affect the interpretation whether the result passes or fails the compliance limit.
Tables for measurement uncertainty are available online at www.mafrl.murdoch.edu.au

Signatory: Vaughan Gregory
Date: 16/03/2021



The results only apply to the sample as received and to the sample tested.
Spare test items will be held for two months unless otherwise requested.



WATER QUALITY DATA

Contact: Donny Koes

Customer: Marine Produce Australia

Address: 1 Darkan Avenue, North Coogee, WA 6163

Date of Issue: 26/03/2021

Date Received: 15/03/2021

Our Reference: MPA21-3

METHOD SAMPLE CODE	Sampling Date	2300 SILICATE µg.Si/L	2000 AMMONIA µg.N/L	4100 ORTHO-P µg.P/L	2100 NO3+NO2 µg.N/L	4700 TOTAL-P µg.P/L	2700 TOTAL-N µg.N/L	3000 CHLOROPHYLL'a' µg/L	3000 PHAEOPHYTIN'a' µg/L	6200 POC mg/L
Reporting Limit		<2	<3	<2	<2	<5	<50	<0.1	<0.2	<0.05
Analysis Date		22/03/2021		18/03/2021		17/03/2021		24/03/2021		25/03/2021
File		21032201		21031802		21031702		21032401		21032501
Site 1: Lease	8/03/2021	240	<3	8	<2	15	80	0.3	0.3	0.16
Site 2: Lease	8/03/2021	280	<3	8	<2	16	90	0.7	<0.2	0.18
Site 3: Lease	8/03/2021	270	<3	7	<2	17	80	0.5	0.2	0.14
Site 4: Lease	8/03/2021	190	<3	9	7	16	80	0.6	0.3	0.11
Site 5: Lease	8/03/2021	180	<3	9	4	16	90	0.5	0.3	0.13
Site 6: Lease	8/03/2021	180	<3	9	3	15	130	0.4	0.2	0.14
Site 7: Lease	8/03/2021	210	<3	7	<2	14	70	0.2	<0.2	0.12
Site 8: Lease	8/03/2021	200	<3	8	<2	15	70	0.3	<0.2	0.15
Site 9: Lease	8/03/2021	190	<3	8	5	16	80	0.9	0.2	0.12
Site 10: Lease	8/03/2021	250	<3	7	<2	16	90	0.4	<0.2	0.16
Site 11: Lease	8/03/2021	160	<3	9	<2	15	80	0.4	<0.2	0.09
Site 12: Lease	8/03/2021	160	<3	9	<2	15	80	0.4	<0.2	0.11
Site 13: Lease	8/03/2021	170	4	8	<2	15	70	0.5	<0.2	0.11
Inner ref 1	8/03/2021	280	<3	8	<2	15	80	0.3	<0.2	0.15
Inner ref 2	8/03/2021	300	<3	8	<2	16	80	0.3	<0.2	0.14
Inner ref 3	8/03/2021	470	<3	8	<2	18	100	0.7	<0.2	0.23
Inner ref 4	8/03/2021	290	<3	9	6	17	90	0.8	0.3	0.13
Inner ref 5	8/03/2021	260	<3	9	5	17	80	0.8	0.3	0.11
Inner ref 6	8/03/2021	190	<3	8	<2	15	70	0.5	<0.2	0.11

Signatory: Vaughan Gregory
Date: 26/03/2021

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Spare test items will be held for two months unless otherwise requested.



WATER QUALITY DATA

Contact: Donny Koes

Customer: Marine Produce Australia

Address: 1 Darkan Avenue, North Coogee, WA 6163

Date of Issue: 26/03/2021

Date Received: 15/03/2021

Our Reference: MPA21-3

METHOD SAMPLE CODE	Sampling Date	2300 SILICATE µg.Si/L	2000 AMMONIA µg.N/L	4100 ORTHO-P µg.P/L	2100 NO3+NO2 µg.N/L	4700 TOTAL-P µg.P/L	2700 TOTAL-N µg.N/L	3000 CHLOROPHYLL'a' µg/L	3000 PHAEOPHYTIN'a' µg/L	6200 POC mg/L
Reporting Limit		<2	<3	<2	<2	<5	<50	<0.1	<0.2	<0.05
Analysis Date		22/03/2021		18/03/2021		17/03/2021		24/03/2021		25/03/2021
File		21032201		21031802		21031702		21032401		21032501
Inner ref 7	8/03/2021	190	<3	8	<2	16	80	0.4	<0.2	0.13
Inner ref 8	8/03/2021	180	<3	8	<2	16	80	0.2	<0.2	0.15
Boundary ref 1	8/03/2021	200	<3	8	8	16	80	0.6	0.4	0.13
Boundary ref 2	8/03/2021	190	3	9	7	16	90	0.6	0.3	0.12
Boundary ref 3	8/03/2021	180	<3	9	8	16	100	0.6	0.3	0.12
Boundary ref 4	8/03/2021	160	<3	8	2	15	90	0.5	0.2	0.13
Boundary ref 5	8/03/2021	150	<3	9	<2	16	70	0.1	<0.2	0.13

Note: For results for compliance purposes uncertainty of measurement (MU) will sometimes affect the interpretation whether the result passes or fails the compliance limit.

Tables for measurement uncertainty are available online at www.mafri.murdoch.edu.au

POC is outside the terms of NATA accreditation

Signatory: Vaughan Gregory
Date: 26/03/2021

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Spare test items will be held for two months unless otherwise requested.

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WATER QUALITY DATA

Contact: Donny Koes
Customer: Donny Koes
Address: 1 Darkan Avenue, North Coogee, WA 6163

Date of Issue: 27/04/2021
Date Received: 6/04/2021
Our Reference: MPA21-4

METHOD SAMPLE CODE	Sampling Date	2300 SILICATE µg.Si/L	2000 AMMONIA µg.N/L	4100 ORTHO-P µg.P/L	2100 NO3+NO2 µg.N/L	4700 TOTAL-P µg.P/L	2700 TOTAL-N µg.N/L	3000 CHLOROPHYLL'a' µg/L	3000 PHAEOPHYTIN'a' µg/L	6200 POC mg/L
Reporting Limit		<2	<3	<2	<2	<5	<50	<0.1	<0.2	<0.05
Analysis Date		14/04/2021		13/04/2021		15/04/2021		15/04/2021		15/04/2021
File		21041401		21041301,1901		21041501		21041501		21041501
1. Cecelia Island	15/03/2021	190	<3	6	<2	14	80	0.7	<0.2	0.24
2. Edeline Island East	15/03/2021	180	<3	6	<2	14	80	0.5	<0.2	0.17
3. Edeline Island North	15/03/2021	190	9	7	<2	15	90	0.8	<0.2	0.25
4. Dorothy Island	15/03/2021	180	<3	8	7	15	80	0.7	<0.2	0.23
5. Irvine Island	15/03/2021	180	<3	8	4	17	90	0.6	0.2	0.30
6. Bathurst Island	15/03/2021	170	<3	8	6	15	80	0.5	0.2	0.23
7. Edeline Island South	15/03/2021	200	<3	7	<2	15	90	0.7	<0.2	0.20
8. Mary Island	15/03/2021	200	<3	6	2	15	80	0.7	<0.2	0.35
9. Bayliss Island	15/03/2021	150	<3	8	3	15	90	0.9	<0.2	0.27
10. Razor Island	15/03/2021	160	10	5	<2	15	90	0.5	<0.2	0.27
11. Koolan Island	15/03/2021	180	<3	8	3	14	70	0.5	<0.2	0.24
12. Crocodile Creek	15/03/2021	180	<3	8	2	16	80	0.5	<0.2	0.23
13. Cornelius Island	15/03/2021	180	<3	8	3	13	60	0.5	<0.2	0.25
Inner ref 1	15/03/2021	200	<3	6	<2	16	90	0.8	<0.2	0.16
Inner ref 2	15/03/2021	280	<3	8	<2	14	90	0.4	<0.2	0.15
Inner ref 3	15/03/2021	380	<3	8	<2	16	100	0.9	<0.2	0.20
Inner ref 4	15/03/2021	210	<3	7	<2	14	90	0.9	0.2	0.18
Inner ref 5	15/03/2021	200	<3	6	2	11	90	1.0	0.3	0.16
Inner ref 6	15/03/2021	180	<3	7	4	14	80	0.6	0.2	0.16

Signatory: Vaughan Gregory
Date: 27/04/2021

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Spare test items will be held for two months unless otherwise requested.



WATER QUALITY DATA

Contact: Donny Koes
Customer: Donny Koes
Address: 1 Darkan Avenue, North Coogee, WA 6163

Date of Issue: 27/04/2021
Date Received: 6/04/2021
Our Reference: MPA21-4

METHOD SAMPLE CODE	Sampling Date	2300 SILICATE µg.Si/L	2000 AMMONIA µg.N/L	4100 ORTHO-P µg.P/L	2100 NO3+NO2 µg.N/L	4700 TOTAL-P µg.P/L	2700 TOTAL-N µg.N/L	3000 CHLOROPHYLL'a' µg/L	3000 PHAEOPHYTIN'a' µg/L	6200 POC mg/L
Reporting Limit		<2	<3	<2	<2	<5	<50	<0.1	<0.2	<0.05
Analysis Date		14/04/2021		13/04/2021		15/04/2021		15/04/2021		15/04/2021
File		21041401		21041301,1901		21041501		21041501		21041501
Inner ref 7	15/03/2021	180	<3	8	3	15	80	0.6	<0.2	0.11
Inner ref 8	15/03/2021	180	<3	8	3	14	80	0.5	0.2	0.25
Boundary ref 1	15/03/2021	210	4	8	9	17	100	0.5	0.4	0.29
Boundary ref 2	15/03/2021	190	7	8	10	16	90	0.6	0.4	0.26
Boundary ref 3	15/03/2021	190	<3	8	11	21	140	0.5	0.4	no result
Boundary ref 4	15/03/2021	180	<3	8	5	16	100	0.6	0.3	0.15
Boundary ref 5	15/03/2021	170	<3	8	3	15	140	0.3	0.2	0.19

Note: For results for compliance purposes uncertainty of measurement (MU) will sometimes affect the interpretation whether the result passes or fails the compliance limit.

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POC is outside the terms of NATA accreditation

Signatory: Vaughan Gregory
Date: 27/04/2021



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Spare test items will be held for two months unless otherwise requested.



WATER QUALITY DATA

Contact: Donny Koes

Customer: Donny Koes

Address: 1 Darkan Avenue, North Coogee, WA 6163

Date of Issue: 6/05/2021

Date Received: 12/04/2021

Our Reference: MPA21-5

METHOD SAMPLE CODE	Sampling Date	2300 SILICATE µg.Si/L	2000 AMMONIA µg.N/L	4100 ORTHO-P µg.P/L	2100 NO3+NO2 µg.N/L	4700 TOTAL-P µg.P/L	2700 TOTAL-N µg.N/L	3000 CHLOROPHYLL'a' µg/L	3000 PHAEOPHYTIN'a' µg/L	6200 POC mg/L
Reporting Limit		<2	<3	<2	<2	<5	<50	<0.1	<0.2	<0.05
Analysis Date		22/04/2021		19/04/2021		23/04/2021		21/04/2021		23/04/2021
File		21042201		21041901		21042302		21042101		21042301
1. Cecelia Island	1/04/2021	240	<3	8	<2	16	80	0.9	0.2	0.15
2. Edeline East	1/04/2021	260	5	8	2	16	80	0.7	0.2	0.16
3. Edeline North	1/04/2021	250	<3	8	<2	17	80	1.1	0.3	0.14
4. Dorothy	1/04/2021	230	<3	10	11	18	80	0.8	0.4	0.11
5. Irvine	1/04/2021	250	<3	10	8	22	90	0.7	0.4	0.13
6. Bathurst	1/04/2021	250	<3	10	9	18	80	0.6	0.3	0.09
7. Edeline South	1/04/2021	250	<3	8	<2	17	80	1.2	0.3	0.16
8. Mary Island	1/04/2021	260	<3	8	<2	17	80	1.2	0.4	0.15
9. Bayliss	1/04/2021	240	<3	9	8	19	80	1.2	0.5	0.16
10. Razor	2/04/2021	260	<3	7	<2	17	80	0.9	0.3	0.13
11. Koolan	1/04/2021	260	<3	10	9	18	80	0.8	0.4	0.11
12. Crocodile Ck	1/04/2021	250	<3	10	7	18	80	0.8	0.3	0.12
13. Cornelius	1/04/2021	250	<3	9	3	15	60	0.8	0.2	0.13
Inner ref 1	2/04/2021	310	<3	7	<2	20	100	1.6	0.3	0.25
Inner ref 2	1/04/2021	420	<3	8	<2	19	100	1.2	0.4	0.23
Inner ref 3	1/04/2021	590	<3	10	<2	35	130	1.7	0.8	0.90
Inner ref 4	1/04/2021	260	<3	8	3	17	70	1.0	0.3	0.14
Inner ref 5	1/04/2021	260	<3	8	<2	18	80	1.0	0.4	0.16
Inner ref 6	1/04/2021	250	<3	8	3	16	70	1.0	0.3	0.11

Signatory: Vaughan Gregory
Date: 6/05/2021

The results only apply to the sample as received and to the sample tested.
Spare test items will be held for two months unless otherwise requested.



WATER QUALITY DATA

Contact: Donny Koes
Customer: Donny Koes
Address: 1 Darkan Avenue, North Coogee, WA 6163

Date of Issue: 6/05/2021
Date Received: 12/04/2021
Our Reference: MPA21-5

METHOD SAMPLE CODE	Sampling Date	2300 SILICATE µg.Si/L	2000 AMMONIA µg.N/L	4100 ORTHO-P µg.P/L	2100 NO3+NO2 µg.N/L	4700 TOTAL-P µg.P/L	2700 TOTAL-N µg.N/L	3000 CHLOROPHYLL'a' µg/L	3000 PHAEOPHYTIN'a' µg/L	6200 POC mg/L
Reporting Limit		<2	<3	<2	<2	<5	<50	<0.1	<0.2	<0.05
Analysis Date		22/04/2021		19/04/2021		23/04/2021		21/04/2021		23/04/2021
File		21042201		21041901		21042302		21042101		21042301
Inner ref 7	1/04/2021	250	6	12	7	18	80	0.9	0.3	0.09
Inner ref 8	1/04/2021	260	<3	8	6	18	80	0.8	0.3	0.13
Boundary ref 1	1/04/2021	240	5	7	10	18	80	0.8	0.7	0.12
Boundary ref 2	1/04/2021	230	<3	10	13	15	70	0.8	0.5	0.11
Boundary ref 3	1/04/2021	230	3	10	9	18	80	0.8	0.5	0.14
Boundary ref 4	1/04/2021	240	<3	10	9	18	70	0.6	0.3	0.11
Boundary ref 5	1/04/2021	260	<3	10	10	17	80	0.7	0.3	0.07
Extra: Crocodile Ck 2	1/04/2021	240	<3	9	8	20	110	0.8	0.4	0.10
Extra: Cornelius 2	1/04/2021	230	<3	10	8	18	100	0.8	0.4	0.11
Extra: Bayliss 2	1/04/2021	230	<3	9	6	17	70	1.0	0.4	0.14

Note: For results for compliance purposes uncertainty of measurement (MU) will sometimes affect the interpretation whether the result passes or fails the compliance limit.

Tables for measurement uncertainty are available online at www.mafri.murdoch.edu.au

POC is outside the terms of NATA accreditation

Signatory: Vaughan Gregory
Date: 6/05/2021

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Spare test items will be held for two months unless otherwise requested.

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WATER QUALITY DATA

Contact: Donny Koes

Customer: Marine Produce Australia

Address: 1 Darkan Avenue, North Coogee, WA 6163

Date of Issue: 10/05/2021

Date Received: 6/04/2021

Our Reference: MPA21-6

METHOD SAMPLE CODE	Sampling Date	2300 SILICATE µg.Si/L	2000 AMMONIA µg.N/L	4100 ORTHO-P µg.P/L	2100 NO3+NO2 µg.N/L	4700 TOTAL-P µg.P/L	2700 TOTAL-N µg.N/L	6200 POC mg/L	3000 CHLOROPHYLL'a' µg/L	3000 PHAEOPHYTIN'a' µg/L
Reporting Limit		<2	<3	<2	<2	<5	<50	<0.05	<0.1	<0.2
Analysis Date	21/04/2022			13/04/2021		15/04/2021		25/03/2021		22/04/2021
File	22042101			21041302,1901		21041502-2901		21032501		21042201
1. Cecelia Island	25/03/2021	240	10	8	5	17	90	0.26	0.5	<0.2
2. Edeline Island East	25/03/2021	310	9	8	3	14	80	0.10	0.4	<0.2
3. Edeline Island North	25/03/2021	320	<3	7	<2	16	90	0.09	0.4	<0.2
4. Dorothy Island	25/03/2021	350	4	9	<2	16	80	0.09	0.2	<0.2
5. Irvine Island	25/03/2021	250	<3	8	<2	16	80	0.16	0.2	<0.2
6. Bathurst Island	25/03/2021	400	3	9	<2	16	80	0.17	0.1	<0.2
7. Edeline Island South	25/03/2021	370	10	7	<2	16	90	0.20	0.3	<0.2
8. Mary Island	25/03/2021	300	6	7	<2	12	70	0.16	0.5	<0.2
9. Bayliss Island	25/03/2021	240	4	8	3	17	100	0.17	0.2	<0.2
10. Razor Island	25/03/2021	520	6	6	<2	15	80	0.19	0.3	<0.2
11. Koolan Island	25/03/2021	550	<3	9	<2	16	70	0.12	0.2	<0.2
12. Crocodile Creek	25/03/2021	470	<3	9	<2	16	90	0.11	0.2	<0.2
13. Cornelius Island	25/03/2021	440	5	9	<2	17	100	0.14	0.2	<0.2
Inner ref 1	25/03/2021	380	4	6	<2	15	100	0.23	0.4	<0.2
Inner ref 2	25/03/2021	790	6	6	<2	13	70	0.16	0.4	<0.2
Inner ref 3	25/03/2021	720	9	7	<2	16	100	0.14	0.5	<0.2
Inner ref 4	25/03/2021	340	9	8	6	16	90	0.11	0.5	<0.2
Inner ref 5	25/03/2021	300	8	9	11	16	90	0.10	0.5	<0.2
Inner ref 6	25/03/2021	260	5	8	<2	15	80	0.11	0.3	<0.2


Signatory: Jamie Woodward
Date: 10/05/2021

The results only apply to the sample as received and to the sample tested.
Spare test items will be held for two months unless otherwise requested.



WATER QUALITY DATA

Contact: Donny Koes

Customer: Marine Produce Australia

Address: 1 Darkan Avenue, North Coogee, WA 6163

Date of Issue: 10/05/2021

Date Received: 6/04/2021

Our Reference: MPA21-6

METHOD SAMPLE CODE	Sampling Date	2300 SILICATE µg.Si/L	2000 AMMONIA µg.N/L	4100 ORTHO-P µg.P/L	2100 NO3+NO2 µg.N/L	4700 TOTAL-P µg.P/L	2700 TOTAL-N µg.N/L	6200 POC mg/L	3000 CHLOROPHYLL'a' µg/L	3000 PHAEOPHYTIN'a' µg/L
Reporting Limit		<2	<3	<2	<2	<5	<50	<0.05	<0.1	<0.2
Analysis Date		21/04/2022		13/04/2021		15/04/2021		25/03/2021		22/04/2021
File		22042101		21041302,1901		21041502-2901		21032501		21042201
Inner ref 7	25/03/2021	500	4	8	<2	17	70	0.09	0.2	<0.2
Inner ref 8	25/03/2021	480	<3	9	<2	16	70	0.10	0.2	<0.2
Boundary ref 1	25/03/2021	210	<3	9	17	14	80	0.08	0.4	0.3
Boundary ref 2	25/03/2021	210	3	9	12	15	80	0.07	0.6	0.2
Boundary ref 3	25/03/2021	240	3	8	<2	16	80	0.07	0.2	<0.2
Boundary ref 4	25/03/2021	480	4	10	<2	14	60	0.22	0.1	<0.2
Boundary ref 5	25/03/2021	570	3	10	<2	14	70	0.06	<0.1	<0.2

Note: For results for compliance purposes uncertainty of measurement (MU) will sometimes affect the interpretation whether the result passes or fails the compliance limit.

Tables for measurement uncertainty are available online at www.mafrl.murdoch.edu.au

Sample Condition: Samples received thawed recommended samples are maintained frozen for all tests except silicate.


Signatory: Jamie Woodward
Date: 10/05/2021

The results only apply to the sample as received and to the sample tested.
Spare test items will be held for two months unless otherwise requested.

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WATER QUALITY DATA

Contact: Donny Koes

Customer: Marine Produce Australia

Address: 1 Darkan Avenue, North Coogee, WA 6163

Date of Issue: 6/08/2021

Date Received: 28/06/2021

Our Reference: MPA21-8b

METHOD SAMPLE CODE	Sampling Date	2300 SILICATE µg.Si/L	2000 AMMONIA µg.N/L	4100 ORTHO-P µg.P/L	2100 NO3+NO2 µg.N/L	4700 TOTAL-P µg.P/L	2700 TOTAL-N µg.N/L	6200 POC mg/L	3000 CHLOROPHYLL'a' µg/L	3000 PHAEOPHYTIN'a' µg/L
Reporting Limit		<2	<3	<2	<2	<5	<50	<0.05	<0.1	<0.2
Analysis Date		9/07/2021	6/07/2021	6/07/2021	6/07/2021	2/07/2021	2/07/2021	9/07/2021	8/07/2021	8/07/2021
File		21070901	21070601-1301-2001	21070601-1301-2001	21070601-1301-2001	21070202-070701	21070202-070701	21070901	21070801	21070801
1. Cecelia Island	17/06/2021	210	<3	10	3	17	70	0.07	0.6	0.3
2. Edeline Island East	17/06/2021	200	<3	8	<2	16	70	0.09	0.5	<0.2
3. Edeline Island North	17/06/2021	200	<3	10	<2	17	70	0.10	0.6	0.2
4. Dorothy Island	18/06/2021	180	3	10	8	17	80	0.07	0.3	0.3
5. Irvine Island	18/06/2021	180	<3	10	8	15	70	0.06	0.4	0.3
6. Bathurst Island	19/06/2021	190	<3	9	7	18	70	0.12	0.4	0.2
7. Edeline Island South	17/06/2021	210	<3	9	<2	18	80	0.08	0.5	0.2
8. Mary Island	17/06/2021	210	<3	9	3	18	70	0.10	0.5	0.3
9. Bayliss Island	17/06/2021	200	4	10	7	19	70	0.09	0.8	0.3
10. Razor Island	16/06/2021	200	<3	8	<2	17	80	0.10	0.5	0.2
11. Koolan Island	18/06/2021	180	7	10	7	16	70	0.06	0.6	0.2
12. Crocodile Creek	18/06/2021	180	<3	10	6	17	70	0.06	0.4	0.2
13. Cornelius Island	18/06/2021	180	<3	11	7	16	60	0.06	0.4	0.2
Inner ref 1	16/06/2021	220	<3	9	<2	18	80	0.17	0.8	0.3
Inner ref 2	17/06/2021	160	<3	8	<2	18	90	0.17	0.7	0.2
Inner ref 3	17/06/2021	260	<3	7	<2	19	90	0.16	0.6	0.2
Inner ref 4	17/06/2021	200	<3	9	3	17	70	0.09	0.5	0.2
Inner ref 5	17/06/2021	200	<3	9	4	17	80	0.09	0.6	0.2
Inner ref 6	17/06/2021	200	9	10	5	17	80	no result	0.7	0.3
Inner ref 7	18/06/2021	190	<3	8	4	16	70	0.06	0.4	0.2
Inner ref 8	18/06/2021	190	<3	10	2	16	70	0.06	0.5	<0.2
Boundary ref 1	19/06/2021	200	8	10	10	17	90	0.05	0.5	0.3
Boundary ref 2	19/06/2021	180	<3	10	12	18	80	0.08	0.4	0.3
Boundary ref 3	19/06/2021	180	<3	10	12	17	90	<0.05	0.4	<0.2
Boundary ref 4	18/06/2021	180	9	11	8	15	70	0.08	0.4	0.2

Vaughan Gregory

Signatory: Vaughan Gregory
Date: 6/08/2021

The results only apply to the sample as received and to the sample tested.
Spare test items will be held for two months unless otherwise requested.

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**Marine and Freshwater
Research Laboratory
Environmental Science**

Tel: 08 93602907 Address: 90 South St, Murdoch, WA, 6150



Accreditation Number: 10603

Accredited for compliance with ISO/IEC 17025 - Testing.
The results of the tests, calibrations and/or
measurements included in this document are traceable
to Australian/national standards.



Murdoch
UNIVERSITY

WATER QUALITY DATA

Contact: Donny Koes
Customer: Marine Produce Australia
Address: 1 Darkan Avenue, North Coogee, WA 6163

Date of Issue: 6/08/2021
Date Received: 28/06/2021
Our Reference: MPA21-8b

METHOD SAMPLE CODE	Sampling Date	2300 SILICATE µg.Si/L	2000 AMMONIA µg.N/L	4100 ORTHO-P µg.P/L	2100 NO3+NO2 µg.N/L	4700 TOTAL-P µg.P/L	2700 TOTAL-N µg.N/L	6200 POC mg/L	3000 CHLOROPHYLL'a' µg/L	3000 PHAEOPHYTIN'a' µg/L
Reporting Limit		<2	<3	<2	<2	<5	<50	<0.05	<0.1	<0.2
Analysis Date		9/07/2021	6/07/2021	6/07/2021	6/07/2021	2/07/2021	2/07/2021	9/07/2021	8/07/2021	8/07/2021
File		21070901	21070601-1301-2001	21070601-1301-2001	21070601-1301-2001	21070202-070701	21070202-070701	21070901	21070801	21070801
Boundary ref 5	18/06/2021	180	4	10	8	17	70	0.08	0.4	0.3
Extra: Bayliss 2	17/06/2021	200	<3	10	11	18	80	0.10	0.7	0.3
Extra: Crocodile Ck 2	18/06/2021	180	<3	10	4	18	70	0.06	0.5	0.3
Extra: Cornelius 2	18/06/2021	180	<3	10	5	17	70	0.11	0.4	0.3

Note: For results for compliance purposes uncertainty of measurement (MU) will sometimes affect the interpretation whether the result passes or fails the compliance limit.

Tables for measurement uncertainty are available online at www.mafrl.murdoch.edu.au

POC is outside the terms of NATA accreditation.

This report replaces MPA21-8 issued on 5/08/2021. Sampling dates have been updated to indicate the specific sampling day for each sample.

Signatory: Vaughan Gregory
Date: 6/08/2021

The results only apply to the sample as received and to the sample tested.
Spare test items will be held for two months unless otherwise requested.

This document may not be reproduced except in full.



WATER QUALITY DATA

Contact: Donny Koes

Customer: Marine Produce Australia

Address: 1 Darkan Avenue, North Coogee, WA 6163

Date of Issue: 9/07/2021

Date Received: 21/06/2021

Our Reference: MPA21-9

METHOD SAMPLE CODE	Sampling Date	2300 SILICATE µg.Si/L	2000 AMMONIA µg.N/L	4100 ORTHO-P µg.P/L	2100 NO3+NO2 µg.N/L	4700 TOTAL-P µg.P/L	2700 TOTAL-N µg.N/L	6200 POC mg/L	3000 CHLOROPHYLL'a' µg/L	3000 PHAEOPHYTIN'a' µg/L
Reporting Limit		<2	<3	<2	<2	<5	<50	<0.05	<0.1	<0.2
Analysis Date		29/06/2021	6/07/2021	6/07/2021	6/07/2021	24/06/2021	24/06/2021	7/07/2021	24/06/2021	24/06/2021
File		21062901	21070601	21070601	21070601	21062403	21062403-070202	21070701	21062401	21062401
1. Cecelia Island	11/06/2021	160	3	9	<2	16	70	0.11	0.8	<0.2
2. Edeline Island East	11/06/2021	170	<3	9	3	16	80	0.12	0.6	0.2
3. Edeline Island North	11/06/2021	180	<3	9	<2	16	80	0.10	0.8	0.2
4. Dorothy Island	11/06/2021	150	<3	10	6	15	80	no result	0.5	<0.2
5. Irvine Island	11/06/2021	160	3	9	7	17	90	0.09	0.5	0.3
6. Bathurst Island	11/06/2021	160	<3	10	6	16	80	0.06	0.4	0.2
7. Edeline Island South	12/06/2021	180	<3	10	<2	17	90	0.11	0.5	<0.2
8. Mary Island	12/06/2021	160	12	10	3	15	70	no result	0.6	<0.2
9. Bayliss Island	11/06/2021	170	<3	9	5	18	80	0.10	0.8	0.3
10. Razor Island	11/06/2021	150	4	8	<2	16	90	0.14	0.6	0.2
11. Koolan Island	11/06/2021	150	<3	9	5	16	70	0.06	0.5	<0.2
12. Crocodile Creek	11/06/2021	150	<3	9	5	16	80	0.05	0.4	<0.2
13. Cornelius Island	11/06/2021	150	3	10	5	16	70	0.06	0.5	<0.2
Inner ref 1	12/06/2021	180	<3	9	2	17	80	0.13	0.6	<0.2
Inner ref 2	12/06/2021	170	<3	8	<2	16	90	0.12	0.5	<0.2
Inner ref 3	12/06/2021	120	3	7	<2	14	70	0.12	0.6	<0.2
Inner ref 4	11/06/2021	160	<3	9	2	16	80	0.09	0.7	0.2
Inner ref 5	11/06/2021	170	<3	9	<2	16	70	0.09	0.8	0.2
Inner ref 6	11/06/2021	180	3	9	3	17	90	0.09	0.7	<0.2

The results only apply to the sample as received and to the sample tested.
Spare test items will be held for two months unless otherwise requested.

Signatory: Vaughan Gregory
Date: 9/07/2021



WATER QUALITY DATA

Contact: Donny Koes
Customer: Marine Produce Australia
Address: 1 Darkan Avenue, North Coogee, WA 6163

Date of Issue: 9/07/2021
Date Received: 21/06/2021
Our Reference: MPA21-9

METHOD SAMPLE CODE	Sampling Date	2300 SILICATE µg.Si/L	2000 AMMONIA µg.N/L	4100 ORTHO-P µg.P/L	2100 NO3+NO2 µg.N/L	4700 TOTAL-P µg.P/L	2700 TOTAL-N µg.N/L	6200 POC mg/L	3000 CHLOROPHYLL'a' µg/L	3000 PHAEOPHYTIN'a' µg/L
Reporting Limit		<2	<3	<2	<2	<5	<50	<0.05	<0.1	<0.2
Analysis Date		29/06/2021	6/07/2021	6/07/2021	6/07/2021	24/06/2021	24/06/2021	7/07/2021	24/06/2021	24/06/2021
File		21062901	21070601	21070601	21070601	21062403	21062403-070202	21070701	21062401	21062401
Inner ref 7	11/06/2021	160	5	8	4	15	60	0.07	0.6	0.2
Inner ref 8	11/06/2021	160	<3	10	5	15	60	0.06	0.5	<0.2
Boundary ref 1	11/06/2021	180	<3	10	10	16	70	0.05	0.5	0.4
Boundary ref 2	11/06/2021	160	<3	11	11	18	80	0.08	0.5	0.4
Boundary ref 3	11/06/2021	160	<3	10	8	16	70	0.08	0.4	0.3
Boundary ref 4	11/06/2021	150	<3	11	10	15	90	<0.05	0.3	<0.2
Boundary ref 5	11/06/2021	150	<3	9	5	15	70	<0.05	0.4	<0.2
extra lease Bayliss 2	11/06/2021	170	<3	10	6	16	80	0.09	0.7	0.3
extra lease Crocodile Ck 2	11/06/2021	160	<3	10	6	16	70	0.08	0.6	0.2
extra lease Cornelius 2	11/06/2021	160	<3	9	4	16	70	<0.05	0.4	0.2

Note: For results for compliance purposes uncertainty of measurement (MU) will sometimes affect the interpretation whether the result passes or fails the compliance limit.

Tables for measurement uncertainty are available online at www.mafri.murdoch.edu.au

POC is outside the terms of NATA accreditation.

Silicate samples received partially frozen, recommended to be received cool.

Signatory: Vaughan Gregory
Date: 9/07/2021

The results only apply to the sample as received and to the sample tested.
Spare test items will be held for two months unless otherwise requested.



SEDIMENT DATA

Contact: Donny Koes

Customer: Marine Produce Australia

Address: 1 Darkan Avenue, North Coogee, WA 6163

Date of Issue: 16/07/2021

Date Received: 28/06/2021

Our Reference: MPA21-10

METHOD SAMPLE CODE	Sampling Date	2600 TKN mg.N/g	4500 TOTAL P mg.P/g	6200 TOC % C	ICP002 Total Ext Cu mg/kg	ICP002 Total Ext Zn mg/kg
Reporting Limit		<0.1	<0.05	<0.1	<0.2	<0.5
Analysis Date		16/07/2021	16/07/2021	16/07/2021	13/07/2021	13/07/2021
File		21071601	21071601	21071601	21071301	21071301
1. Cecelia Island	17/06/2021	0.3	0.57	0.2	3.3	10
2. Edeline Island East	17/06/2021	0.9	0.44	0.7	9.9	29
3. Edeline Island North	17/06/2021	1.0	0.43	0.7	9.3	26
4. Dorothy Island	18/06/2021	1.2	0.46	0.8	10	25
7. Edeline Island South	17/06/2021	1.2	0.43	0.8	11	30
8. Mary Island	17/06/2021	1.0	0.45	0.7	9.7	29
9. Bayliss Island	17/06/2021	0.6	0.40	0.4	5.1	15
10. Razor Island	16/06/2021	0.5	0.47	0.4	5.8	20
11. Koolan Island	18/06/2021	0.5	0.45	0.4	4.5	12
12. Crocodile Creek	18/06/2021	0.9	0.42	0.6	7.6	20
13. Cornelius Island	18/06/2021	1.2	0.47	0.8	10	27
Crocodile Creek 2	18/06/2021	0.9	0.52	0.6	8.3	24
Cornelius 2	18/06/2021	1.0	0.48	0.6	8.2	22
Bayliss 2	17/06/2021	1.0	0.51	0.6	8.8	24

Note: Results expressed as dry weight basis, reporting limits raised due to sample size

Note: For results for compliance purposes uncertainty of measurement (MU) will sometimes affect the interpretation whether the result passes or fails the compliance limit.

Tables for measurement uncertainty are available online at www.mafri.murdoch.edu.au

Signatory: Vaughan Gregory
Date: 16/07/2021

The results only apply to the sample as received and to the sample tested.
Spare test items will be held for two months unless otherwise requested.

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SEDIMENT DATA

Contact: Donny Koes

Customer: Marine Produce Australia

Address: 1 Darkan Avenue, North Coogee, WA 6163

Date of Issue: 16/07/2021

Date Received: 28/06/2021

Our Reference: MPA21-10

METHOD SAMPLE CODE	Sampling Date	2600 TKN mg.N/g	4500 TOTAL P mg.P/g	6200 TOC % C	ICP002 Total Ext Cu mg/kg	ICP002 Total Ext Zn mg/kg
Reporting Limit		<0.1	<0.05	<0.1	<0.2	<0.5
Analysis Date		16/07/2021	16/07/2021	16/07/2021	13/07/2021	13/07/2021
File		21071601	21071601	21071601	21071301	21071301
1. Cecelia Island	17/06/2021	0.3	0.57	0.2	3.3	10
2. Edeline Island East	17/06/2021	0.9	0.44	0.7	9.9	29
3. Edeline Island North	17/06/2021	1.0	0.43	0.7	9.3	26
4. Dorothy Island	18/06/2021	1.2	0.46	0.8	10	25
7. Edeline Island South	17/06/2021	1.2	0.43	0.8	11	30
8. Mary Island	17/06/2021	1.0	0.45	0.7	9.7	29
9. Bayliss Island	17/06/2021	0.6	0.40	0.4	5.1	15
10. Razor Island	16/06/2021	0.5	0.47	0.4	5.8	20
11. Koolan Island	18/06/2021	0.5	0.45	0.4	4.5	12
12. Crocodile Creek	18/06/2021	0.9	0.42	0.6	7.6	20
13. Cornelius Island	18/06/2021	1.2	0.47	0.8	10	27
Crocodile Creek 2	18/06/2021	0.9	0.52	0.6	8.3	24
Cornelius 2	18/06/2021	1.0	0.48	0.6	8.2	22
Bayliss 2	17/06/2021	1.0	0.51	0.6	8.8	24

Note: Results expressed as dry weight basis, reporting limits raised due to sample size

Note: For results for compliance purposes uncertainty of measurement (MU) will sometimes affect the interpretation whether the result passes or fails the compliance limit.

Tables for measurement uncertainty are available online at www.mafri.murdoch.edu.au

Signatory: Vaughan Gregory
Date: 16/07/2021

The results only apply to the sample as received and to the sample tested.
Spare test items will be held for two months unless otherwise requested.

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WATER QUALITY DATA

Contact: Donny Koes
Customer: Marine Produce Australia
Address: 4/9 Short Street, Broome WA 6725

Date of Issue: 19/08/2021
Date Received: 9/08/2021
Our Reference: MPA21-19

METHOD SAMPLE CODE	Sampling Date	2300 SILICATE µg.Si/L	2000 AMMONIA µg.N/L	4100 ORTHO-P µg.P/L	2100 NO3+NO2 µg.N/L	4700 TOTAL-P µg.P/L	2700 TOTAL-N µg.N/L	6200 POC mg/L	3000 CHLOROPHYLL'a' µg/L	3000 PHAEOPHYTIN'a' µg/L
Reporting Limit		<2	<3	<2	<2	<5	<50	<0.05	<0.1	<0.2
Analysis Date		13/08/2021	16/08/2021	16/08/2021	16/08/2021	12/08/2021	12/08/2021	17/08/2021	18/08/2021	18/08/2021
File		21081302	21081601	21081601	21081601	21081201	21081201	21081701	21081803	21081803
1. Cecelia Island	31/07/2021	150	<3	9	<2	13	90	0.11	0.3	<0.2
2. Edeline Island East	31/07/2021	150	<3	9	<2	14	60	0.12	0.3	0.3
3. Edeline Island North	31/07/2021	160	3	9	<2	15	70	0.10	0.3	<0.2
4. Dorothy Island	31/07/2021	170	<3	10	<2	12	50	0.10	0.3	0.2
5. Irvine Island	31/07/2021	180	<3	10	2	13	50	0.11	0.4	0.3
6. Bathurst Island	31/07/2021	190	<3	11	2	14	70	0.08	0.3	<0.2
7. Edeline Island South	1/08/2021	170	<3	10	<2	15	80	No Result	0.2	<0.2
8. Mary Island	1/08/2021	170	<3	9	<2	14	70	0.06	0.3	<0.2
9. Bayliss Island	31/07/2021	170	<3	9	<2	14	60	0.12	0.4	0.3
10. Razor Island	1/08/2021	190	<3	9	<2	15	70	0.10	0.5	0.2
11. Koolan Island	31/07/2021	210	<3	10	3	14	50	0.11	0.3	<0.2
12. Crocodile Creek	31/07/2021	200	<3	10	<2	14	60	0.09	0.3	0.2
13. Cornelius Island	31/07/2021	200	<3	10	<2	15	70	0.11	0.3	0.2
Inner ref 1	1/08/2021	150	<3	8	<2	13	70	0.12	0.4	<0.2
Inner ref 2	1/08/2021	43	<3	5	<2	12	60	0.15	0.9	0.3
Inner ref 3	1/08/2021	140	<3	4	<2	14	90	0.16	0.9	0.3
Inner ref 4	31/07/2021	140	<3	9	2	13	60	0.11	0.6	0.3
Inner ref 5	31/07/2021	150	<3	9	<2	15	60	0.12	0.5	0.3
Inner ref 6	31/07/2021	170	5	10	<2	15	60	0.12	0.4	0.2

Signatory: Vaughan Gregory
Date: 19/08/2021

The results only apply to the sample as received and to the sample tested.
Spare test items will be held for two months unless otherwise requested.



WATER QUALITY DATA

Contact: Donny Koes
Customer: Marine Produce Australia
Address: 4/9 Short Street, Broome WA 6725

Date of Issue: 19/08/2021
Date Received: 9/08/2021
Our Reference: MPA21-19

METHOD SAMPLE CODE	Sampling Date	2300 SILICATE µg.Si/L	2000 AMMONIA µg.N/L	4100 ORTHO-P µg.P/L	2100 NO3+NO2 µg.N/L	4700 TOTAL-P µg.P/L	2700 TOTAL-N µg.N/L	6200 POC mg/L	3000 CHLOROPHYLL'a' µg/L	3000 PHAEOPHYTIN'a' µg/L
Reporting Limit		<2	<3	<2	<2	<5	<50	<0.05	<0.1	<0.2
Analysis Date		13/08/2021	16/08/2021	16/08/2021	16/08/2021	12/08/2021	12/08/2021	17/08/2021	18/08/2021	18/08/2021
File		21081302	21081601	21081601	21081601	21081201	21081201	21081701	21081803	21081803
Inner ref 7	31/07/2021	190	<3	10	<2	16	60	0.11	0.3	0.3
Inner ref 8	31/07/2021	200	<3	9	<2	14	60	0.08	0.3	0.2
Boundary ref 1	31/07/2021	160	<3	11	4	16	60	0.08	0.4	0.3
Boundary ref 2	31/07/2021	150	<3	10	3	12	50	0.11	0.3	0.4
Boundary ref 3	31/07/2021	150	3	10	2	15	50	0.07	0.3	0.2
Boundary ref 4	31/07/2021	220	<3	10	3	16	60	0.09	0.4	0.2
Boundary ref 5	31/07/2021	230	<3	11	4	14	50	0.11	0.2	0.2
Extra: Bayliss 2	31/07/2021	160	3	10	<2	14	50	0.11	0.3	0.3
Extra: Crocodile Ck 2	31/07/2021	200	<3	10	<2	14	60	0.08	0.4	0.2
Extra: Cornelius 2	31/07/2021	200	<3	10	<2	15	50	0.08	0.3	0.2

Note: For results for compliance purposes uncertainty of measurement (MU) will sometimes affect the interpretation whether the result passes or fails the compliance limit.

Tables for measurement uncertainty are available online at www.mafri.murdoch.edu.au

POC testing is outside the scope of accreditation

Signatory: Vaughan Gregory
Date: 19/08/2021

The results only apply to the sample as received and to the sample tested.
Spare test items will be held for two months unless otherwise requested.

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WATER QUALITY DATA

Contact: Donny Koes
Customer: Marine Produce Australia
Address: 4/9 Short Street, Broome WA 6725

Date of Issue: 16/08/2021
Date Received: 2/08/2021
Our Reference: MPA21-20

METHOD SAMPLE CODE	Sampling Date	2300 SILICATE µg.Si/L	2000 AMMONIA µg.N/L	4100 ORTHO-P µg.P/L	2100 NO3+NO2 µg.N/L	4700 TOTAL-P µg.P/L	2700 TOTAL-N µg.N/L	6200 POC mg/L	3000 CHLOROPHYLL'a' µg/L	3000 PHAEOPHYTIN'a' µg/L
Reporting Limit		<2	<3	<2	<2	<5	<50	<0.05	<0.1	<0.2
Analysis Date		13/08/2021	5/08/2021	5/08/2021	5/08/2021	4/08/2021	4/08/2021	10/08/2021	11/08/2021	11/08/2021
File		21081301	21080501	21080501	21080501	21080401-1202	21080401-1202	21081001	21081102	21081102
1. Cecelia Island	20/07/2021	170	<3	10	<2	14	60	0.11	0.3	<0.2
2. Edeline Island East	20/07/2021	160	<3	10	<2	16	70	0.09	0.5	<0.2
3. Edeline Island North	20/07/2021	170	<3	9	<2	16	70	0.09	0.3	<0.2
4. Dorothy Island	19/07/2021	170	<3	10	<2	16	60	0.08	0.4	<0.2
5. Irvine Island	19/07/2021	190	<3	11	<2	17	80	0.12	0.4	0.3
6. Bathurst Island	19/07/2021	190	<3	10	2	16	70	0.08	0.3	0.2
7. Edeline Island South	20/07/2021	170	<3	9	<2	16	60	0.11	0.2	<0.2
8. Mary Island	20/07/2021	160	<3	10	<2	14	50	0.12	0.2	<0.2
9. Bayliss Island	19/07/2021	180	<3	9	<2	13	50	0.11	0.4	<0.2
10. Razor Island	20/07/2021	190	<3	10	<2	15	70	0.17	0.4	0.2
11. Koolan Island	19/07/2021	230	<3	11	3	16	80	0.07	0.4	<0.2
12. Crocodile Creek	19/07/2021	200	<3	12	<2	15	60	0.08	0.3	<0.2
13. Cornelius Island	19/07/2021	200	<3	11	<2	16	60	0.12	0.3	<0.2
Inner ref 1	20/07/2021	180	<3	11	<2	14	60	0.16	0.2	<0.2
Inner ref 2	20/07/2021	160	<3	10	<2	16	60	0.11	0.3	<0.2
Inner ref 3	20/07/2021	89	<3	6	<2	16	90	0.25	0.7	<0.2
Inner ref 4	20/07/2021	140	<3	9	<2	18	70	0.13	0.7	0.3
Inner ref 5	20/07/2021	140	<3	11	<2	14	60	0.11	0.5	0.2
Inner ref 6	19/07/2021	180	<3	10	<2	17	70	0.11	0.4	0.2


Signatory: Jamie Woodward
Date: 16/08/2021

The results only apply to the sample as received and to the sample tested.
Spare test items will be held for two months unless otherwise requested.



WATER QUALITY DATA

Contact: Donny Koes
Customer: Marine Produce Australia
Address: 4/9 Short Street, Broome WA 6725

Date of Issue: 16/08/2021
Date Received: 2/08/2021
Our Reference: MPA21-20

METHOD SAMPLE CODE	Sampling Date	2300 SILICATE µg.Si/L	2000 AMMONIA µg.N/L	4100 ORTHO-P µg.P/L	2100 NO3+NO2 µg.N/L	4700 TOTAL-P µg.P/L	2700 TOTAL-N µg.N/L	6200 POC mg/L	3000 CHLOROPHYLL'a' µg/L	3000 PHAEOPHYTIN'a' µg/L
Reporting Limit		<2	<3	<2	<2	<5	<50	<0.05	<0.1	<0.2
Analysis Date		13/08/2021	5/08/2021	5/08/2021	5/08/2021	4/08/2021	4/08/2021	10/08/2021	11/08/2021	11/08/2021
File		21081301	21080501	21080501	21080501	21080401-1202	21080401-1202	21081001	21081102	21081102
Inner ref 7	19/07/2021	200	<3	10	<2	14	60	0.14	0.4	0.2
Inner ref 8	19/07/2021	200	<3	11	<2	16	60	0.11	0.3	<0.2
Boundary ref 1	19/07/2021	170	<3	11	2	18	60	0.09	0.4	0.4
Boundary ref 2	19/07/2021	150	<3	11	3	17	60	0.06	0.4	0.3
Boundary ref 3	19/07/2021	160	<3	10	<2	15	60	0.08	0.3	0.2
Boundary ref 4	19/07/2021	220	<3	12	2	16	60	0.07	0.4	0.2
Boundary ref 5	19/07/2021	250	<3	11	4	18	70	0.07	0.4	<0.2
Extra: Bayliss 2	19/07/2021	170	4	10	<2	15	70	0.10	0.4	<0.2
Extra: Crocodile Ck 2	19/07/2021	200	<3	12	<2	14	60	0.14	0.3	0.2
Extra: Cornelius 2	19/07/2021	200	<3	11	<2	17	70	0.10	0.3	<0.2

Note: For results for compliance purposes uncertainty of measurement (MU) will sometimes affect the interpretation whether the result passes or fails the compliance limit.

Tables for measurement uncertainty are available online at www.mafri.murdoch.edu.au

POC testing is outside the scope of accreditation


Signatory: Jamie Woodward
Date: 16/08/2021

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WATER QUALITY DATA

Contact: Donny Koes

Customer: Marine Produce Australia

Address: 4/9 Short Street, Broome WA 6725

Date of Issue: 16/08/2021

Date Received: 2/08/2021

Our Reference: MPA21-21

METHOD SAMPLE CODE	Sampling Date	2300 SILICATE µg.Si/L Reporting Limit <2	2000 AMMONIA µg.N/L Reporting Limit <3	4100 ORTHO-P µg.P/L Reporting Limit <2	2100 NO3+NO2 µg.N/L Reporting Limit <2	4700 TOTAL-P µg.P/L Reporting Limit <5	2700 TOTAL-N µg.N/L Reporting Limit <50	6200 POC mg/L Reporting Limit <0.05	3000 CHLOROPHYLL'a' µg/L Reporting Limit <0.1	3000 PHAEOPHYTIN'a' µg/L Reporting Limit <0.2
Analysis Date File		13/08/2021 21081302	5/08/2021 21080501,0901	5/08/2021 21080501	5/08/2021 21080501	4/08/2021 21080402-1202	4/08/2021 21080402-1202	12/08/2021 21081201	11/08/2021 21081103	11/08/2021 21081103
1. Cecelia Island	26/07/2021	170	<3	10	<2	16	160	0.08	0.6	<0.2
2. Edeline Island East	26/07/2021	150	<3	9	<2	26	860	0.13	0.6	0.2
3. Edeline Island North	26/07/2021	160	<3	10	<2	17	80	0.10	0.6	<0.2
4. Dorothy Island	26/07/2021	200	7	11	<2	16	90	0.08	0.2	<0.2
5. Irvine Island	26/07/2021	190	12	10	<2	16	110	0.15	0.4	<0.2
6. Bathurst Island	26/07/2021	200	12	12	<2	18	120	0.12	0.4	<0.2
7. Edeline Island South	26/07/2021	180	<3	9	<2	17	180	0.07	0.2	<0.2
8. Mary Island	26/07/2021	180	<3	10	<2	16	70	0.13	0.4	<0.2
9. Bayliss Island	26/07/2021	180	4	9	<2	15	70	0.10	0.3	<0.2
10. Razor Island	26/07/2021	210	<3	9	<2	16	60	0.14	0.6	<0.2
11. Koolan Island	26/07/2021	220	<3	10	<2	17	60	0.06	0.3	<0.2
12. Crocodile Creek	26/07/2021	220	<3	10	<2	17	160	0.09	0.3	<0.2
13. Cornelius Island	26/07/2021	210	4	12	<2	17	100	0.21	0.2	<0.2
Inner ref 1	26/07/2021	190	<3	8	<2	16	70	0.17	0.5	<0.2
Inner ref 2	26/07/2021	94	<3	7	<2	17	80	0.19	0.7	<0.2
Inner ref 3	26/07/2021	190	13	7	<2	18	100	0.26	0.6	<0.2
Inner ref 4	26/07/2021	150	4	9	<2	17	70	0.13	0.9	0.2
Inner ref 5	26/07/2021	160	4	9	<2	17	70	0.09	0.7	<0.2
Inner ref 6	26/07/2021	190	<3	8	<2	17	120	0.09	0.3	<0.2
Inner ref 7	26/07/2021	210	<3	11	<2	16	100	0.06	0.2	<0.2
Inner ref 8	26/07/2021	220	5	10	<2	17	100	0.15	0.2	<0.2



Signatory: Jamie Woodward
Date: 16/08/2021

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WATER QUALITY DATA

Contact: Donny Koes

Customer: Marine Produce Australia

Address: 4/9 Short Street, Broome WA 6725

Date of Issue: 16/08/2021

Date Received: 2/08/2021

Our Reference: MPA21-21

METHOD SAMPLE CODE	Sampling Date	2300 SILICATE µg.Si/L	2000 AMMONIA µg.N/L	4100 ORTHO-P µg.P/L	2100 NO3+NO2 µg.N/L	4700 TOTAL-P µg.P/L	2700 TOTAL-N µg.N/L	6200 POC mg/L	3000 CHLOROPHYLL'a' µg/L	3000 PHAEOPHYTIN'a' µg/L
Reporting Limit		<2	<3	<2	<2	<5	<50	<0.05	<0.1	<0.2
Analysis Date		13/08/2021	5/08/2021	5/08/2021	5/08/2021	4/08/2021	4/08/2021	12/08/2021	11/08/2021	11/08/2021
File		21081302	21080501,0901	21080501	21080501	21080402-1202	21080402-1202	21081201	21081103	21081103
Boundary ref 1	26/07/2021	180	<3	10	3	15	80	0.11	0.6	0.4
Boundary ref 2	26/07/2021	160	<3	10	2	15	70	0.07	0.6	0.2
Boundary ref 3	26/07/2021	180	17	7	<2	16	80	0.09	0.4	<0.2
Boundary ref 4	26/07/2021	220	7	11	<2	14	100	0.09	0.3	<0.2
Boundary ref 5	26/07/2021	230	7	10	<2	15	100	0.13	0.4	<0.2
Extra: Bayliss 2	26/07/2021	180	4	10	<2	15	70	0.08	0.3	<0.2
Extra: Crocodile Ck 2	26/07/2021	220	9	11	<2	17	110	0.08	0.2	<0.2
Extra: Cornelius 2	26/07/2021	210	5	9	<2	15	80	0.16	0.2	<0.2

Sample Condition: For samples with Total-N of greater than 100µg.N/L and Ammonia greater than 5µg.N/L the spare samples supplied were analysed to confirm high levels. Some results were confirmed and some were not. It is suspected that there has been contamination during field sampling, so the lowest result obtained between primary and spare sample were reported.

Note: For results for compliance purposes uncertainty of measurement (MU) will sometimes affect the interpretation whether the result passes or fails the compliance limit.

Tables for measurement uncertainty are available online at www.mafri.murdoch.edu.au

POC testing is outside the scope of accreditation

Signatory: Jamie Woodward
Date: 16/08/2021

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WATER QUALITY DATA

Contact: Donny Koes
Customer: Marine Produce Australia
Address: 4/9 Short Street, Broome WA 6725

Date of Issue: 6/08/2021
Date Received: 19/07/2021
Our Reference: MPA21-22

METHOD SAMPLE CODE	Sampling Date	2300 SILICATE µg.Si/L	2000 AMMONIA µg.N/L	4100 ORTHO-P µg.P/L	2100 NO3+NO2 µg.N/L	4700 TOTAL-P µg.P/L	2700 TOTAL-N µg.N/L	6200 POC mg/L	3000 CHLOROPHYLL'a' µg/L	3000 PHAEOPHYTIN'a' µg/L
Reporting Limit		<2	<3	<2	<2	<5	<50	<0.05	<0.1	<0.2
Analysis Date		30/07/2021	22/07/2021	22/07/2021	22/07/2021	21/07/2021	21/07/2021	27/07/2021	21/07/2021	21/07/2021
File		21073001	21072201,0803	21072201,0803	21072201,0803	21072102-2801	21072102-2801	21072701	21072101	21072101
1. Cecelia Island	12/07/2021	180	<3	9	<2	16	80	0.09	0.5	<0.2
2. Edeline Island East	12/07/2021	170	<3	9	<2	16	80	0.07	0.5	<0.2
3. Edeline Island North	12/07/2021	180	<3	9	<2	18	80	0.07	0.5	<0.2
4. Dorothy Island	12/07/2021	190	<3	9	<2	17	60	<0.05	0.4	<0.2
5. Irvine Island	12/07/2021	210	<3	10	<2	16	60	0.06	0.4	0.2
6. Bathurst Island	12/07/2021	210	<3	9	<2	17	60	0.07	0.3	0.2
7. Edeline Island South	12/07/2021	190	<3	10	<2	16	60	0.06	0.4	<0.2
8. Mary Island	12/07/2021	190	<3	9	<2	16	60	0.05	0.4	<0.2
9. Bayliss Island	12/07/2021	210	<3	9	<2	17	80	0.08	0.6	0.3
10. Razor Island	12/07/2021	220	<3	8	<2	17	70	0.10	0.6	<0.2
11. Koolan Island	12/07/2021	220	<3	9	<2	16	60	0.06	0.3	<0.2
12. Crocodile Creek	12/07/2021	220	<3	9	<2	16	70	0.05	0.3	<0.2
13. Cornelius Island	12/07/2021	220	<3	9	<2	16	60	0.06	0.3	<0.2
Inner ref 1	12/07/2021	200	<3	9	<2	16	70	0.07	0.4	<0.2
Inner ref 2	12/07/2021	170	<3	8	<2	17	60	0.08	0.6	<0.2
Inner ref 3	12/07/2021	130	<3	6	<2	17	70	0.13	0.7	<0.2
Inner ref 4	12/07/2021	180	<3	9	<2	18	70	0.10	0.7	0.3
Inner ref 5	12/07/2021	180	<3	9	<2	16	60	0.11	0.7	0.2
Inner ref 6	12/07/2021	220	<3	9	<2	17	80	0.07	0.5	0.2
Inner ref 7	12/07/2021	220	<3	10	<2	17	70	0.06	0.4	<0.2
Inner ref 8	12/07/2021	220	<3	9	<2	16	70	0.07	0.3	<0.2
Boundary ref 1	12/07/2021	200	<3	10	6	17	70	0.09	0.4	0.4
Boundary ref 2	12/07/2021	200	<3	10	5	16	60	0.07	0.5	0.4
Boundary ref 3	12/07/2021	180	<3	14	5	17	60	0.07	0.5	0.4

The results only apply to the sample as received and to the sample tested.
Spare test items will be held for two months unless otherwise requested.

Signatory: Jamie Woodward
Date: 6/08/2021

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WATER QUALITY DATA

Contact: Donny Koes
Customer: Marine Produce Australia
Address: 4/9 Short Street, Broome WA 6725

Date of Issue: 6/08/2021
Date Received: 19/07/2021
Our Reference: MPA21-22

METHOD SAMPLE CODE	Sampling Date	2300 SILICATE µg.Si/L	2000 AMMONIA µg.N/L	4100 ORTHO-P µg.P/L	2100 NO3+NO2 µg.N/L	4700 TOTAL-P µg.P/L	2700 TOTAL-N µg.N/L	6200 POC mg/L	3000 CHLOROPHYLL'a' µg/L	3000 PHAEOPHYTIN'a' µg/L
Reporting Limit		<2	<3	<2	<2	<5	<50	<0.05	<0.1	<0.2
Analysis Date		30/07/2021	22/07/2021	22/07/2021	22/07/2021	21/07/2021	21/07/2021	27/07/2021	21/07/2021	21/07/2021
File		21073001	21072201,0803	21072201,0803	21072201,0803	21072102-2801	21072102-2801	21072701	21072101	21072101
Boundary ref 4	12/07/2021	220	<3	10	3	17	60	0.07	0.4	<0.2
Boundary ref 5	12/07/2021	220	<3	10	<2	18	70	0.07	0.4	<0.2
extra lease Bayliss 2	12/07/2021	210	<3	9	<2	17	70	0.07	0.3	<0.2
extra lease Crocodile Ck 2	12/07/2021	220	<3	9	<2	16	60	0.07	0.3	<0.2
extra lease Cornelius 2	12/07/2021	210	<3	9	<2	17	60	No Result	0.4	0.2

Note: For results for compliance purposes uncertainty of measurement (MU) will sometimes affect the interpretation whether the result passes or fails the compliance limit.
Tables for measurement uncertainty are available online at www.mafri.murdoch.edu.au


Signatory: Jamie Woodward
Date: 6/08/2021

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WATER QUALITY DATA

Contact: Kian Rex

Customer: Barramundi Group Australia

Address: Unit 3, 9 Short Street, Broome, WA 6725

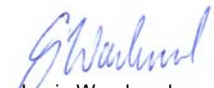
Date of Issue: 28/02/2023

Date Received: 27/01/2023

Our Reference: MPA23-7

Your Reference: Additional Baseline Data Collection

METHOD SAMPLE CODE	Sampling Date	2300 SILICATE µg.Si/L	2000 AMMONIA µg.N/L	4100 ORTHO-P µg.P/L	2100 NO3+NO2 µg.N/L	4700 TOTAL-P µg.P/L	2700 TOTAL-N µg.N/L	3000 CHLOROPHYLL'a' µg/L	3000 PHAEOPHYTIN'a' µg/L	2540D TSS mg/L	6200 POC mg/L
Reporting Limit		<2	<3	<2	<2	<5	<50	<0.1	<0.2	<0.5	<0.05
Analysis Date		6/02/2023	9/02/2023	9/02/2023	9/02/2023	3/02/2023	3/02/2023	17/02/2023	17/02/2023	27/01/2023	16/02/2023
File		23020601	23020901	23020901	23020901	23020302	23020302-1601	23021701	23021701	230127	23021601
Cecelia Island	22/01/2023	85	<3	5	<2	15	80	0.6	<0.2	3.3	0.13
Edeline Island North	22/01/2023	140	38	7	9	14	80	0.5	<0.2	2.4	0.10
Dorothy Island	21/01/2023	63	<3	4	3	14	80	1.1	<0.2	2.2	0.07
Edeline Island South	21/01/2023	200	21	10	9	14	80	0.2	<0.2	1.7	0.08
Mary Island	22/01/2023	130	7	6	<2	13	70	0.5	<0.2	2.1	0.07
Bayliss Island	21/01/2023	140	3	8	3	15	80	0.6	<0.2	4.2	0.09
Razor Island	19/01/2023	120	18	4	7	14	80	0.5	<0.2	1.5	0.09
Koolan Island	20/01/2023	120	8	6	<2	13	70	0.3	<0.2	1.2	0.05
Crocodile Creek	20/01/2023	110	<3	6	<2	13	60	0.3	<0.2	1.8	0.05
Conilurus Island	20/01/2023	96	<3	6	<2	13	100	0.3	<0.2	1.7	0.08
Extra Crocodile Creek 2	20/01/2023	110	<3	5	<2	14	70	0.3	<0.2	1.8	0.08
Extra Conilurus Island 2	20/01/2023	100	10	5	<2	14	60	0.3	<0.2	1.5	0.06
Extra Bayliss Island 2	20/01/2023	130	3	8	2	13	70	0.6	<0.2	1.9	0.06
Strickland Bay Ref Site 1	22/01/2023	120	<3	6	<2	14	80	0.5	<0.2	2.0	0.07
Strickland Bay Ref Site 2	21/01/2023	100	3	7	<2	13	70	0.4	<0.2	2.0	0.10
Strickland Bay Ref Site 3	22/01/2023	110	<3	7	<2	14	70	0.5	<0.2	2.7	0.10
Strickland Bay Ref Site 4	22/01/2023	86	<3	5	<2	13	70	0.6	<0.2	2.1	0.08
Bayliss Islands Ref Site 1	21/01/2023	60	<3	5	<2	14	60	0.7	<0.2	2.3	0.07
Bayliss Islands Ref Site 2	21/01/2023	64	<3	6	2	14	70	0.5	<0.2	2.2	0.09
Dorothy Island Ref Site 1	21/01/2023	78	<3	10	2	14	80	1.0	0.2	2.3	0.09
Conilurus/Crock Creek Ref 1	21/01/2023	69	<3	5	<2	14	70	0.5	<0.2	1.6	0.08


Signatory: Jamie Woodward
Date: 28/02/2023

The results only apply to the sample as received and to the sample tested.
Spare test items will be held for two months unless otherwise requested.

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Page 1 of 3



WATER QUALITY DATA

Contact: Kian Rex
Customer: Barramundi Group Australia
Address: Unit 3, 9 Short Street, Broome, WA 6725

Date of Issue: 28/02/2023

Date Received: 27/01/2023

Our Reference: MPA23-7

Your Reference: Additional Baseline Data Collection

METHOD SAMPLE CODE	Sampling Date	2300 SILICATE µg.Si/L	2000 AMMONIA µg.N/L	4100 ORTHO-P µg.P/L	2100 NO3+NO2 µg.N/L	4700 TOTAL-P µg.P/L	2700 TOTAL-N µg.N/L	3000 CHLOROPHYLL'a' µg/L	3000 PHAEOPHYTIN'a' µg/L	2540D TSS mg/L	6200 POC mg/L
Reporting Limit		<2	<3	<2	<2	<5	<50	<0.1	<0.2	<0.5	<0.05
Analysis Date		6/02/2023	9/02/2023	9/02/2023	9/02/2023	3/02/2023	3/02/2023	17/02/2023	17/02/2023	27/01/2023	16/02/2023
File		23020601	23020901	23020901	23020901	23020302	23020302-1601	23021701	23021701	230127	23021601
Conilurus/Crock Creek Ref 2	20/01/2023	110	<3	6	<2	14	80	0.3	<0.2	1.5	0.06
Conilurus/Crock Creek Ref 3	20/01/2023	110	<3	6	<2	12	70	0.3	<0.2	1.2	0.06
Koolan Island Ref Site 1	20/01/2023	120	7	6	<2	13	70	0.4	<0.2	2.1	0.06
Razor Island Ref Site 1	19/01/2023	180	28	8	11	14	80	0.8	<0.2	2.5	0.14
Inner ref 1	19/01/2023	160	6	5	<2	15	90	0.7	<0.2	3.3	0.14
Inner ref 2	21/01/2023	590	34	11	13	15	80	0.4	<0.2	2.5	0.13
Inner ref 3	21/01/2023	230	3	5	<2	16	90	0.9	<0.2	4.5	0.20
Inner ref 4	21/01/2023	100	<3	5	<2	15	80	0.9	<0.2	3.9	0.12
Inner ref 5	21/01/2023	87	<3	5	<2	14	70	0.7	<0.2	3.1	0.10
Inner ref 6	22/01/2023	75	<3	5	<2	14	90	0.7	<0.2	3.1	0.12
Inner ref 7	20/01/2023	100	<3	5	<2	14	70	0.4	<0.2	2.5	0.09
Inner ref 8	20/01/2023	120	13	6	<2	13	60	0.3	<0.2	1.6	<0.05
Boundary ref 1	20/01/2023	230	8	6	7	15	70	1.1	0.4	2.5	0.08
Boundary ref 2	20/01/2023	68	3	4	<2	13	70	1.3	0.4	4.2	0.13
Boundary ref 3	20/01/2023	160	7	6	14	15	70	0.9	<0.2	1.7	0.08
Boundary ref 4	20/01/2023	120	12	6	5	14	70	0.2	<0.2	1.1	0.06
Boundary ref 5	20/01/2023	130	3	6	<2	17	80	0.1	<0.2	1.6	<0.05
Edeline Island North FSP	22/01/2023		4	7	3						
Edeline Island South FSP	21/01/2023		8	13	3						
Razor Island Ref Site 1 FSP	19/01/2023		<3	6	<2						
Extra Conilurus Island 2 FSP	20/01/2023		<3	7	<2						

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Spare test items will be held for two months unless otherwise requested.


Signatory: Jamie Woodward
Date: 28/02/2023



WATER QUALITY DATA

Contact: Kian Rex

Customer: Barramundi Group Australia

Address: Unit 3, 9 Short Street, Broome, WA 6725

Date of Issue: 28/02/2023

Date Received: 27/01/2023

Our Reference: MPA23-7

Your Reference: Additional Baseline Data Collection

METHOD SAMPLE CODE	Sampling Date	2300 SILICATE µg.Si/L	2000 AMMONIA µg.N/L	4100 ORTHO-P µg.P/L	2100 NO3+NO2 µg.N/L	4700 TOTAL-P µg.P/L	2700 TOTAL-N µg.N/L	3000 CHLOROPHYLL'a' µg/L	3000 PHAEOPHYTIN'a' µg/L	2540D TSS mg/L	6200 POC mg/L
Reporting Limit		<2	<3	<2	<2	<5	<50	<0.1	<0.2	<0.5	<0.05
Analysis Date		6/02/2023	9/02/2023	9/02/2023	9/02/2023	3/02/2023	3/02/2023	17/02/2023	17/02/2023	27/01/2023	16/02/2023
File		23020601	23020901	23020901	23020901	23020302	23020302-1601	23021701	23021701	230127	23021601
Dorothy Island Ref Site 1 FSP	21/01/2023		<3	6	2						
Razor Island Ref Site 1 FSP	19/01/2023		13	8	4						
Inner ref 2 FSP	21/01/2023		46	9	20						
Inner ref 8 FSP	20/01/2023		59	6	<2						
Boundary ref 4 FSP	20/01/2023		15	6	5						

Note: For results for compliance purposes uncertainty of measurement (MU) will sometimes affect the interpretation whether the result passes or fails the compliance limit.

Tables for measurement uncertainty are available online at www.mafrl.murdoch.edu.au

FSP tube analysed where dissolved ammonia or ortho-P were greater than 10 µg/L

POC is outside the scope of NATA accreditation

Signatory: Jamie Woodward
Date: 28/02/2023

The results only apply to the sample as received and to the sample tested.
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**Marine and Freshwater
Research Laboratory
Environmental Science**

Tel: 08 93602907 Address: 90 South St, Murdoch, WA, 6150



Accreditation Number: 10603

Accredited for compliance with ISO/IEC 17025 - Testing.
The results of the tests, calibrations and/or
measurements included in this document are traceable
to Australian/national standards.



Murdoch
UNIVERSITY

WATER QUALITY DATA

Contact: Kian Rex

Customer: Barramundi Group Australia

Address: Unit 3, 9 Short Street, Broome, WA 6725

Date of Issue: 8/03/2023

Date Received: 10/02/2023

Our Reference: MPA23-8

Your Reference: Additional Baseline Data Collection

METHOD SAMPLE CODE	Sampling Date	2300 SILICATE µg.Si/L	2000 AMMONIA µg.N/L	4100 ORTHO-P µg.P/L	2100 NO3+NO2 µg.N/L	4700 TOTAL-P µg.P/L	2700 TOTAL-N µg.N/L	3000 CHLOROPHYLL'a' µg/L	3000 PHAEOPHYTIN'a' µg/L	2540D TSS mg/L	6200 POC mg/L
Reporting Limit		<2	<3	<2	<2	<5	<50	<0.1	<0.2	<1	<0.05
Analysis Date		27/02/2023	20/02/2023	20/02/2023	20/02/2023	16/02/2023	16/02/2023	2/03/2023	2/03/2023	15/02/2023	24/02/2023
File		23022701	23022001	23022001	23022001	23021602-03-2401	23021602-03-2401	23030201-02	23030201-02	230215-17	23022401-030101-0201-0301
Cecelia Island S	5/02/2023	290	<3	6	3	14	100	0.6	<0.2	2	0.09
Cecelia Island B	5/02/2023	300	7	6	4	20	180	0.5	1.1	29	0.39
Edeline Island North S	2/02/2023	310	<3	6	<2	14	90	0.6	<0.2	2	0.14
Edeline Island North B	2/02/2023	300	3	7	5	34	150	0.7	1.0	27	0.47
Dorothy Island S	4/02/2023	200	4	7	3	14	120	0.5	<0.2	1	0.05
Dorothy Island B	4/02/2023	200	<3	7	5	34	140	0.5	2.5	7	0.13
Edeline Island South S	2/02/2023	370	<3	6	<2	14	80	0.1	<0.2	2	0.06
Edeline island south B	2/02/2023	330	20	7	9	71	220	1.2	9.0	430	4.3
Mary Island S	2/02/2023	350	3	5	<2	14	70	0.2	<0.2	2	0.06
Mary Island B	2/02/2023	340	<3	7	2	73	220	2.0	7.2	230	2.5
Bayliss Island S	5/02/2023	230	<3	6	2	16	90	0.4	<0.2	2	<0.05
Bayliss island B	5/02/2023	230	<3	7	5	17	90	0.5	0.5	12	0.19
Razor Island S	2/02/2023	260	<3	4	<2	13	80	0.4	<0.2	4	0.07
Razor Island B	2/02/2023	330	41	8	12	27	230	0.6	1.7	63	0.76
Koolan Island S	2/02/2023	300	<3	8	<2	15	70	0.1	<0.2	<1	<0.05
Koolan island B	2/02/2023	260	<3	8	3	21	90	0.3	0.6	13	0.22
Crocodile Creek S	4/02/2023	220	<3	7	<2	15	80	0.2	<0.2	1	<0.05
Crocodile creek B	4/02/2023	220	<3	8	4	20	100	0.7	1.0	20	0.25
Conilurus Island S	4/02/2023	210	<3	7	<2	16	100	0.3	<0.2	1	<0.05
Conilurus island B	4/02/2023	210	6	7	7	21	100	0.5	0.7	3	0.05
Extra Crocodile Creek 2 S	4/02/2023	230	<3	7	<2	16	100	0.2	<0.2	1	<0.05
Extra crocodile Creek 2 B	4/02/2023	250	6	9	6	110	290	0.4	3.6	170	2.2
Extra Conilurus Island 2 S	4/02/2023	220	<3	7	<2	14	80	0.3	<0.2	1	<0.05
Extra conilurus Island 2 B	4/02/2023	210	5	7	3	19	110	0.5	1.3	13	0.19
Extra Bayliss Island 2 S	5/02/2023	230	<3	7	3	15	90	0.4	<0.2	7	0.07
Extra Bayliss Island 2 B	5/02/2023	230	<3	6	3	16	80	0.6	1.5	21	0.34
Strickland Bay Ref Site 1 S	2/02/2023	340	<3	6	<2	14	90	0.2	<0.2	1	0.06

J. Woodward

Signatory: Jamie Woodward
Date: 8/03/2023

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WATER QUALITY DATA

Contact: Kian Rex

Customer: Barramundi Group Australia

Address: Unit 3, 9 Short Street, Broome, WA 6725

Date of Issue: 8/03/2023

Date Received: 10/02/2023

Our Reference: MPA23-8

Your Reference: Additional Baseline Data Collection

METHOD SAMPLE CODE	Sampling Date	2300 SILICATE µg.Si/L	2000 AMMONIA µg.N/L	4100 ORTHO-P µg.P/L	2100 NO3+NO2 µg.N/L	4700 TOTAL-P µg.P/L	2700 TOTAL-N µg.N/L	3000 CHLOROPHYLL'a' µg/L	3000 PHAEOPHYTIN'a' µg/L	2540D TSS mg/L	6200 POC mg/L
Reporting Limit		<2	<3	<2	<2	<5	<50	<0.1	<0.2	<1	<0.05
Analysis Date		27/02/2023	20/02/2023	20/02/2023	20/02/2023	16/02/2023	16/02/2023	2/03/2023	2/03/2023	15/02/2023	24/02/2023
File		23022701	23022001	23022001	23022001	23021602-03-2401	23021602-03-2401	23030201-02	23030201-02	230215-17	23022401-030101-0201-0301
Strickland Bay Ref Site 1 B	2/02/2023	340	7	10	6	170	470	2.3	14	310	4.1
Strickland Bay Ref Site 2 S	2/02/2023	300	<3	6	<2	14	80	0.2	<0.2	2	0.05
Strickland Bay Red Site 2 B	2/02/2023	300	<3	6	<2	89	290	1.1	2.4	130	1.6
Strickland Bay Ref Site 3 S	2/02/2023	330	<3	6	<2	14	90	0.3	<0.2	5	0.10
Strickland Bay ref site 3 B	2/02/2023	300	<3	6	<2	81	230	1.0	1.3	32	0.43
Strickland Bay Ref Site 4 S	5/02/2023	280	<3	6	2	14	80	0.4	<0.2	1	<0.05
Strickland bay ref site 4 B	5/02/2023	290	<3	6	3	40	150	0.5	6.8	4	0.09
Bayliss Islands Ref Site 1 S	5/02/2023	230	<3	7	8	16	130	0.4	0.3	2	0.06
Bayliss Island ref site 1 B	5/02/2023	230	3	7	8	16	120	0.6	2.6	13	0.22
Bayliss Islands Ref Site 2 S	5/02/2023	250	<3	7	5	15	100	0.3	<0.2	6	0.06
Bayliss isalnds Ref Site 2 B	5/02/2023	230	3	7	3	16	100	0.4	<0.2	4	0.07
Dorothy Island Ref Site 1 S	4/02/2023	200	<3	6	4	14	100	0.4	<0.2	1	<0.05
Dorothy Island Ref Site 1 B	4/02/2023	190	<3	7	4	15	120	0.6	2.1	5	0.08
Conilurus/Crock Creek Ref 1 S	4/02/2023	210	<3	7	2	15	90	0.3	<0.2	1	<0.05
Conilurus/Crock Creek Ref 1 B	4/02/2023	210	5	8	7	21	140	0.5	2.0	33	0.48
Conilurus/Crock Creek Ref 2 S	4/02/2023	210	4	7	<2	15	90	0.2	<0.2	1	<0.05
Conilurus/Crock Creek Ref 2 B	4/02/2023	200	<3	8	3	23	120	0.5	1.4	12	0.17
Conilurus/Crock Creek Ref 3 S	4/02/2023	220	<3	7	3	15	90	0.3	<0.2	1	<0.05
Conilurus/Crock Creek Ref 3 B	4/02/2023	220	8	8	6	45	190	0.6	1.7	4	0.13
Koolan Island Ref Site 1 S	2/02/2023	300	<3	7	<2	16	80	0.2	<0.2	<1	<0.05
Koolan Island Ref Site 1 B	2/02/2023	290	<3	7	<2	16	90	0.3	0.3	7	0.16
Razor Island Ref Site 1 S	2/02/2023	290	<3	5	<2	14	100	0.3	<0.2	14	0.19
Razor Islan Ref Site 1 B	2/02/2023	440	10	14	8	150	370	1.1	13	330	3.9
Inner ref 1 S	2/02/2023	390	<3	5	<2	12	90	0.3	<0.2	4	0.10
Inner ref 1 B	2/02/2023	430	24	11	4	700	1600	3.5	8.4	520	5.3
Inner ref 2 S	5/02/2023	380	<3	6	<2	14	90	0.6	<0.2	4	0.27
Inner ref 2 B	5/02/2023	370	<3	7	<2	42	160	1.0	1.8	50	0.72



Signatory: Jamie Woodward
Date: 8/03/2023

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WATER QUALITY DATA

Contact: Kian Rex

Customer: Barramundi Group Australia

Address: Unit 3, 9 Short Street, Broome, WA 6725

Date of Issue: 8/03/2023

Date Received: 10/02/2023

Our Reference: MPA23-8

Your Reference: Additional Baseline Data Collection

METHOD SAMPLE CODE	Sampling Date	2300 SILICATE µg.Si/L	2000 AMMONIA µg.N/L	4100 ORTHO-P µg.P/L	2100 NO3+NO2 µg.N/L	4700 TOTAL-P µg.P/L	2700 TOTAL-N µg.N/L	3000 CHLOROPHYLL'a' µg/L	3000 PHAEOPHYTIN'a' µg/L	2540D TSS mg/L	6200 POC mg/L
Reporting Limit		<2	<3	<2	<2	<5	<50	<0.1	<0.2	<1	<0.05
Analysis Date		27/02/2023	20/02/2023	20/02/2023	20/02/2023	16/02/2023	16/02/2023	2/03/2023	2/03/2023	15/02/2023	24/02/2023
File		23022701	23022001	23022001	23022001	23021602-03-2401	23021602-03-2401	23030201-02	23030201-02	230215-17	23022401-030101-0201-0301
Inner ref 3 S	5/02/2023	530	<3	5	<2	16	100	0.7	<0.2	5	0.18
Inner ref 3 B	5/02/2023	520	<3	7	<2	18	120	1.0	1.7	18	0.43
Inner ref 4 S	5/02/2023	330	<3	6	5	14	100	0.8	0.2	4	0.07
Inner ref 4 B	5/02/2023	330	4	6	6	15	110	0.9	0.8	8	0.14
Inner ref 5 S	5/02/2023	300	<3	6	5	15	110	0.7	0.2	3	0.05
Inner ref 5 B	5/02/2023	300	<3	6	5	20	130	0.6	0.3	7	0.11
Inner ref 6 S	5/02/2023	230	<3	6	<2	14	110	0.3	0.2	3	<0.05
Inner ref 6 B	5/02/2023	230	6	7	3	60	180	0.3	4.0	120	1.0
Inner ref 7 S	4/02/2023	230	<3	6	<2	12	60	0.3	<0.2	4	<0.05
Inner ref 7 B	4/02/2023	220	<3	7	3	34	130	1.2	1.7	16	0.30
Inner ref 8 S	2/02/2023	230	<3	7	<2	14	110	0.3	<0.2	2	0.05
Inner ref 8 B	2/02/2023	240	<3	8	<2	36	110	0.6	1.1	31	0.38
Boundary ref 1 S	2/02/2023	270	<3	6	8	14	100	0.6	<0.2	3	0.07
Boundary ref 1 B	2/02/2023	250	<3	7	10	14	120	0.5	0.7	15	0.93
Boundary ref 2 S	4/02/2023	210	<3	7	6	16	150	0.5	<0.2	3	0.06
Boundary ref 2 B	4/02/2023	210	<3	6	7	14	90	0.4	1.1	18	0.30
Boundary ref 3 S	3/02/2023	170	4	6	3	12	70	0.3	<0.2	2	<0.05
Boundary ref 3 B	3/02/2023	190	4	7	10	16	90	0.3	0.6	8	0.15
Boundary ref 4 S	3/02/2023	250	<3	8	<2	13	70	<0.1	<0.2	2	<0.05
Boundary ref 4 B	3/02/2023	220	<3	9	17	28	110	0.3	0.4	10	0.15
Boundary ref 5 S	3/02/2023	320	<3	8	<2	14	60	0.1	<0.2	1	<0.05
Boundary ref 5 B	3/02/2023	220	4	8	6	56	190	2.3	6.1	14	0.19

Note: For results for compliance purposes uncertainty of measurement (MU) will sometimes affect the interpretation whether the result passes or fails the compliance limit.

Tables for measurement uncertainty are available online at www.mafri.murdoch.edu.au

POC is outside the scope of NATA accreditation


Signatory: Jamie Woodward
Date: 8/03/2023

The results only apply to the sample as received and to the sample tested.
Spare test items will be held for two months unless otherwise requested.

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WATER QUALITY DATA

Contact: Kian Rex

Customer: Barramundi Group Australia

Address: 6 Murakami Road, Broome, WA 6725

Date of Issue: 28/03/2023

Date Received: 23/02/2023

Our Reference: MPA23-9

Your Reference: Additional Baseline Data Collection

METHOD SAMPLE CODE	Sampling Date	2300 SILICATE µg.Si/L	2000 AMMONIA µg.N/L	4100 ORTHO-P µg.P/L	2100 NO3+NO2 µg.N/L	4700 TOTAL-P µg.P/L	2700 TOTAL-N µg.N/L	3000 CHLOROPHYLL'a' µg/L	3000 PHAEOPHYTIN'a' µg/L	2540D TSS mg/L	6200 POC mg/L
Reporting Limit		<2	<3	<2	<2	<5	<50	<0.1	<0.2	<1	<0.05
Analysis Date	8/03/2023	2-14/03/2023	2-14/03/2023	2-14/03/2023	3-10/03/2023	3-10/03/2023	14/03/2023	14/03/2023	2/03/2023	3-8/03/2023	
File	23030801	23030202,0701,1402	23030301-1001-02-03	23031402-03	23031402-03	230302-03	23030301-0701-0801				
Cecelia Island_S	18/02/2023	400	<3	6	3	14	120	0.1	0.2	2	0.07
Cecelia Island_B	18/02/2023	380	5	7	4	15	120	0.4	0.6	6	0.14
Edeline Island North_S	18/02/2023	430	<3	6	4	13	90	0.3	<0.2	2	<0.05
Edeline Island North_B	18/02/2023	410	4	7	4	17	120	0.4	0.2	6	0.15
Dorothy Island_S	17/02/2023	280	<3	6	4	14	80	0.2	<0.2	1	<0.05
Dorothy Island_B	17/02/2023	290	4	7	12	16	120	0.5	<0.2	4	0.09
Edeline Island South_S	18/02/2023	410	<3	6	<2	13	80	0.1	<0.2	<1	<0.05
Edeline Island South_B	18/02/2023	400	7	7	<2	18	160	0.2	<0.2	9	0.16
Mary Island_S	18/02/2023	410	<3	6	<2	12	70	0.2	<0.2	2	0.07
Mary Island_B	18/02/2023	380	11	8	6	83	390	1.2	3.0	79	1.1
Bayliss Island_S	17/02/2023	320	4	6	<2	13	100	0.3	<0.2	4	0.06
Bayliss Island_B	17/02/2023	320	4	7	4	17	90	0.5	0.3	4	0.06
Razor Island_S	15/02/2023	450	5	5	<2	15	100	0.3	<0.2	2	0.10
Razor Island_B	15/02/2023	410	5	7	8	33	150	0.6	1.0	16	0.25
Koolan Island_S	16/02/2023	310	4	7	<2	15	90	0.2	<0.2	2	<0.05
Koolan Island_B	16/02/2023	300	<3	8	9	38	140	0.4	1.8	12	0.20
Crocodile Creek_S	16/02/2023	290	<3	7	<2	15	70	0.2	<0.2	<1	<0.05
Crocodile Creek_B	16/02/2023	290	6	7	3	19	130	0.4	<0.2	3	0.08
Conilurus Island_S	17/02/2023	290	<3	7	2	16	90	0.2	<0.2	1	<0.05
Conilurus Island_B	17/02/2023	310	4	8	6	16	90	0.4	1.4	11	0.16
Extra Crocodile Creek 2_S	16/02/2023	300	<3	7	<2	16	100	0.1	<0.2	<1	0.06
Extra Crocodile Creek 2_B	16/02/2023	320	4	8	3	56	220	0.4	0.9	36	0.44
Extra Conilurus Island 2_S	17/02/2023	310	<3	8	<2	14	70	0.1	<0.2	5	<0.05

J. Woodward

Signatory: Jamie Woodward
Date: 28/03/2023

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WATER QUALITY DATA

Contact: Kian Rex

Customer: Barramundi Group Australia

Address: 6 Murakami Road, Broome, WA 6725

Date of Issue: 28/03/2023

Date Received: 23/02/2023

Our Reference: MPA23-9

Your Reference: Additional Baseline Data Collection

METHOD SAMPLE CODE	Sampling Date	2300 SILICATE µg.Si/L	2000 AMMONIA µg.N/L	4100 ORTHO-P µg.P/L	2100 NO3+NO2 µg.N/L	4700 TOTAL-P µg.P/L	2700 TOTAL-N µg.N/L	3000 CHLOROPHYLL'a' µg/L	3000 PHAEOPHYTIN'a' µg/L	2540D TSS mg/L	6200 POC mg/L
Reporting Limit		<2	<3	<2	<2	<5	<50	<0.1	<0.2	<1	<0.05
Analysis Date File		8/03/2023 23030801	2-14/03/2023 23030202,0701,1402	2-14/03/2023 23030202,0701,1402	2-14/03/2023 23030202,0701,1402	3-10/03/2023 23030301-1001-02-03	3-10/03/2023 23030301-1001-02-03	14/03/2023 23031402-03	14/03/2023 23031402-03	2/03/2023 230302-03	3-8/03/2023 23030301-0701-0801
Extra Conilurus Island 2_B	17/02/2023	310	4	7	3	16	100	0.2	<0.2	3	0.06
Extra Bayliss Island 2_S	17/02/2023	330	<3	7	<2	14	70	0.3	<0.2	4	0.06
Extra Bayliss Island 2_B	17/02/2023	330	12	7	2	17	100	0.8	2.3	18	0.29
Strickland Bay Ref Site 1_S	17/02/2023	400	4	7	<2	15	70	0.2	<0.2	2	<0.05
Strickland Bay Ref Site 1_B	17/02/2023	380	8	8	3	24	220	0.7	1.5	140	3.0
Strickland Bay Ref Site 2_S	18/02/2023	400	<3	7	<2	14	80	0.1	<0.2	1	0.06
Strickland Bay Ref Site 2_B	18/02/2023	380	7	7	<2	16	160	0.4	0.2	4	0.08
Strickland Bay Ref Site 3_S	18/02/2023	400	6	7	<2	14	110	0.2	<0.2	2	0.06
Strickland Bay Ref Site 3_B	18/02/2023	410	<3	6	<2	22	130	0.8	2.2	90	0.99
Strickland Bay Ref Site 4_S	18/02/2023	370	<3	7	2	15	100	0.2	<0.2	2	0.07
Strickland Bay Ref Site 4_B	18/02/2023	360	4	7	3	29	140	0.4	0.3	16	0.26
Bayliss Islands Ref Site 1_S	17/02/2023	310	<3	7	<2	16	100	0.3	<0.2	2	0.07
Bayliss Islands Ref Site 1_B	17/02/2023	300	4	7	6	17	100	0.5	0.5	4	0.12
Bayliss Islands Ref Site 2_S	17/02/2023	310	<3	7	5	15	100	0.4	0.2	2	0.08
Bayliss Islands Ref Site 2_B	17/02/2023	310	5	7	6	16	130	0.3	0.3	8	0.20
Dorothy Island Ref Site 1_S	17/02/2023	280	<3	7	2	14	90	0.2	<0.2	2	<0.05
Dorothy Island Ref Site 1_B	17/02/2023	300	4	8	14	19	140	0.5	1.0	10	0.18
Conilurus/Crock Creek Ref 1_S	17/02/2023	290	<3	7	<2	14	80	0.2	<0.2	2	<0.05
Conilurus/Crock Creek Ref 1_B	17/02/2023	290	4	7	<2	15	120	0.3	0.3	3	0.08
Conilurus/Crock Creek Ref 2_S	17/02/2023	300	<3	7	<2	15	90	<0.1	<0.2	2	<0.05
Conilurus/Crock Creek Ref 2_B	17/02/2023	300	4	8	3	19	130	0.8	0.8	4	0.07
Conilurus/Crock Creek Ref 3_S	16/02/2023	280	<3	7	<2	14	90	0.2	<0.2	2	0.06
Conilurus/Crock Creek Ref 3_B	16/02/2023	280	3	7	<2	15	90	0.3	<0.2	3	0.08

J. Woodward

Signatory: Jamie Woodward
Date: 28/03/2023

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WATER QUALITY DATA

Contact: Kian Rex

Customer: Barramundi Group Australia

Address: 6 Murakami Road, Broome, WA 6725

Date of Issue: 28/03/2023

Date Received: 23/02/2023

Our Reference: MPA23-9

Your Reference: Additional Baseline Data Collection

METHOD SAMPLE CODE	Sampling Date	2300 SILICATE µg.Si/L	2000 AMMONIA µg.N/L	4100 ORTHO-P µg.P/L	2100 NO3+NO2 µg.N/L	4700 TOTAL-P µg.P/L	2700 TOTAL-N µg.N/L	3000 CHLOROPHYLL'a' µg/L	3000 PHAEOPHYTIN'a' µg/L	2540D TSS mg/L	6200 POC mg/L
Reporting Limit		<2	<3	<2	<2	<5	<50	<0.1	<0.2	<1	<0.05
Analysis Date	8/03/2023	2-14/03/2023	2-14/03/2023	2-14/03/2023	3-10/03/2023	3-10/03/2023	14/03/2023	14/03/2023	2/03/2023	3-8/03/2023	
File	23030801	23030202,0701,1402	23030301-1001-02-03	23031402-03	23031402-03	230302-03	23030301-0701-0801				
Koolan Island Ref Site 1_S	16/02/2023	310	<3	7	<2	15	90	0.3	<0.2	2	0.06
Koolan Island Ref Site 1_B	16/02/2023	290	<3	8	5	15	90	0.2	1.0	18	0.25
Razor Island Ref Site 1_S	15/02/2023	440	<3	6	<2	14	80	0.2	<0.2	3	0.13
Razor Island Ref Site 1_B	15/02/2023	390	5	7	<2	24	110	0.8	0.4	7	0.18
Inner ref 1_S	18/02/2023	480	4	6	<2	14	100	0.4	<0.2	6	0.13
Inner ref 1_B	18/02/2023	480	4	7	<2	110	370	2.1	3.7	110	1.2
Inner ref 2_S	18/02/2023	690	<3	6	<2	15	100	0.3	<0.2	2	0.08
Inner ref 2_B	18/02/2023	580	4	7	<2	18	120	1.1	1.1	44	0.60
Inner ref 3_S	18/02/2023	1200	3	6	<2	16	150	0.5	<0.2	4	0.15
Inner ref 3_B	18/02/2023	1100	<3	7	<2	18	140	1.0	0.3	10	0.22
Inner ref 4_S	18/02/2023	450	5	7	7	17	120	0.4	0.2	3	0.09
Inner ref 4_B	18/02/2023	440	5	8	7	21	140	0.4	0.9	15	0.21
Inner ref 5_S	18/02/2023	400	5	8	5	15	100	0.3	<0.2	2	<0.05
Inner ref 5_B	18/02/2023	400	6	7	5	16	130	0.4	0.4	3	0.08
Inner ref 6_S	17/02/2023	320	<3	7	<2	15	80	0.2	<0.2	2	<0.05
Inner ref 6_B	17/02/2023	330	<3	7	<2	52	180	0.5	1.6	30	0.33
Inner ref 7_S	17/02/2023	300	<3	8	<2	15	70	0.1	<0.2	2	<0.05
Inner ref 7_B	17/02/2023	300	5	8	<2	16	90	0.2	<0.2	7	0.12
Inner ref 8_S	16/02/2023	280	<3	7	<2	14	90	0.2	<0.2	1	0.05
Inner ref 8_B	16/02/2023	280	4	7	<2	17	110	0.3	<0.2	8	0.12
Boundary ref 1_S	16/02/2023	340	4	7	7	16	100	0.5	0.2	2	0.08
Boundary ref 1_B	16/02/2023	330	3	9	10	16	100	0.6	0.4	4	0.10
Boundary ref 2_S	16/02/2023	290	<3	8	12	17	110	0.5	<0.2	3	0.05

J. Woodward

Signatory: Jamie Woodward
Date: 28/03/2023

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WATER QUALITY DATA

Contact: Kian Rex
Customer: Barramundi Group Australia
Address: 6 Murakami Road, Broome, WA 6725

Date of Issue: 28/03/2023

Date Received: 23/02/2023

Our Reference: MPA23-9

Your Reference: Additional Baseline Data Collection

METHOD SAMPLE CODE	Sampling Date	2300 SILICATE µg.Si/L	2000 AMMONIA µg.N/L	4100 ORTHO-P µg.P/L	2100 NO3+NO2 µg.N/L	4700 TOTAL-P µg.P/L	2700 TOTAL-N µg.N/L	3000 CHLOROPHYLL'a' µg/L	3000 PHAEOPHYTIN'a' µg/L	2540D TSS mg/L	6200 POC mg/L
Reporting Limit		<2	<3	<2	<2	<5	<50	<0.1	<0.2	<1	<0.05
Analysis Date	8/03/2023	2-14/03/2023	2-14/03/2023	2-14/03/2023	3-10/03/2023	3-10/03/2023	14/03/2023	14/03/2023	2/03/2023	3-8/03/2023	
File	23030801	23030202,0701,1402	23030202,0701,1402	23030202,0701,1402	23030301-1001-02-03	23030301-1001-02-03	23031402-03	23031402-03	230302-03	23030301-0701-0801	
Boundary ref 2_B	16/02/2023	300	<3	8	13	17	100	0.5	0.5	5	0.10
Boundary ref 3_S	16/02/2023	260	<3	7	7	16	100	0.4	<0.2	2	0.06
Boundary ref 3_B	16/02/2023	280	<3	8	15	25	180	0.5	1.1	10	0.15
Boundary ref 4_S	16/02/2023	280	<3	7	<2	18	120	0.2	<0.2	1	<0.05
Boundary ref 4_B	16/02/2023	280	6	8	10	25	120	0.4	0.5	7	0.11
Boundary ref 5_S	16/02/2023	300	<3	8	<2	17	90	0.4	<0.2	1	<0.05
Boundary ref 5_B	16/02/2023	260	3	9	13	19	100	0.4	1.3	4	0.08

Note: For results for compliance purposes uncertainty of measurement (MU) will sometimes affect the interpretation whether the result passes or fails the compliance limit.

Tables for measurement uncertainty are available online at www.mafrl.murdoch.edu.au

POC is outside the scope of NATA accreditation

J Woodward

Signatory: Jamie Woodward
Date: 28/03/2023

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**Marine and Freshwater
Research Laboratory
Environmental Science**

Tel: 08 93602907 Address: 90 South St, Murdoch, WA, 6150



Accreditation Number: 10603

Accredited for compliance with ISO/IEC 17025 - Testing.
The results of the tests, calibrations and/or
measurements included in this document are traceable
to Australian/national standards.



Murdoch
UNIVERSITY

WATER QUALITY DATA

Contact: Kian Rex
Customer: Barramundi Group Australia
Address: 6 Murakami Road, Broome, WA 6725

Date of Issue: 31/03/2023

Date Received: 7/03/2023

Our Reference: MPA23-10

Your Reference: Additional Baseline Data Collection

METHOD SAMPLE CODE	Sampling Date	2300 SILICATE µg.Si/L	2000 AMMONIA µg.N/L	4100 ORTHO-P µg.P/L	2100 NO3+NO2 µg.N/L	4700 TOTAL-P µg.P/L	2700 TOTAL-N µg.N/L	3000 CHLOROPHYLL'a' µg/L	3000 PHAEOPHYTIN'a' µg/L	2540D TSS mg/L	6200 POC mg/L
Reporting Limit		<2	<3	<2	<2	<5	<50	<0.1	<0.2	<1	<0.05
Analysis Date	17/03/2023	21-27/03/2023			10/03/2023	10/03/2023	23/03/2023	23/03/2023	9/03/2023	22/03/2023	
File	23031701,02	23032101,2301,2701			23031002	23031002	23032303-04	23032303-04	230309-0314	23032201-2301	
Cecelia Island_S	26/02/2023	420	4	8	10	17	110	0.9	0.3	3	0.11
Cecelia Island_B	26/02/2023	370	7	8	13	23	110	0.8	1.8	20	0.46
Edeline Island North_S	28/02/2023	410	3	8	12	17	140	1.4	0.3	3	0.06
Edeline Island North_B	28/02/2023	410	7	8	27	29	150	0.8	1.7	24	0.36
Dorothy Island_S	27/02/2023	290	<3	8	18	16	90	0.8	<0.2	4	0.06
Dorothy Island_B	27/02/2023	300	<3	9	18	20	100	0.6	0.5	13	0.20
Edeline Island South_S	2/03/2023	290	4	6	<2	15	90	1.1	0.2	2	0.09
Edeline Island South_B	2/03/2023	290	<3	6	<2	15	90	3.3	3.4	72	0.90
Mary Island_S	2/03/2023	250	<3	6	<2	14	80	0.8	<0.2	2	0.09
Mary Island_B	2/03/2023	290	6	7	5	50	180	1.2	1.0	18	0.23
Bayliss Island_S	27/02/2023	320	<3	8	14	18	120	1.1	0.4	4	0.12
Bayliss Island_B	27/02/2023	320	<3	8	14	20	100	2.4	28	600	6.5
Razor Island_S	23/02/2023	430	<3	6	<2	17	90	0.9	0.5	4	0.14
Razor Island_B	23/02/2023	430	6	7	<2	23	170	1.1	0.5	6	0.16
Koolan Island_S	24/02/2023	310	<3	8	15	18	100	0.4	0.3	5	0.10
Koolan Island_B	24/02/2023	310	6	9	16	41	180	0.6	1.5	45	0.61
Crocodile Creek_S	25/02/2023	310	<3	8	12	17	130	0.7	0.2	3	0.09
Crocodile Creek_B	25/02/2023	310	<3	9	15	87	260	0.8	0.5	27	0.35
Conilurus Island_S	26/02/2023	310	<3	8	17	17	120	0.7	<0.2	3	0.07
Conilurus Island_B	26/02/2023	310	<3	9	19	33	140	<0.1	0.8	18	0.22
Extra Crocodile Creek 2_S	25/02/2023	290	<3	8	15	17	100	0.6	<0.2	3	0.07
Extra Crocodile Creek 2_B	25/02/2023	290	<3	9	16	18	100	0.5	0.4	5	0.09
Extra Conilurus Island 2_S	25/02/2023	280	<3	9	14	18	130	0.6	0.2	5	0.10

J. Woodward

Signatory: Jamie Woodward
Date: 31/03/2023

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**Marine and Freshwater
Research Laboratory
Environmental Science**

Tel: 08 93602907 Address: 90 South St, Murdoch, WA, 6150



Accreditation Number: 10603

Accredited for compliance with ISO/IEC 17025 - Testing.
The results of the tests, calibrations and/or
measurements included in this document are traceable
to Australian/national standards.



Murdoch
UNIVERSITY

WATER QUALITY DATA

Contact: Kian Rex
Customer: Barramundi Group Australia
Address: 6 Murakami Road, Broome, WA 6725

Date of Issue: 31/03/2023

Date Received: 7/03/2023

Our Reference: MPA23-10

Your Reference: Additional Baseline Data Collection

METHOD SAMPLE CODE	Sampling Date	2300 SILICATE µg.Si/L	2000 AMMONIA µg.N/L	4100 ORTHO-P µg.P/L	2100 NO3+NO2 µg.N/L	4700 TOTAL-P µg.P/L	2700 TOTAL-N µg.N/L	3000 CHLOROPHYLL'a' µg/L	3000 PHAEOPHYTIN'a' µg/L	2540D TSS mg/L	6200 POC mg/L
Reporting Limit		<2	<3	<2	<2	<5	<50	<0.1	<0.2	<1	<0.05
Analysis Date	17/03/2023	21-27/03/2023			10/03/2023	10/03/2023	23/03/2023	23/03/2023	9/03/2023	22/03/2023	
File	23031701,02	23032101,2301,2701			23031002	23031002	23032303-04	23032303-04	230309-0314	23032201-2301	
Extra Conilurus Island 2_B	25/02/2023	440	33	20	36	1400	3700	9.3	71	2600	24
Extra Bayliss Island 2_S	28/02/2023	310	<3	8	15	17	100	0.9	0.3	2	0.07
Extra Bayliss Island 2_B	28/02/2023	310	<3	9	16	22	210	0.5	0.6	6	0.12
Strickland Bay Ref Site 1_S	2/03/2023	240	<3	5	<2	16	120	1.1	0.2	1	-
Strickland Bay Ref Site 1_B	2/03/2023	270	5	8	6	58	190	1.1	1.6	26	0.34
Strickland Bay Ref Site 2_S	2/03/2023	270	3	6	2	17	100	0.9	0.4	1	0.08
Strickland Bay Ref Site 2_B	2/03/2023	270	15	7	6	25	130	1.8	1.3	22	0.31
Strickland Bay Ref Site 3_S	2/03/2023	300	15	6	6	21	130	1.2	0.2	1	0.09
Strickland Bay Ref Site 3_B	2/03/2023	300	<3	5	<2	16	90	3.8	1.9	27	0.34
Strickland Bay Ref Site 4_S	26/02/2023	380	4	7	9	17	90	1.0	0.3	3	0.09
Strickland Bay Ref Site 4_B	26/02/2023	350	3	9	12	17	110	0.8	2.3	26	0.38
Bayliss Islands Ref Site 1_S	27/02/2023	290	<3	9	20	18	120	0.8	0.3	3	0.08
Bayliss Islands Ref Site 1_B	27/02/2023	310	4	8	19	38	190	0.9	2.4	10	0.22
Bayliss Islands Ref Site 2_S	28/02/2023	300	<3	8	17	17	100	0.7	0.5	6	0.16
Bayliss Islands Ref Site 2_B	28/02/2023	310	3	8	16	22	120	0.9	0.7	7	0.12
Dorothy Island Ref Site 1_S	27/02/2023	280	<3	9	19	18	90	0.5	<0.2	5	0.12
Dorothy Island Ref Site 1_B	27/02/2023	290	3	8	18	200	590	1.2	9.8	190	2.5
Conilurus/Crock Creek Ref 1_S	27/02/2023	290	<3	8	15	20	130	0.6	0.3	2	0.10
Conilurus/Crock Creek Ref 1_B	27/02/2023	290	5	9	18	23	120	0.3	0.9	8	0.18
Conilurus/Crock Creek Ref 2_S	25/02/2023	290	<3	8	15	17	90	0.8	0.2	3	0.08
Conilurus/Crock Creek Ref 2_B	25/02/2023	280	<3	8	16	21	110	0.6	2.9	9	0.15
Conilurus/Crock Creek Ref 3_S	25/02/2023	300	<3	7	13	18	140	0.7	<0.2	2	0.06
Conilurus/Crock Creek Ref 3_B	25/02/2023	290	3	8	14	19	110	0.5	0.6	8	0.14

J. Woodward

Signatory: Jamie Woodward
Date: 31/03/2023

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Contact: Kian Rex
Customer: Barramundi Group Australia
Address: 6 Murakami Road, Broome, WA 6725

Date of Issue: 31/03/2023

Date Received: 7/03/2023

Our Reference: MPA23-10

Your Reference: Additional Baseline Data Collection

WATER QUALITY DATA

METHOD SAMPLE CODE	Sampling Date	2300 SILICATE µg.Si/L	2000 AMMONIA µg.N/L	4100 ORTHO-P µg.P/L	2100 NO3+NO2 µg.N/L	4700 TOTAL-P µg.P/L	2700 TOTAL-N µg.N/L	3000 CHLOROPHYLL'a' µg/L	3000 PHAEOPHYTIN'a' µg/L	2540D TSS mg/L	6200 POC mg/L
Reporting Limit		<2	<3	<2	<2	<5	<50	<0.1	<0.2	<1	<0.05
Analysis Date	17/03/2023	21-27/03/2023			10/03/2023	10/03/2023	23/03/2023	23/03/2023	9/03/2023	22/03/2023	
File	23031701,02	23032101,2301,2701			23031002	23031002	23032303-04	23032303-04	230309-0314	23032201-2301	
Koolan Island Ref Site 1_S	24/02/2023	300	<3	8	16	20	420	0.6	0.2	4	0.13
Koolan Island Ref Site 1_B	24/02/2023	300	5	8	44	56	210	0.6	1.5	25	0.36
Razor Island Ref Site 1_S	26/02/2023	380	<3	7	5	16	110	0.8	0.3	3	0.13
Razor Island Ref Site 1_B	26/02/2023	410	17	8	21	92	360	1.0	5.1	95	1.1
Inner ref 1_S	2/03/2023	340	3	13	<2	16	100	0.7	<0.2	2	0.11
Inner ref 1_B	2/03/2023	320	<3	6	<2	20	130	1.9	1.0	14	0.24
Inner ref 2_S	2/03/2023	440	<3	4	<2	16	90	0.5	<0.2	2	0.14
Inner ref 2_B	2/03/2023	340	4	9	<2	44	280	1.5	1.2	7	0.17
Inner ref 3_S	2/03/2023	1000	<3	5	<2	14	110	0.5	<0.2	2	0.13
Inner ref 3_B	2/03/2023	840	3	5	<2	33	180	5.6	2.3	55	0.90
Inner ref 4_S	28/02/2023	410	4	8	14	18	110	1.1	0.3	2	0.07
Inner ref 4_B	28/02/2023	410	6	9	14	18	120	1.1	0.4	6	0.12
Inner ref 5_S	28/02/2023	370	<3	9	14	16	110	1.1	0.3	2	<0.05
Inner ref 5_B	28/02/2023	370	6	8	14	16	110	1.2	0.3	2	0.07
Inner ref 6_S	23/02/2023	300	<3	8	7	15	90	1.4	0.3	2	0.11
Inner ref 6_B	23/02/2023	300	16	8	12	19	220	1.1	0.7	5	0.17
Inner ref 7_S	26/02/2023	300	<3	9	18	64	250	0.9	0.3	2	0.10
Inner ref 7_B	26/02/2023	300	7	9	17	21	130	1.0	2.8	46	0.71
Inner ref 8_S	24/02/2023	350	<3	8	12	32	150	1.2	<0.2	2	0.11
Inner ref 8_B	24/02/2023	310	<3	8	10	16	90	0.9	0.8	7	0.16
Boundary ref 1_S	23/02/2023	340	<3	8	15	18	110	0.9	0.5	5	0.10
Boundary ref 1_B	23/02/2023	280	7	8	23	18	100	0.7	0.6	7	0.15
Boundary ref 2_S	23/02/2023	250	<3	8	17	17	100	0.8	0.5	7	0.11


Signatory: Jamie Woodward
Date: 31/03/2023

The results only apply to the sample as received and to the sample tested.
Spare test items will be held for two months unless otherwise requested.

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WATER QUALITY DATA

Contact: Kian Rex
Customer: Barramundi Group Australia
Address: 6 Murakami Road, Broome, WA 6725

Date of Issue: 31/03/2023
Date Received: 7/03/2023
Our Reference: MPA23-10
Your Reference: Additional Baseline Data Collection

METHOD SAMPLE CODE	Sampling Date	2300 SILICATE µg.Si/L	2000 AMMONIA µg.N/L	4100 ORTHO-P µg.P/L	2100 NO3+NO2 µg.N/L	4700 TOTAL-P µg.P/L	2700 TOTAL-N µg.N/L	3000 CHLOROPHYLL'a' µg/L	3000 PHAEOPHYTIN'a' µg/L	2540D TSS mg/L	6200 POC mg/L
Reporting Limit		<2	<3	<2	<2	<5	<50	<0.1	<0.2	<1	<0.05
Analysis Date		17/03/2023		21-27/03/2023		10/03/2023	10/03/2023	23/03/2023	23/03/2023	9/03/2023	22/03/2023
File		23031701,02		23032101,2301,2701		23031002	23031002	23032303-04	23032303-04	230309-0314	23032201-2301
Boundary ref 2_B	23/02/2023	260	4	9	17	18	110	0.7	0.8	7	0.17
Boundary ref 3_S	24/02/2023	410	<3	8	17	18	90	0.6	0.4	4	0.09
Boundary ref 3_B	24/02/2023	290	<3	9	18	24	130	0.6	2.7	11	0.18
Boundary ref 4_S	24/02/2023	280	<3	9	14	18	90	0.4	<0.2	3	0.06
Boundary ref 4_B	24/02/2023	290	<3	9	94	110	310	0.3	5.2	84	1.2
Boundary ref 5_S	24/02/2023	290	<3	9	14	16	90	0.4	<0.2	2	0.20
Boundary ref 5_B	24/02/2023	280	<3	9	16	48	160	0.4	1.7	30	1.2

Note: For results for compliance purposes uncertainty of measurement (MU) will sometimes affect the interpretation whether the result passes or fails the compliance limit.

Tables for measurement uncertainty are available online at www.mafri.murdoch.edu.au

POC is outside the scope of NATA accreditation

No result was obtained for POC on Strickland Bay Ref Site 1_S

Signatory: Jamie Woodward
Date: 31/03/2023

The results only apply to the sample as received and to the sample tested.
Spare test items will be held for two months unless otherwise requested.

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SEDIMENT DATA

Contact: Kian Rex

Customer: Barramundi Group Australia

Address: Unit 3, 9 Short Street, Broome, WA 6725

Date Received: 7/03/2023

Date of Issue: 3/04/2023

Our Reference: MPA23-11

Your Reference: Additional Baseline Data Collection

METHOD SAMPLE CODE	Sampling Date	2600 TKN mg.N/g Reporting Limit <0.1	4500 TOTAL P mg.P/g Reporting Limit <0.05	ICP002 Total Ext Cu mg/kg Reporting Limit <0.2	ICP002 Total Ext Zn mg/kg Reporting Limit <0.5	6200 TOC % C Reporting Limit <0.1
Analysis Date File		28/03/2023 23032801	28/03/2023 23032801	24/03/2023 23032401	24/03/2023 23032401	28/03/2023 23032801
Cecelia Island	26/02/2023	0.5	0.52	4.7	14	0.4
Edeline Island North	28/02/2023	0.7	0.43	6.9	19	0.5
Dorothy Island	27/02/2023	1.0	0.46	8.5	21	0.8
Edeline Island South	2/03/2023	0.6	0.37	11	28	0.8
Mary Island	2/03/2023	0.8	0.45	8.7	26	0.6
Bayliss Island	27/02/2023	0.6	0.45	5.3	15	0.4
Razor Island	23/02/2023	0.5	0.41	5.1	18	0.3
Koolan Island	24/02/2023	0.5	0.42	5.5	14	0.4
Crocodile Creek	25/02/2023	0.8	0.44	8.3	21	0.6
Conilurus Island	26/02/2023	1.0	0.44	9.1	23	0.8
Extra Crocodile Creek 2	25/02/2023	0.9	0.47	8.7	23	0.6
Extra Conilurus Island 2	25/02/2023	0.9	0.53	8.0	22	0.6
Extra Bayliss Island 2	28/02/2023	0.9	0.44	9.0	23	0.6
Strickland Bay Ref Site 1	2/03/2023	0.9	0.49	8.5	26	0.6
Strickland Bay Ref Site 2	2/03/2023	1.1	0.41	11	27	0.7
Strickland Bay Ref Site 3	2/03/2023	1.1	0.41	12	32	0.8
Strickland Bay Ref Site 4	26/02/2023	0.3	0.72	2.9	11	0.2
Bayliss Islands Ref Site 1	27/02/2023	0.6	0.35	16	32	0.7
Bayliss Islands Ref Site 2	28/02/2023	0.8	0.38	6.1	17	0.5


Signatory: Jamie Woodward
Date: 3/04/2023

The results only apply to the sample as received and to the sample tested.
Spare test items will be held for two months unless otherwise requested.



**Marine and Freshwater
Research Laboratory
Environmental Science**

Tel: 08 93602907 Address: 90 South St, Murdoch, WA, 6150



Accreditation Number: 10603

Accredited for compliance with ISO/IEC 17025 - Testing.
The results of the tests, calibrations and/or
measurements included in this document are traceable
to Australian/national standards.



Murdoch
UNIVERSITY

SEDIMENT DATA

Contact: Kian Rex

Customer: Barramundi Group Australia

Address: Unit 3, 9 Short Street, Broome, WA 6725

Date Received: 7/03/2023

Date of Issue: 3/04/2023

Our Reference: MPA23-11

Your Reference: Additional Baseline Data Collection

METHOD SAMPLE CODE	Sampling Date	2600 TKN mg.N/g	4500 TOTAL P mg.P/g	ICP002 Total Ext Cu mg/kg	ICP002 Total Ext Zn mg/kg	6200 TOC % C
Reporting Limit		<0.1	<0.05	<0.2	<0.5	<0.1
Analysis Date File		28/03/2023 23032801	28/03/2023 23032801	24/03/2023 23032401	24/03/2023 23032401	28/03/2023 23032801
Dorothy Island Ref Site 1	27/02/2023	1.3	0.45	10	26	0.9
Conilurus/Croc Creek Ref 1	27/03/2023	0.8	0.39	6.1	16	0.5
Conilurus/Croc Creek Ref 2	25/02/2023	0.9	0.45	7.0	18	0.5
Conilurus/Croc Creek Ref 3	25/02/2023	0.7	0.44	5.4	14	0.4
Koolan Island Ref Site 1	24/02/2023	0.7	0.41	6.5	17	0.5
Razor Island Ref Site 1	26/02/2023	0.7	0.43	7.8	24	0.5

Note: For results for compliance purposes uncertainty of measurement (MU) will sometimes affect the interpretation whether the result passes or fails the compliance limit.

Tables for measurement uncertainty are available online at www.mafri.murdoch.edu.au


Signatory: Jamie Woodward
Date: 3/04/2023

The results only apply to the sample as received and to the sample tested.
Spare test items will be held for two months unless otherwise requested.

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**Marine and Freshwater
Research Laboratory
Environmental Science**

Tel: 08 93602907 Address: 90 South St, Murdoch, WA, 6150



Accreditation Number: 10603

Accredited for compliance with ISO/IEC 17025 - Testing.
The results of the tests, calibrations and/or
measurements included in this document are traceable
to Australian/national standards.



WATER QUALITY DATA

Contact: Kian Rex

Customer: Barramundi Group Australia

Address: Unit 3, 9 Short Street, Broome, WA 6725

Date of Issue: 11/05/2023

Date Received: 27/03/2023

Our Reference: MPA23-12 v2

Your Reference: Additional Baseline Data Collection

METHOD SAMPLE CODE	Sampling Date	2300 SILICATE µg.Si/L	2000 AMMONIA µg.N/L	4100 ORTHO-P µg.P/L	2100 NO3+NO2 µg.N/L	4700 TOTAL-P µg.P/L	2700 TOTAL-N µg.N/L	3000 CHLOROPHYLL'a' µg/L	3000 PHAEOPHYTIN'a' µg/L	2540D TSS mg/L	6200 POC mg/L
Reporting Limit		<2	<3	<2	<2	<5	<50	<0.1	<0.2	<1	<0.05
Analysis Date	4/04/2023	3-11/04/2023	3-11/04/2023	3-11/04/2023	28/03/2023-27/04/2023	28/03/2023-27/04/2023	12/04/2023	12/04/2023	28/03/2023	5-11/04/2023	
File	23040401-02	23040301-02-1101	23032802-040501-2702	23041201	23041201	23032801	23040501-0601-1101				
Cecelia Island_S	17/03/2023	160	<3	6	<2	13	130	0.4	<0.2	1	0.09
Cecelia Island_B	17/03/2023	240	6	7	2	21	90	1.0	2.7	15	0.32
Edeline Island North_S	17/03/2023	170	<3	6	<2	14	70	0.3	<0.2	2	0.13
Edeline Island North_B	17/03/2023	170	3	7	4	20	90	1.0	1.2	14	0.30
Dorothy Island_S	17/03/2023	150	<3	7	3	13	70	0.3	<0.2	1	0.09
Dorothy Island_B	17/03/2023	140	4	8	11	22	100	0.7	0.9	4	0.13
Edeline Island South_S	17/03/2023	210	<3	6	<2	13	80	0.1	<0.2	1	0.07
Edeline Island South_B	17/03/2023	200	<3	7	<2	38	130	2.3	1.7	10	0.23
Mary Island_S	17/03/2023	210	<3	6	<2	13	120	0.2	<0.2	2	0.10
Mary Island_B	17/03/2023	210	<3	7	<2	22	100	1.0	1.0	6	0.20
Bayliss Island_S	17/03/2023	150	<3	7	<2	14	80	0.5	0.2	2	0.14
Bayliss Island_B	17/03/2023	150	<3	7	3	44	140	0.5	2.5	5	0.14
Razor Island_S	15/03/2023	220	<3	5	3	14	90	0.3	<0.2	2	0.15
Razor Island_B	15/03/2023	210	4	7	2	19	130	0.7	0.3	7	0.20
Koolan Island_S	16/03/2023	210	<3	8	<2	14	70	0.4	<0.2	1	0.09
Koolan Island_B	16/03/2023	180	5	8	16	16	80	0.5	4.4	4	0.18
Crocodile Creek_S	16/03/2023	180	<3	7	26	14	100	0.2	<0.2	2	0.10
Crocodile Creek_B	16/03/2023	160	<3	7	<2	16	130	0.6	0.3	3	0.16
Conilurus Island_S	16/03/2023	170	<3	7	<2	14	80	0.2	<0.2	1	0.11
Conilurus Island_B	16/03/2023	150	5	7	3	18	90	0.5	0.6	12	0.26
Extra Crocodile Creek 2_S	16/03/2023	170	<3	7	<2	13	60	0.3	<0.2	1	0.10
Extra Crocodile Creek 2_B	16/03/2023	160	3	7	<2	19	80	0.6	0.8	8	0.26
Extra Conilurus Island 2_S	16/03/2023	180	4	8	4	14	80	0.3	<0.2	1	0.14
Extra Conilurus Island 2_B	16/03/2023	160	4	7	62	15	90	0.6	0.2	2	0.13
Extra Bayliss Island 2_S	17/03/2023	150	<3	7	<2	14	80	0.4	<0.2	3	0.12
Extra Bayliss Island 2_B	17/03/2023	150	3	7	5	21	100	0.7	1.3	15	0.32
Strickland Bay Ref Site 1_S	17/03/2023	220	<3	7	<2	14	80	0.2	<0.2	1	0.10

Vaughan Gregory

Signatory: Vaughan Gregory
Date: 11/05/2023

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Spare test items will be held for two months unless otherwise requested.

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WATER QUALITY DATA

Contact: Kian Rex

Customer: Barramundi Group Australia

Address: Unit 3, 9 Short Street, Broome, WA 6725

Date of Issue: 11/05/2023

Date Received: 27/03/2023

Our Reference: MPA23-12 v2

Your Reference: Additional Baseline Data Collection

METHOD SAMPLE CODE	Sampling Date	2300 SILICATE µg.Si/L	2000 AMMONIA µg.N/L	4100 ORTHO-P µg.P/L	2100 NO3+NO2 µg.N/L	4700 TOTAL-P µg.P/L	2700 TOTAL-N µg.N/L	3000 CHLOROPHYLL'a' µg/L	3000 PHAEOPHYTIN'a' µg/L	2540D TSS mg/L	6200 POC mg/L
Reporting Limit		<2	<3	<2	<2	<5	<50	<0.1	<0.2	<1	<0.05
Analysis Date	4/04/2023	3-11/04/2023	3-11/04/2023	3-11/04/2023	28/03/2023-27/04/2023	28/03/2023-27/04/2023	12/04/2023	12/04/2023	28/03/2023	5-11/04/2023	
File	23040401-02	23040301-02-1101	23040301-02-1101	23040301-02-1101	23032802-040501-2702	23032802-040501-2702	23041201	23041201	23032801	23040501-0601-1101	
Strickland Bay Ref Site 1_B	17/03/2023	210	4	7	<2	34	140	1.0	0.7	8	0.25
Strickland Bay Ref Site 2_S	17/03/2023	200	<3	7	<2	14	80	0.1	<0.2	<1	0.08
Strickland Bay Ref Site 2_B	17/03/2023	190	3	6	<2	17	150	0.9	0.5	8	0.22
Strickland Bay Ref Site 3_S	17/03/2023	180	<3	6	<2	14	80	0.2	<0.2	1	0.08
Strickland Bay Ref Site 3_B	17/03/2023	170	<3	7	<2	15	90	0.8	0.2	5	0.20
Strickland Bay Ref Site 4_S	17/03/2023	160	<3	7	<2	14	80	0.3	<0.2	1	0.09
Strickland Bay Ref Site 4_B	17/03/2023	160	<3	7	3	20	120	0.5	1.5	24	0.41
Bayliss Islands Ref Site 1_S	17/03/2023	140	<3	7	<2	14	70	0.6	0.2	2	0.10
Bayliss Islands Ref Site 1_B	17/03/2023	150	<3	7	<2	18	80	0.7	0.9	6	0.16
Bayliss Islands Ref Site 2_S	17/03/2023	150	<3	8	4	15	80	0.5	0.4	2	0.11
Bayliss Islands Ref Site 2_B	17/03/2023	150	4	8	2	15	110	0.5	0.3	3	0.13
Dorothy Island Ref Site 1_S	17/03/2023	150	<3	7	<2	13	84	0.3	<0.2	1	0.08
Dorothy Island Ref Site 1_B	17/03/2023	200	7	9	110	110	360	1.8	16	210	3.5
Conilurus/Crock Creek Ref 1_S	16/03/2023	130	<3	7	3	14	70	0.3	<0.2	1	0.12
Conilurus/Crock Creek Ref 1_B	16/03/2023	130	<3	7	<2	16	80	0.6	0.4	4	0.16
Conilurus/Crock Creek Ref 2_S	16/03/2023	250	<3	7	2	14	90	0.3	<0.2	1	0.13
Conilurus/Crock Creek Ref 2_B	16/03/2023	140	5	7	<2	16	130	0.6	0.3	2	0.12
Conilurus/Crock Creek Ref 3_S	16/03/2023	160	<3	7	<2	13	70	0.3	<0.2	2	0.12
Conilurus/Crock Creek Ref 3_B	16/03/2023	150	<3	7	<2	18	100	0.6	0.5	9	0.24
Koolan Island Ref Site 1_S	16/03/2023	230	<3	8	<2	14	80	0.3	<0.2	<1	0.12
Koolan Island Ref Site 1_B	16/03/2023	180	<3	8	3	24	100	0.4	1.0	9	0.32
Razor Island Ref Site 1_S	18/03/2023	220	<3	6	<2	13	70	0.2	<0.2	2	0.10
Razor Island Ref Site 1_B	18/03/2023	200	4	6	<2	16	80	0.6	0.3	5	0.16
Inner ref 1_S	18/03/2023	200	<3	6	<2	14	80	0.3	<0.2	2	0.15
Inner ref 1_B	18/03/2023	230	3	7	4	20	100	0.5	<0.2	5	0.20
Inner ref 2_S	17/03/2023	280	<3	6	<2	16	80	0.3	<0.2	2	0.15
Inner ref 2_B	17/03/2023	230	3	6	<2	18	90	1.0	0.3	9	0.31



Signatory: Vaughan Gregory
Date: 11/05/2023

The results only apply to the sample as received and to the sample tested.
Spare test items will be held for two months unless otherwise requested.

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WATER QUALITY DATA

Contact: Kian Rex

Customer: Barramundi Group Australia

Address: Unit 3, 9 Short Street, Broome, WA 6725

Date of Issue: 11/05/2023

Date Received: 27/03/2023

Our Reference: MPA23-12 v2

Your Reference: Additional Baseline Data Collection

METHOD SAMPLE CODE	Sampling Date	2300 SILICATE µg.Si/L	2000 AMMONIA µg.N/L	4100 ORTHO-P µg.P/L	2100 NO3+NO2 µg.N/L	4700 TOTAL-P µg.P/L	2700 TOTAL-N µg.N/L	3000 CHLOROPHYLL'a' µg/L	3000 PHAEOPHYTIN'a' µg/L	2540D TSS mg/L	6200 POC mg/L
Reporting Limit		<2	<3	<2	<2	<5	<50	<0.1	<0.2	<1	<0.05
Analysis Date		4/04/2023	3-11/04/2023	3-11/04/2023	3-11/04/2023	28/03/2023-27/04/2023	28/03/2023-27/04/2023	12/04/2023	12/04/2023	28/03/2023	5-11/04/2023
File		23040401-02	23040301-02-1101	23040301-02-1101	23040301-02-1101	23032802-040501-2702	23032802-040501-2702	23041201	23041201	23032801	23040501-0601-1101
Inner ref 3_S	17/03/2023	540	<3	8	<2	16	100	0.5	<0.2	3	0.21
Inner ref 3_B	17/03/2023	540	3	7	<2	19	100	0.7	0.2	6	0.27
Inner ref 4_S	17/03/2023	170	<3	7	2	15	70	0.7	<0.2	2	0.15
Inner ref 4_B	17/03/2023	170	7	7	3	24	120	0.8	0.7	10	0.26
Inner ref 5_S	17/03/2023	190	<3	7	<2	15	70	0.6	<0.2	2	0.13
Inner ref 5_B	17/03/2023	190	6	7	3	16	80	0.8	0.7	3	0.13
Inner ref 6_S	17/03/2023	160	<3	7	2	16	80	0.4	<0.2	2	0.10
Inner ref 6_B	17/03/2023	160	3	8	<2	15	70	0.4	0.3	11	0.26
Inner ref 7_S	16/03/2023	170	<3	7	<2	14	70	0.2	<0.2	1	0.12
Inner ref 7_B	16/03/2023	150	<3	8	7	16	90	0.7	0.4	3	0.15
Inner ref 8_S	16/03/2023	180	<3	7	<2	14	70	0.2	<0.2	1	0.13
Inner ref 8_B	16/03/2023	170	4	7	140	15	90	0.5	0.5	3	0.13
Boundary ref 1_S	16/03/2023	170	<3	7	3	14	70	0.6	0.2	2	0.10
Boundary ref 1_B	16/03/2023	160	4	7	6	31	140	0.8	1.5	11	0.25
Boundary ref 2_S	16/03/2023	150	<3	8	5	16	90	0.6	0.4	3	0.10
Boundary ref 2_B	16/03/2023	140	3	8	7	16	90	0.7	0.5	4	0.13
Boundary ref 3_S	16/03/2023	120	<3	6	3	14	80	0.6	<0.2	2	0.09
Boundary ref 3_B	16/03/2023	130	<3	7	5	16	80	0.5	2.9	2	0.11
Boundary ref 4_S	16/03/2023	180	<3	7	<2	14	70	0.2	<0.2	1	0.08
Boundary ref 4_B	16/03/2023	150	<3	7	4	18	100	0.8	0.6	6	0.19
Boundary ref 5_S	16/03/2023	220	<3	7	<2	14	80	0.2	<0.2	<1	0.07
Boundary ref 5_B	16/03/2023	170	3	9	12	16	80	0.7	0.4	2	0.11
Inner ref 8_B SPARE	16/03/2023	170	6	8	220	14	90				

Note: For results for compliance purposes uncertainty of measurement (MU) will sometimes affect the interpretation whether the result passes or fails the compliance limit.

Tables for measurement uncertainty are available online at www.mafri.murdoch.edu.au

This report replaces MPA23-12 issued on 28/04/2023 due to Silicate data not being reported

Signatory: Vaughan Gregory
Date: 11/05/2023

The results only apply to the sample as received and to the sample tested.
Spare test items will be held for two months unless otherwise requested.

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WATER QUALITY DATA

Contact: Kian Rex

Customer: Barramundi Group Australia

Address: Unit 3, 9 Short Street, Broome, WA 6725

Date of Issue: 2/05/2023

Date Received: 3/04/2023

Our Reference: MPA23-13

Your Reference: Additional Baseline Data Collection

METHOD SAMPLE CODE	Sampling Date	2300 SILICATE µg.Si/L	2000 AMMONIA µg.N/L	4100 ORTHO-P µg.P/L	2100 NO3+NO2 µg.N/L	4700 TOTAL-P µg.P/L	2700 TOTAL-N µg.N/L	3000 CHLOROPHYLL'a' µg/L	3000 PHAEOPHYTIN'a' µg/L	2540D TSS mg/L	6200 POC mg/L
Reporting Limit		<2	<3	<2	<2	<5	<50	<0.1	<0.2	<1	<0.05
Analysis Date File		18/04/2023 23041801.02	17/04/2023 23041701.02,2001	17/04/2023 23041701.02,2001	17/04/2023 23041701.02,2001	5/04/2023 23040501	5/04/2023 23040501-1901	18/04/2023 23041801-2101	18/04/2023 23041801-2101	5/04/2023 23040501	13-19/04/2023 23041301-1901
Cecelia Island_S	23/03/2023	230	<3	7	<2	15	80	0.6	<0.2	3	0.10
Cecelia Island_B	23/03/2023	230	6	7	20	18	90	0.7	0.3	10	0.21
Edeline Island North_S	23/03/2023	270	<3	7	<2	15	80	0.7	<0.2	3	0.10
Edeline Island North_B	23/03/2023	280	<3	9	4	140	330	0.8	9.7	9	0.22
Dorothy Island_S	23/03/2023	240	<3	8	8	16	80	0.7	0.3	4	0.10
Dorothy Island_B	23/03/2023	980	<3	6	7	32	130	0.7	3.1	52	0.82
Edeline Island South_S	23/03/2023	300	<3	7	3	16	90	0.5	<0.2	3	0.11
Edeline Island South_B	23/03/2023	300	<3	7	4	17	100	0.8	0.4	10	0.19
Mary Island_S	23/03/2023	270	<3	7	<2	15	80	0.5	<0.2	3	0.08
Mary Island_B	23/03/2023	250	<3	8	6	36	130	0.8	1.7	36	0.50
Bayliss Island_S	23/03/2023	300	<3	8	6	17	80	0.9	0.3	4	0.10
Bayliss Island_B	23/03/2023	240	3	8	8	18	100	0.9	0.7	12	0.20
Razor Island_S	23/03/2023	250	<3	7	2	17	90	0.5	0.3	5	0.14
Razor Island_B	23/03/2023	250	6	8	3	21	110	0.6	0.4	11	0.25
Koolan Island_S	24/03/2023	250	<3	8	8	16	80	0.5	0.5	7	0.13
Koolan Island_B	24/03/2023	260	<3	9	11	93	260	0.5	6.6	180	2.0
Crocodile Creek_S	24/03/2023	250	<3	8	6	16	100	0.5	<0.2	2	0.08
Crocodile Creek_B	24/03/2023	250	<3	9	9	46	150	0.6	1.8	40	0.53
Conilurus Island_S	24/03/2023	240	<3	8	6	16	100	0.6	<0.2	2	0.10
Conilurus Island_B	24/03/2023	300	<3	8	8	24	110	0.7	3.3	47	0.81
Extra Crocodile Creek 2_S	24/03/2023	250	<3	8	8	16	80	0.4	<0.2	3	0.07
Extra Crocodile Creek 2_B	24/03/2023	250	<3	8	13	21	140	0.7	1.0	12	0.20
Extra Conilurus Island 2_S	24/03/2023	500	<3	8	6	16	80	0.6	0.2	3	0.11
Extra Conilurus Island 2_B	24/03/2023	250	<3	8	7	35	140	0.7	1.5	9	0.19
Extra Bayliss Island 2_S	23/03/2023	220	<3	7	11	16	100	0.6	0.2	3	0.10

Signatory: Jamie Woodward
Date: 2/05/2023

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Spare test items will be held for two months unless otherwise requested.

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**Marine and Freshwater
Research Laboratory
Environmental Science**

Tel: 08 93602907 Address: 90 South St, Murdoch, WA, 6150



Accreditation Number: 10603

Accredited for compliance with ISO/IEC 17025 - Testing.
The results of the tests, calibrations and/or
measurements included in this document are traceable
to Australian/national standards.



Murdoch
UNIVERSITY

WATER QUALITY DATA

Contact: Kian Rex

Customer: Barramundi Group Australia

Address: Unit 3, 9 Short Street, Broome, WA 6725

Date of Issue: 2/05/2023

Date Received: 3/04/2023

Our Reference: MPA23-13

Your Reference: Additional Baseline Data Collection

METHOD SAMPLE CODE	Sampling Date	2300 SILICATE µg.Si/L	2000 AMMONIA µg.N/L	4100 ORTHO-P µg.P/L	2100 NO3+NO2 µg.N/L	4700 TOTAL-P µg.P/L	2700 TOTAL-N µg.N/L	3000 CHLOROPHYLL'a' µg/L	3000 PHAEOPHYTIN'a' µg/L	2540D TSS mg/L	6200 POC mg/L
Reporting Limit		<2	<3	<2	<2	<5	<50	<0.1	<0.2	<1	<0.05
Analysis Date File		18/04/2023 23041801.02	17/04/2023 23041701.02,2001	17/04/2023 23041701.02,2001	17/04/2023 23041701.02,2001	5/04/2023 23040501	5/04/2023 23040501-1901	18/04/2023 23041801-2101	18/04/2023 23041801-2101	5/04/2023 23040501	13-19/04/2023 23041301-1901
Extra Bayliss Island 2_B	23/03/2023	230	<3	9	8	38	140	0.7	2.1	44	0.73
Strickland Bay Ref Site 1_S	23/03/2023	260	<3	7	12	14	90	0.5	<0.2	3	0.12
Strickland Bay Ref Site 1_B	23/03/2023	260	3	9	46	130	360	1.2	6.7	7	0.19
Strickland Bay Ref Site 2_S	23/03/2023	280	<3	7	<2	16	70	0.6	<0.2	3	0.12
Strickland Bay Ref Site 2_B	23/03/2023	280	<3	7	41	35	140	0.9	0.9	15	0.30
Strickland Bay Ref Site 3_S	23/03/2023	250	<3	7	<2	15	100	0.7	<0.2	3	0.10
Strickland Bay Ref Site 3_B	23/03/2023	280	<3	7	2	59	190	1.0	2.5	77	1.1
Strickland Bay Ref Site 4_S	23/03/2023	240	<3	8	8	16	90	0.7	0.2	4	0.09
Strickland Bay Ref Site 4_B	23/03/2023	240	5	8	8	17	100	0.9	0.4	8	0.16
Bayliss Islands Ref Site 1_S	25/03/2023	260	3	8	14	19	110	0.6	0.7	9	0.14
Bayliss Islands Ref Site 1_B	25/03/2023	240	4	9	13	18	90	0.6	1.5	10	0.18
Bayliss Islands Ref Site 2_S	23/03/2023	240	<3	7	18	17	100	1.0	1.2	5	0.12
Bayliss Islands Ref Site 2_B	23/03/2023	240	3	8	7	21	100	0.9	0.4	11	0.23
Dorothy Island Ref Site 1_S	24/03/2023	240	<3	8	8	15	80	0.6	0.3	4	0.10
Dorothy Island Ref Site 1_B	24/03/2023	240	4	8	10	20	90	0.6	1.0	11	0.22
Conilurus/Crock Creek Ref 1_S	24/03/2023	240	<3	8	6	15	80	0.7	<0.2	2	0.12
Conilurus/Crock Creek Ref 1_B	24/03/2023	310	<3	8	7	31	170	0.8	1.8	60	0.94
Conilurus/Crock Creek Ref 2_S	24/03/2023	230	<3	8	7	16	80	0.6	<0.2	3	0.11
Conilurus/Crock Creek Ref 2_B	24/03/2023	240	<3	8	9	26	120	0.7	1.5	30	0.41
Conilurus/Crock Creek Ref 3_S	24/03/2023	240	<3	7	6	16	70	0.5	<0.2	2	0.09
Conilurus/Crock Creek Ref 3_B	24/03/2023	270	<3	8	8	75	230	0.8	7.4	140	1.9
Koolan Island Ref Site 1_S	24/03/2023	250	<3	8	11	16	80	0.6	0.3	6	0.12
Koolan Island Ref Site 1_B	24/03/2023	250	<3	7	12	47	160	0.6	3.9	53	0.77
Razor Island Ref Site 1_S	23/03/2023	250	<3	6	<2	16	80	0.7	0.3	7	0.18
Razor Island Ref Site 1_B	23/03/2023	290	5	9	<2	160	380	0.9	10	240	4.0

Signatory: Jamie Woodward
Date: 2/05/2023

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WATER QUALITY DATA

Contact: Kian Rex

Customer: Barramundi Group Australia

Address: Unit 3, 9 Short Street, Broome, WA 6725

Date of Issue: 2/05/2023

Date Received: 3/04/2023

Our Reference: MPA23-13

Your Reference: Additional Baseline Data Collection

METHOD SAMPLE CODE	Sampling Date	2300 SILICATE µg.Si/L	2000 AMMONIA µg.N/L	4100 ORTHO-P µg.P/L	2100 NO3+NO2 µg.N/L	4700 TOTAL-P µg.P/L	2700 TOTAL-N µg.N/L	3000 CHLOROPHYLL'a' µg/L	3000 PHAEOPHYTIN'a' µg/L	2540D TSS mg/L	6200 POC mg/L
Reporting Limit		<2	<3	<2	<2	<5	<50	<0.1	<0.2	<1	<0.05
Analysis Date File		18/04/2023 23041801.02	17/04/2023 23041701.02,2001	17/04/2023 23041701.02,2001	17/04/2023 23041701.02,2001	5/04/2023 23040501	5/04/2023 23040501-1901	18/04/2023 23041801-2101	18/04/2023 23041801-2101	5/04/2023 23040501	13-19/04/2023 23041301-1901
Inner ref 1_S	23/03/2023	340	<3	7	<2	20	100	1.2	0.4	12	0.34
Inner ref 1_B	23/03/2023	350	3	7	4	30	140	1.6	1.1	20	0.50
Inner ref 2_S	23/03/2023	330	<3	7	<2	16	80	0.5	<0.2	3	0.15
Inner ref 2_B	23/03/2023	320	4	8	6	23	100	0.8	0.4	8	0.18
Inner ref 3_S	23/03/2023	470	<3	8	<2	20	90	1.2	0.3	6	0.22
Inner ref 3_B	23/03/2023	420	<3	8	<2	20	100	1.3	0.4	8	0.25
Inner ref 4_S	23/03/2023	250	<3	7	3	18	90	0.9	0.5	7	0.16
Inner ref 4_B	23/03/2023	250	4	7	4	20	90	0.7	0.5	9	0.19
Inner ref 5_S	23/03/2023	240	<3	8	3	16	80	0.7	0.4	5	0.12
Inner ref 5_B	23/03/2023	240	<3	7	4	20	90	0.7	0.5	8	0.24
Inner ref 6_S	23/03/2023	240	<3	7	2	16	70	1.1	0.3	4	0.12
Inner ref 6_B	23/03/2023	250	<3	7	3	20	140	1.1	0.4	7	0.17
Inner ref 7_S	24/03/2023	260	<3	7	7	17	80	1.1	0.3	5	0.22
Inner ref 7_B	24/03/2023	260	<3	8	5	19	100	1.1	0.4	7	0.29
Inner ref 8_S	24/03/2023	240	<3	8	5	16	80	0.8	2.0	7	0.20
Inner ref 8_B	24/03/2023	250	<3	8	17	22	90	0.5	<0.2	7	0.15
Boundary ref 1_S	25/03/2023	250	<3	8	12	18	100	0.7	0.6	2	0.11
Boundary ref 1_B	25/03/2023	350	5	9	120	20	120	0.7	1.0	39	0.52
Boundary ref 2_S	25/03/2023	440	5	8	14	17	100	0.6	0.4	6	0.12
Boundary ref 2_B	25/03/2023	630	3	8	14	29	130	0.5	0.5	13	0.26
Boundary ref 3_S	24/03/2023	250	<3	8	10	16	140	0.7	0.2	3	0.10
Boundary ref 3_B	24/03/2023	220	<3	8	12	37	140	0.4	0.7	10	0.21
Boundary ref 4_S	24/03/2023	240	<3	9	10	17	90	0.5	0.2	3	0.11
Boundary ref 4_B	24/03/2023	240	<3	8	11	38	140	0.4	2.3	34	0.60
Boundary ref 5_S	24/03/2023	250	<3	9	10	17	80	0.5	<0.2	2	0.08

J. Woodward

Signatory: Jamie Woodward
Date: 2/05/2023

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**Marine and Freshwater
Research Laboratory
Environmental Science**

Tel: 08 93602907 Address: 90 South St, Murdoch, WA, 6150



Accreditation Number: 10603

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The results of the tests, calibrations and/or
measurements included in this document are traceable
to Australian/national standards.



Murdoch
UNIVERSITY

WATER QUALITY DATA

Contact: Kian Rex

Customer: Barramundi Group Australia

Address: Unit 3, 9 Short Street, Broome, WA 6725

Date of Issue: 2/05/2023

Date Received: 3/04/2023

Our Reference: MPA23-13

Your Reference: Additional Baseline Data Collection

METHOD SAMPLE CODE	Sampling Date	2300 SILICATE µg.Si/L	2000 AMMONIA µg.N/L	4100 ORTHO-P µg.P/L	2100 NO3+NO2 µg.N/L	4700 TOTAL-P µg.P/L	2700 TOTAL-N µg.N/L	3000 CHLOROPHYLL'a' µg/L	3000 PHAEOPHYTIN'a' µg/L	2540D TSS mg/L	6200 POC mg/L
Reporting Limit		<2	<3	<2	<2	<5	<50	<0.1	<0.2	<1	<0.05
Analysis Date		18/04/2023	17/04/2023	17/04/2023	17/04/2023	5/04/2023	5/04/2023	18/04/2023	18/04/2023	5/04/2023	13-19/04/2023
File		23041801,02	23041701,02,2001	23041701,02,2001	23041701,02,2001	23040501	23040501-1901	23041801-2101	23041801-2101	23040501	23041301-1901
Boundary ref 5_B	24/03/2023	240	<3	7	9	38	130	0.4	4.1	55	1.0

Note: For results for compliance purposes uncertainty of measurement (MU) will sometimes affect the interpretation whether the result passes or fails the compliance limit.

Tables for measurement uncertainty are available online at www.mafrl.murdoch.edu.au

Signatory: Jamie Woodward
Date: 2/05/2023

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WATER QUALITY DATA

Contact: Kian Rex

Customer: Barramundi Group Australia

Address: Unit 3, 9 Short Street, Broome, WA 6725

Date of Issue: 10/05/2023

Date Received: 17/04/2023

Our Reference: MPA23-14

Your Reference: Additional Baseline Data Collection

METHOD SAMPLE CODE	Sampling Date	2300 SILICATE µg.Si/L	2000 AMMONIA µg.N/L	4100 ORTHO-P µg.P/L	2100 NO3+NO2 µg.N/L	4700 TOTAL-P µg.P/L	2700 TOTAL-N µg.N/L	3000 CHLOROPHYLL'a' µg/L	3000 PHAEOPHYTIN'a' µg/L	2540D TSS mg/L	6200 POC mg/L
Reporting Limit		<2	<3	<2	<2	<5	<50	<0.1	<0.2	<1	<0.05
Analysis Date File		2/05/2023 23050201_02	20/04/2023 23042001	20/04/2023 23042001	20/04/2023 23042001	19/04/2023 23041901/2701	19/04/2023 23041901/2701	2/05/2023 23050201-0301	2/05/2023 23050201-0301	19/04/2023 23041901	20/04/2023 23042001-2701
Cecelia Island_S	6/04/2023	340	<3	9	9	14	80	0.9	0.3	3	0.09
Cecelia Island_B	6/04/2023	330	4	9	12	24	120	0.8	1.7	16	0.26
Edeline Island North_S	6/04/2023	410	<3	9	10	16	80	0.9	0.3	1	0.08
Edeline Island North_B	6/04/2023	380	5	9	31	43	150	0.9	2.6	60	0.76
Dorothy Island_S	7/04/2023	300	<3	9	13	18	110	0.6	0.3	3	0.09
Dorothy Island_B	7/04/2023	380	4	10	17	63	210	0.5	2.9	44	0.72
Edeline Island South_S	6/04/2023	420	<3	8	<2	15	80	0.6	<0.2	2	0.14
Edeline Island South_B	6/04/2023	410	5	10	5	150	360	1.3	8.9	230	3.5
Mary Island_S	6/04/2023	320	3	9	12	15	80	0.7	0.3	4	0.09
Mary Island_B	6/04/2023	340	11	10	13	55	180	1.0	3.1	58	0.71
Bayliss Island_S	6/04/2023	310	4	7	13	16	80	1.2	0.3	4	0.12
Bayliss Island_B	6/04/2023	310	4	8	15	26	110	1.0	0.9	8	0.16
Razor Island_S	5/04/2023	370	<3	6	<2	15	80	0.7	<0.2	2	0.12
Razor Island_B	5/04/2023	360	4	8	6	29	120	0.8	0.7	4	0.14
Koolan Island_S	7/04/2023	320	<3	7	9	18	90	0.5	0.3	3	0.06
Koolan Island_B	7/04/2023	320	4	8	10	47	160	0.6	1.4	19	0.26
Crocodile Creek_S	7/04/2023	310	<3	7	11	16	90	0.5	<0.2	2	0.06
Crocodile Creek_B	7/04/2023	320	5	8	12	49	150	0.8	2.3	47	0.70
Conilurus Island_S	7/04/2023	310	<3	8	11	17	90	0.8	0.2	4	0.16
Conilurus Island_B	7/04/2023	320	<3	8	11	44	150	1.0	4.1	52	0.68
Extra Crocodile Creek 2_S	7/04/2023	330	5	8	10	16	80	0.4	<0.2	3	0.11
Extra Crocodile Creek 2_B	7/04/2023	320	<3	8	11	41	140	0.7	2.4	47	0.62
Extra Conilurus Island 2_S	7/04/2023	310	<3	7	9	17	80	0.7	0.3	3	0.09
Extra Conilurus Island 2_B	7/04/2023	310	6	9	14	25	110	0.9	1.3	15	0.22
Extra Bayliss Island 2_S	6/04/2023	310	<3	8	9	16	90	1.3	0.2	3	0.11

J. Woodward

Signatory: Jamie Woodward
Date: 10/05/2023

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WATER QUALITY DATA

Contact: Kian Rex

Customer: Barramundi Group Australia

Address: Unit 3, 9 Short Street, Broome, WA 6725

Date of Issue: 10/05/2023

Date Received: 17/04/2023

Our Reference: MPA23-14

Your Reference: Additional Baseline Data Collection

METHOD SAMPLE CODE	Sampling Date	2300 SILICATE µg.Si/L	2000 AMMONIA µg.N/L	4100 ORTHO-P µg.P/L	2100 NO3+NO2 µg.N/L	4700 TOTAL-P µg.P/L	2700 TOTAL-N µg.N/L	3000 CHLOROPHYLL'a' µg/L	3000 PHAEOPHYTIN'a' µg/L	2540D TSS mg/L	6200 POC mg/L
Reporting Limit		<2	<3	<2	<2	<5	<50	<0.1	<0.2	<1	<0.05
Analysis Date File		2/05/2023 23050201,02	20/04/2023 23042001	20/04/2023 23042001	20/04/2023 23042001	19/04/2023 23041901/2701	19/04/2023 23041901/2701	2/05/2023 23050201-0301	2/05/2023 23050201-0301	19/04/2023 23041901	20/04/2023 23042001-2701
Extra Bayliss Island 2_B	6/04/2023	300	4	9	13	56	180	1.3	1.4	24	0.34
Strickland Bay Ref Site 1_S	6/04/2023	300	4	9	16	16	90	0.6	0.4	3	0.07
Strickland Bay Ref Site 1_B	6/04/2023	310	5	9	13	52	240	0.7	2.5	51	0.77
Strickland Bay Ref Site 2_S	6/04/2023	380	<3	8	6	16	90	0.7	0.3	2	0.10
Strickland Bay Ref Site 2_B	6/04/2023	370	<3	8	39	52	180	1.1	2.5	46	0.62
Strickland Bay Ref Site 3_S	6/04/2023	370	<3	8	4	17	120	0.9	0.3	3	0.11
Strickland Bay Ref Site 3_B	6/04/2023	360	4	8	7	59	200	1.2	3.3	83	1.1
Strickland Bay Ref Site 4_S	6/04/2023	320	8	8	12	17	100	1.0	0.3	4	0.10
Strickland Bay Ref Site 4_B	6/04/2023	310	<3	8	10	19	100	1.0	0.5	4	0.12
Bayliss Islands Ref Site 1_S	8/04/2023	290	<3	8	18	19	110	0.7	0.5	7	0.14
Bayliss Islands Ref Site 1_B	8/04/2023	290	6	9	20	23	120	0.8	1.7	13	0.23
Bayliss Islands Ref Site 2_S	6/04/2023	310	<3	8	19	18	90	1.2	0.4	5	0.14
Bayliss Islands Ref Site 2_B	6/04/2023	310	<3	7	13	20	110	1.2	0.5	9	0.19
Dorothy Island Ref Site 1_S	7/04/2023	290	<3	8	13	18	90	0.6	0.3	3	0.12
Dorothy Island Ref Site 1_B	7/04/2023	300	<3	9	17	96	320	0.6	4.0	58	0.79
Conilurus/Crock Creek Ref 1_S	7/04/2023	290	<3	7	7	16	80	0.9	<0.2	3	0.11
Conilurus/Crock Creek Ref 1_B	7/04/2023	290	<3	9	15	31	130	0.7	1.2	25	0.38
Conilurus/Crock Creek Ref 2_S	7/04/2023	290	<3	9	6	16	100	0.6	<0.2	2	0.09
Conilurus/Crock Creek Ref 2_B	7/04/2023	320	<3	9	11	86	260	0.7	5.3	110	1.6
Conilurus/Crock Creek Ref 3_S	7/04/2023	300	<3	8	7	17	100	0.6	<0.2	2	0.09
Conilurus/Crock Creek Ref 3_B	7/04/2023	300	<3	8	9	21	110	0.7	0.7	12	0.21
Koolan Island Ref Site 1_S	7/04/2023	300	<3	9	10	18	100	0.6	0.4	5	0.12
Koolan Island Ref Site 1_B	7/04/2023	300	9	9	18	52	180	0.5	1.9	23	0.31
Razor Island Ref Site 1_S	5/04/2023	370	<3	7	<2	16	110	0.6	<0.2	2	0.14
Razor Island Ref Site 1_B	5/04/2023	360	8	9	5	150	370	1.3	3.8	140	1.9

J. Woodward

Signatory: Jamie Woodward
Date: 10/05/2023

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WATER QUALITY DATA

Contact: Kian Rex

Customer: Barramundi Group Australia

Address: Unit 3, 9 Short Street, Broome, WA 6725

Date of Issue: 10/05/2023

Date Received: 17/04/2023

Our Reference: MPA23-14

Your Reference: Additional Baseline Data Collection

METHOD SAMPLE CODE	Sampling Date	2300 SILICATE µg.Si/L	2000 AMMONIA µg.N/L	4100 ORTHO-P µg.P/L	2100 NO3+NO2 µg.N/L	4700 TOTAL-P µg.P/L	2700 TOTAL-N µg.N/L	3000 CHLOROPHYLL'a' µg/L	3000 PHAEOPHYTIN'a' µg/L	2540D TSS mg/L	6200 POC mg/L
Reporting Limit		<2	<3	<2	<2	<5	<50	<0.1	<0.2	<1	<0.05
Analysis Date File		2/05/2023 23050201_02	20/04/2023 23042001	20/04/2023 23042001	20/04/2023 23042001	19/04/2023 23041901/2701	19/04/2023 23041901/2701	2/05/2023 23050201-0301	2/05/2023 23050201-0301	19/04/2023 23041901	20/04/2023 23042001-2701
Inner ref 1_S	5/04/2023	490	<3	6	<2	18	100	0.9	<0.2	6	0.27
Inner ref 1_B	5/04/2023	470	<3	7	<2	26	150	1.2	0.3	7	0.25
Inner ref 2_S	6/04/2023	460	<3	8	<2	18	100	2.0	0.4	4	0.21
Inner ref 2_B	6/04/2023	460	5	9	3	100	270	2.7	4.7	63	1.2
Inner ref 3_S	6/04/2023	540	<3	8	66	20	110	1.7	0.4	6	0.28
Inner ref 3_B	6/04/2023	540	<3	7	4	32	140	2.5	1.1	20	0.56
Inner ref 4_S	6/04/2023	430	<3	8	10	18	110	1.0	0.4	4	0.14
Inner ref 4_B	6/04/2023	400	4	9	9	23	130	1.0	0.7	7	0.19
Inner ref 5_S	6/04/2023	370	<3	7	10	18	110	0.9	0.4	3	0.09
Inner ref 5_B	6/04/2023	370	<3	9	10	19	110	0.9	0.5	6	0.15
Inner ref 6_S	6/04/2023	330	<3	8	6	17	100	1.4	0.3	4	0.14
Inner ref 6_B	6/04/2023	330	<3	8	6	45	170	1.9	1.9	28	0.38
Inner ref 7_S	7/04/2023	320	<3	8	7	16	140	1.4	0.4	4	0.19
Inner ref 7_B	7/04/2023	320	<3	8	7	30	130	1.5	1.9	29	0.50
Inner ref 8_S	7/04/2023	300	<3	7	8	16	140	0.6	<0.2	2	0.08
Inner ref 8_B	7/04/2023	300	3	8	8	36	160	0.9	0.9	18	0.27
Boundary ref 1_S	8/04/2023	290	<3	9	19	17	100	0.7	0.5	5	0.14
Boundary ref 1_B	8/04/2023	290	5	10	19	22	110	0.7	0.5	6	0.11
Boundary ref 2_S	8/04/2023	280	<3	9	21	18	100	0.7	0.5	6	0.10
Boundary ref 2_B	8/04/2023	280	4	9	22	23	120	0.6	1.0	9	0.16
Boundary ref 3_S	7/04/2023	270	<3	9	24	20	110	0.3	0.5	6	0.17
Boundary ref 3_B	7/04/2023	270	6	9	23	36	150	0.2	0.5	13	0.22
Boundary ref 4_S	7/04/2023	300	<3	9	12	17	100	0.5	0.2	2	0.07
Boundary ref 4_B	7/04/2023	300	<3	9	15	79	250	0.4	2.5	20	0.28
Boundary ref 5_S	7/04/2023	300	<3	9	10	17	90	0.5	0.2	2	0.06

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Signatory: Jamie Woodward
Date: 10/05/2023

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**Marine and Freshwater
Research Laboratory
Environmental Science**

Tel: 08 93602907 Address: 90 South St, Murdoch, WA, 6150



Accreditation Number: 10603

Accredited for compliance with ISO/IEC 17025 - Testing.
The results of the tests, calibrations and/or
measurements included in this document are traceable
to Australian/national standards.



Murdoch
UNIVERSITY

WATER QUALITY DATA

Contact: Kian Rex

Customer: Barramundi Group Australia

Address: Unit 3, 9 Short Street, Broome, WA 6725

Date of Issue: 10/05/2023

Date Received: 17/04/2023

Our Reference: MPA23-14

Your Reference: Additional Baseline Data Collection

METHOD SAMPLE CODE	Sampling Date	2300 SILICATE µg.Si/L	2000 AMMONIA µg.N/L	4100 ORTHO-P µg.P/L	2100 NO3+NO2 µg.N/L	4700 TOTAL-P µg.P/L	2700 TOTAL-N µg.N/L	3000 CHLOROPHYLL'a' µg/L	3000 PHAEOPHYTIN'a' µg/L	2540D TSS mg/L	6200 POC mg/L
Reporting Limit		<2	<3	<2	<2	<5	<50	<0.1	<0.2	<1	<0.05
Analysis Date		2/05/2023	20/04/2023	20/04/2023	20/04/2023	19/04/2023	19/04/2023	2/05/2023	2/05/2023	19/04/2023	20/04/2023
File		23050201_02	23042001	23042001	23042001	23041901/2701	23041901/2701	23050201-0301	23050201-0301	23041901	23042001-2701
Boundary ref 5_B	7/04/2023	290	3	10	12	31	140	0.4	1.5	15	0.23

Note: For results for compliance purposes uncertainty of measurement (MU) will sometimes affect the interpretation whether the result passes or fails the compliance limit.

Tables for measurement uncertainty are available online at www.mafri.murdoch.edu.au

POC is outside the scope of NATA accreditation

Signatory: Jamie Woodward
Date: 10/05/2023

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Murdoch
UNIVERSITY

WATER QUALITY DATA

Contact: Kian Rex
Customer: Barramundi Group Australia
Address: Unit 3, 9 Short Street, Broome, WA 6725

Date of Issue: 10/05/2023
Date Received: 17/04/2023
Our Reference: MPA23-14
Your Reference: Additional Baseline Data Collection

METHOD SAMPLE CODE	Sampling Date	MS001 Filtered Cu µg/L	MS001 Filtered Zn µg/L
Reporting Limit		<0.2	<1
Analysis Date		19/04/2023	19/04/2023
File		23041901-2701	23041901-2701
Cecelia Island_S	6/04/2023	<0.2	<1
Cecelia Island_B	6/04/2023	0.3	1
Edeline Island North_S	6/04/2023	0.3	1
Edeline Island North_B	6/04/2023	0.4	2
Dorothy Island_S	7/04/2023	<0.2	<1
Dorothy Island_B	7/04/2023	0.2	1
Edeline Island South_S	6/04/2023	0.3	2
Edeline Island South_B	6/04/2023	0.2	<1
Mary Island_S	6/04/2023	<0.2	<1
Mary Island_B	6/04/2023	0.3	1
Bayliss Island_S	6/04/2023	<0.2	<1
Bayliss Island_B	6/04/2023	0.3	1
Razor Island_S	5/04/2023	0.3	1
Razor Island_B	5/04/2023	0.6	4
Koolan Island_S	7/04/2023	0.2	<1
Koolan Island_B	7/04/2023	<0.2	<1
Crocodile Creek_S	7/04/2023	0.2	1
Crocodile Creek_B	7/04/2023	0.2	1
Conilurus Island_S	7/04/2023	0.3	2
Conilurus Island_B	7/04/2023	0.3	1
Extra Crocodile Creek 2_S	7/04/2023	<0.2	<1
Extra Crocodile Creek 2_B	7/04/2023	0.2	1
Extra Conilurus Island 2_S	7/04/2023	<0.2	<1
Extra Conilurus Island 2_B	7/04/2023	0.3	<1
Extra Bayliss Island 2_S	6/04/2023	0.3	<1

Signatory: Jamie Woodward
Date: 10/05/2023

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Murdoch
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WATER QUALITY DATA

Contact: Kian Rex
Customer: Barramundi Group Australia
Address: Unit 3, 9 Short Street, Broome, WA 6725

Date of Issue: 10/05/2023
Date Received: 17/04/2023
Our Reference: MPA23-14
Your Reference: Additional Baseline Data Collection

METHOD SAMPLE CODE	Sampling Date	MS001 Filtered Cu µg/L	MS001 Filtered Zn µg/L
Reporting Limit		<0.2	<1
Analysis Date File		19/04/2023 23041901-2701	19/04/2023 23041901-2701
Extra Bayliss Island 2_B	6/04/2023	0.3	3
Strickland Bay Ref Site 1_S	6/04/2023	0.3	<1
Strickland Bay Ref Site 1_B	6/04/2023	0.4	2
Strickland Bay Ref Site 2_S	6/04/2023	0.4	<1
Strickland Bay Ref Site 2_B	6/04/2023	0.4	2
Strickland Bay Ref Site 3_S	6/04/2023	0.2	<1
Strickland Bay Ref Site 3_B	6/04/2023	0.3	1
Strickland Bay Ref Site 4_S	6/04/2023	0.2	<1
Strickland Bay Ref Site 4_B	6/04/2023	0.3	1
Bayliss Islands Ref Site 1_S	8/04/2023	0.2	<1
Bayliss Islands Ref Site 1_B	8/04/2023	0.2	2
Bayliss Islands Ref Site 2_S	6/04/2023	<0.2	2
Bayliss Islands Ref Site 2_B	6/04/2023	0.3	1
Dorothy Island Ref Site 1_S	7/04/2023	0.2	<1
Dorothy Island Ref Site 1_B	7/04/2023	0.3	2
Conilurus/Crock Creek Ref 1_S	7/04/2023	0.2	1
Conilurus/Crock Creek Ref 1_B	7/04/2023	<0.2	<1
Conilurus/Crock Creek Ref 2_S	7/04/2023	0.2	<1
Conilurus/Crock Creek Ref 2_B	7/04/2023	<0.2	<1
Conilurus/Crock Creek Ref 3_S	7/04/2023	<0.2	1
Conilurus/Crock Creek Ref 3_B	7/04/2023	<0.2	1
Koolan Island Ref Site 1_S	7/04/2023	<0.2	<1
Koolan Island Ref Site 1_B	7/04/2023	0.3	1
Razor Island Ref Site 1_S	5/04/2023	0.2	<1
Razor Island Ref Site 1_B	5/04/2023	0.4	1

J Woodward

Signatory: Jamie Woodward
Date: 10/05/2023

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WATER QUALITY DATA

Contact: Kian Rex
Customer: Tassal Barramundi Operations
Address: 1 Darkan Avenue, North Coogee, WA 6163

Date of Issue: 22/12/2023

Date Received: 11/12/2023

Our Reference: MPA23-15

Your Reference: Additional Baseline Data Collection

METHOD SAMPLE CODE	Sampling Date	2300 SILICATE µg.Si/L	2000 AMMONIA µg.N/L	4100 ORTHO-P µg.P/L	2100 NO3+NO2 µg.N/L	4700 TOTAL-P µg.P/L	2700 TOTAL-N µg.N/L	3000 CHLOROPHYLL'a' µg/L	3000 PHAEOPHYTIN'a' µg/L	2540D TSS mg/L	6200 POC mg/L
Reporting Limit		<2	<3	<2	<2	<5	<50	<0.1	<0.2	<1	<0.05
Analysis Date File		20/12/2023 23122001	12/12/2023 23121201-02	12/12/2023 23121201-02	12/12/2023 23121201-02	13/12/2023 23121301-02	13/12/2023 23121301-02	19/12/2023 23121901	19/12/2023 23121901	13/12/2023 23121301-1901	20/12/2023 23122001-2201
Cecelia Island_S	1/12/2023	300	<3	8	<2	17	80	0.3	<0.2	2.4	0.13
Cecelia Island_B	1/12/2023	290	6	9	<2	20	250	0.6	0.2	3.5	0.20
Edeline Island North_S	1/12/2023	270	<3	8	<2	16	80	0.4	<0.2	2.1	0.08
Edeline Island North_B	1/12/2023	280	<3	8	<2	18	100	0.5	0.2	3.7	0.19
Dorothy Island_S	2/12/2023	180	<3	8	7	16	90	0.5	<0.2	3.0	0.08
Dorothy Island_B	2/12/2023	180	<3	8	6	19	100	0.7	0.4	6.8	0.21
Edeline Island South_S	1/12/2023	240	<3	7	<2	16	80	0.3	<0.2	2.4	0.09
Edeline Island South_B	1/12/2023	260	<3	8	<2	18	120	0.5	<0.2	3.9	0.23
Mary Island_S	1/12/2023	230	4	7	<2	16	80	0.4	<0.2	2.8	0.07
Mary Island_B	1/12/2023	240	5	9	<2	16	120	0.6	<0.2	4.3	0.39
Bayliss Island_S	2/12/2023	200	4	11	2	20	160	0.5	<0.2	3.1	0.08
Bayliss Island_B	2/12/2023	210	<3	8	3	18	170	0.6	0.3	4.0	0.13
Razor Island_S	1/12/2023	300	<3	7	<2	17	100	1.1	0.3	4.3	0.19
Razor Island_B	1/12/2023	340	5	10	3	24	220	1.1	0.3	15	0.55
Koolan Island_S	2/12/2023	170	<3	8	2	17	90	0.6	0.2	3.9	0.11
Koolan Island_B	2/12/2023	180	9	16	3	26	200	0.7	0.6	13	0.55
Crocodile Creek_S	2/12/2023	170	<3	8	<2	16	80	0.5	<0.2	2.7	0.10
Crocodile Creek_B	2/12/2023	180	<3	7	<2	18	100	0.6	0.2	4.8	0.17
Conilurus Island_S	2/12/2023	170	<3	8	<2	16	90	0.5	<0.2	2.8	0.10
Conilurus Island_B	2/12/2023	180	4	8	3	17	90	0.7	0.3	4.6	0.17
Extra Crocodile Creek 2_S	2/12/2023	170	<3	7	<2	15	80	0.6	<0.2	2.2	0.09
Extra Crocodile Creek 2_B	2/12/2023	180	<3	8	<2	17	100	0.7	0.2	3.7	0.17
Extra Conilurus Island 2_S	2/12/2023	170	<3	8	<2	16	120	0.5	<0.2	2.6	0.07
Extra Conilurus Island 2_B	2/12/2023	180	<3	8	<2	17	90	0.5	<0.2	3.7	0.12
Extra Bayliss Island 2_S	2/12/2023	200	<3	8	3	16	80	0.5	0.2	3.0	0.08
Extra Bayliss Island 2_B	2/12/2023	210	<3	6	2	16	120	0.6	0.2	4.1	0.16
Strickland Bay Ref Site 1_S	1/12/2023	210	<3	9	4	17	80	0.6	0.3	3.2	0.09

Vaughan Gregory

Signatory: Vaughan Gregory
Date: 22/12/2023

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WATER QUALITY DATA

Contact: Kian Rex

Customer: Tassal Barramundi Operations

Address: 1 Darkan Avenue, North Coogee, WA 6163

Date of Issue: 22/12/2023

Date Received: 11/12/2023

Our Reference: MPA23-15

Your Reference: Additional Baseline Data Collection

METHOD SAMPLE CODE	Sampling Date	2300 SILICATE µg.Si/L	2000 AMMONIA µg.N/L	4100 ORTHO-P µg.P/L	2100 NO3+NO2 µg.N/L	4700 TOTAL-P µg.P/L	2700 TOTAL-N µg.N/L	3000 CHLOROPHYLL'a' µg/L	3000 PHAEOPHYTIN'a' µg/L	2540D TSS mg/L	6200 POC mg/L
Reporting Limit		<2	<3	<2	<2	<5	<50	<0.1	<0.2	<1	<0.05
Analysis Date File		20/12/2023 23122001	12/12/2023 23121201-02	12/12/2023 23121201-02	12/12/2023 23121201-02	13/12/2023 23121301-02	13/12/2023 23121301-02	19/12/2023 23121901	19/12/2023 23121901	13/12/2023 23121301-1901	20/12/2023 23122001-2201
Strickland Bay Ref Site 1_B	1/12/2023	230	5	10	4	18	120	0.6	0.3	6.5	0.36
Strickland Bay Ref Site 2_S	1/12/2023	200	<3	9	4	15	80	0.6	<0.2	2.1	0.10
Strickland Bay Ref Site 2_B	1/12/2023	210	<3	9	4	19	190	0.7	0.2	4.8	0.18
Strickland Bay Ref Site 3_S	1/12/2023	230	<3	9	<2	16	80	0.5	<0.2	2.3	0.09
Strickland Bay Ref Site 3_B	1/12/2023	240	<3	8	<2	18	210	0.7	<0.2	4.4	0.18
Strickland Bay Ref Site 4_S	1/12/2023	250	<3	8	<2	16	80	0.6	<0.2	2.8	0.11
Strickland Bay Ref Site 4_B	1/12/2023	230	<3	8	3	18	140	0.8	0.3	4.6	0.21
Bayliss Islands Ref Site 1_S	2/12/2023	200	<3	8	4	16	80	0.6	0.3	4.5	0.09
Bayliss Islands Ref Site 1_B	2/12/2023	200	5	10	5	22	110	0.6	0.4	6.4	0.33
Bayliss Islands Ref Site 2_S	1/12/2023	200	<3	8	<2	16	80	0.6	0.2	2.8	0.12
Bayliss Islands Ref Site 2_B	1/12/2023	230	6	8	<2	19	230	0.6	0.3	4.3	0.34
Dorothy Island Ref Site 1_S	2/12/2023	180	<3	8	5	16	80	0.6	0.3	3.8	0.09
Dorothy Island Ref Site 1_B	2/12/2023	200	<3	8	5	52	210	0.9	1.5	35	0.53
Conilurus/Crock Creek Ref 1_S	2/12/2023	190	<3	7	4	16	90	0.6	0.2	3.6	0.08
Conilurus/Crock Creek Ref 1_B	2/12/2023	190	<3	7	4	20	120	0.7	0.3	5.8	0.20
Conilurus/Crock Creek Ref 2_S	2/12/2023	190	18	7	2	15	80	0.6	<0.2	2.5	0.07
Conilurus/Crock Creek Ref 2_B	2/12/2023	190	<3	8	3	17	110	0.7	0.3	4.8	0.19
Conilurus/Crock Creek Ref 3_S	2/12/2023	170	<3	7	<2	16	70	0.6	<0.2	3.7	0.09
Conilurus/Crock Creek Ref 3_B	2/12/2023	180	<3	8	3	18	120	0.8	0.3	4.8	0.16
Koolan Island Ref Site 1_S	2/12/2023	170	<3	8	<2	18	80	0.7	<0.2	4.5	0.11
Koolan Island Ref Site 1_B	2/12/2023	180	6	13	3	24	170	0.8	1.1	16	1.3
Razor Island Ref Site 1_S	1/12/2023	260	<3	7	<2	17	100	0.7	<0.2	3.6	0.13
Razor Island Ref Site 1_B	1/12/2023	290	8	8	<2	23	270	0.7	0.2	6.0	0.45
Inner ref 1_S	1/12/2023	440	<3	7	2	20	130	1.0	0.3	9.0	0.22
Inner ref 1_B	1/12/2023	470	5	7	<2	22	180	1.1	0.2	15	0.53
Inner ref 2_S	1/12/2023	440	<3	7	<2	17	90	0.7	<0.2	3.6	0.09
Inner ref 2_B	1/12/2023	480	<3	8	<2	22	190	0.9	0.3	5.7	0.21

Vaughan Gregory

Signatory: Vaughan Gregory
Date: 22/12/2023

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WATER QUALITY DATA

Contact: Kian Rex
Customer: Tassal Barramundi Operations
Address: 1 Darkan Avenue, North Coogee, WA 6163

Date of Issue: 22/12/2023
Date Received: 11/12/2023
Our Reference: MPA23-15

Your Reference: Additional Baseline Data Collection

METHOD SAMPLE CODE	Sampling Date	2300 SILICATE µg.Si/L	2000 AMMONIA µg.N/L	4100 ORTHO-P µg.P/L	2100 NO3+NO2 µg.N/L	4700 TOTAL-P µg.P/L	2700 TOTAL-N µg.N/L	3000 CHLOROPHYLL'a' µg/L	3000 PHAEOPHYTIN'a' µg/L	2540D TSS mg/L	6200 POC mg/L
Reporting Limit		<2	<3	<2	<2	<5	<50	<0.1	<0.2	<1	<0.05
Analysis Date File		20/12/2023 23122001	12/12/2023 23121201-02	12/12/2023 23121201-02	12/12/2023 23121201-02	13/12/2023 23121301-02	13/12/2023 23121301-02	19/12/2023 23121901	19/12/2023 23121901	13/12/2023 23121301-1901	20/12/2023 23122001-2201
Inner ref 3_S	1/12/2023	550	<3	8	<2	19	100	0.9	0.2	6.2	0.16
Inner ref 3_B	1/12/2023	580	<3	8	<2	20	150	1.0	0.3	9.8	0.36
Inner ref 4_S	1/12/2023	360	<3	8	4	16	80	0.6	0.2	4.1	0.11
Inner ref 4_B	1/12/2023	380	4	9	3	26	240	0.6	0.3	5.3	0.20
Inner ref 5_S	1/12/2023	330	<3	8	3	16	100	0.5	0.2	3.2	0.11
Inner ref 5_B	1/12/2023	350	6	8	3	17	160	0.6	0.3	3.2	0.14
Inner ref 6_S	2/12/2023	210	<3	7	<2	16	100	0.5	<0.2	2.6	0.09
Inner ref 6_B	2/12/2023	220	<3	8	<2	17	120	0.5	<0.2	3.6	0.16
Inner ref 7_S	2/12/2023	170	<3	7	<2	17	100	0.5	<0.2	2.5	0.07
Inner ref 7_B	2/12/2023	180	4	8	<2	18	120	0.8	0.4	8.1	0.18
Inner ref 8_S	2/12/2023	170	<3	8	<2	16	90	0.5	<0.2	2.9	0.10
Inner ref 8_B	2/12/2023	180	<3	8	<2	17	120	0.5	<0.2	3.4	0.23
Boundary ref 1_S	3/12/2023	200	3	8	8	16	90	0.7	0.2	3.9	0.07
Boundary ref 1_B	3/12/2023	200	4	8	8	17	120	0.7	0.3	4.3	0.12
Boundary ref 2_S	3/12/2023	190	<3	7	7	16	80	0.7	<0.2	4.1	0.08
Boundary ref 2_B	3/12/2023	190	5	9	8	17	120	0.7	0.3	6.3	0.17
Boundary ref 3_S	3/12/2023	180	3	6	5	17	90	0.6	0.2	3.4	0.08
Boundary ref 3_B	3/12/2023	180	7	6	5	20	130	0.6	0.7	7.6	0.19
Boundary ref 4_S	3/12/2023	180	<3	7	2	16	90	0.5	0.4	3.3	0.08
Boundary ref 4_B	3/12/2023	190	4	8	4	26	150	0.8	0.7	6.8	0.12
Boundary ref 5_S	3/12/2023	160	<3	8	2	18	100	0.4	0.5	3.5	0.09
Boundary ref 5_B	3/12/2023	170	4	8	3	21	140	0.5	0.7	7.0	0.29

Note: For results for compliance purposes uncertainty of measurement (MU) will sometimes affect the interpretation whether the result passes or fails the compliance limit.

Tables for measurement uncertainty are available online at www.mafrl.murdoch.edu.au

Signatory: Vaughan Gregory
Date: 22/12/2023

The results only apply to the sample as received and to the sample tested.
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Environmental Science**

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Accreditation Number: 10603

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measurements included in this document are traceable
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WATER QUALITY DATA

Contact: Kian Rex
Customer: Tassal Barramundi Operations
Address: 1 Darkan Avenue, North Coogee, WA 6163

Date of Issue: 8/03/2024
Date Received: 12/02/2024
Our Reference: MPA23-16
Your Reference: Additional Baseline Data Collection

METHOD SAMPLE CODE	Sampling Date	2300 SILICATE µg.Si/L	2000 AMMONIA µg.N/L	4100 ORTHO-P µg.P/L	2100 NO3+NO2 µg.N/L	4700 TOTAL-P µg.P/L	2700 TOTAL-N µg.N/L	3000 CHLOROPHYLL'a' µg/L	3000 PHAEOPHYTIN'a' µg/L	2540D TSS mg/L	6200 POC mg/L
Reporting Limit		<2	<3	<2	<2	<5	<50	<0.1	<0.2	<1	<0.05
Analysis Date		20/02/2024	15/02/2024	15/02/2024	15/02/2024	21/02/2024	21/02/2024	28/02/2024	28/02/2024	21/02/2024	23/02/2024
File		24022001	24021501	24021501	24021501	24022102-2801	24022102-2801	24022802	24022802	24022101	24022301
Cecelia Island_S	2/02/2024	160	9	5	3	17	150	0.3	<0.2	5	0.13
Cecelia Island_B	2/02/2024	170	10	5	<2	17	120	0.9	0.3	6	0.21
Edeline Island North_S	3/02/2024	190	<3	7	4	17	150	0.1	<0.2	2	<0.05
Edeline Island North_B	3/02/2024	180	18	7	<2	25	170	0.2	0.5	22	0.30
Dorothy Island_S	2/02/2024	140	6	7	8	19	140	0.7	0.5	4	0.14
Dorothy Island_B	2/02/2024	920	210	34	15	2000	6000	<2	49	2400	28
Edeline Island South_S	3/02/2024	140	46	9	10	16	130	<0.1	<0.2	2	0.11
Edeline Island South_B	3/02/2024	130	20	6	5	23	180	0.1	0.2	80	1.6
Bayliss Island_S	2/02/2024	130	14	7	8	15	90	0.4	<0.2	2	0.09
Bayliss Island_B	2/02/2024	130	7	5	3	16	130	0.6	0.3	3	0.11
Razor Island_S	3/02/2024	240	4	4	<2	16	140	0.2	<0.2	4	0.13
Razor Island_B	3/02/2024	260	31	7	7	22	220	0.5	0.4	11	0.28
Extra Bayliss Island 2_S	2/02/2024	130	<3	5	<2	15	130	0.3	<0.2	10	0.19
Extra Bayliss Island 2_B	2/02/2024	130	5	6	<2	15	160	0.5	<0.2	4	0.17
Strickland Bay Ref Site 2_S	3/02/2024	140	6	6	3	16	100	0.1	<0.2	2	0.09
Strickland Bay Ref Site 2_B	3/02/2024	140	18	5	4	28	210	<0.1	0.3	20	0.33
Strickland Bay Ref Site 3_S	3/02/2024	160	26	6	6	16	110	0.1	<0.2	1	0.08
Strickland Bay Ref Site 3_B	3/02/2024	170	18	6	3	26	160	<0.1	0.3	19	0.31
Strickland Bay Ref Site 4_S	2/02/2024	180	8	7	3	13	130	0.1	<0.2	3	0.11
Strickland Bay Ref Site 4_B	2/02/2024	190	16	9	3	17	210	0.6	0.5	8	0.22
Bayliss Islands Ref Site 1_S	2/02/2024	140	18	7	11	12	100	0.5	0.3	9	0.36
Bayliss Islands Ref Site 1_B	2/02/2024	140	6	7	7	15	120	0.2	<0.2	7	0.10
Bayliss Islands Ref Site 2_S	2/02/2024	130	16	7	8	14	110	0.4	<0.2	3	0.08
Bayliss Islands Ref Site 2_B	2/02/2024	140	7	7	3	17	130	0.6	0.3	3	0.19
Dorothy Island Ref Site 1_S	2/02/2024	140	<3	6	5	30	220	0.4	0.2	3	0.07
Dorothy Island Ref Site 1_B	2/02/2024	140	9	6	5	20	210	0.5	0.5	34	0.45
Razor Island Ref Site 1_S	3/02/2024	190	18	6	5	14	100	0.2	<0.2	2	0.10

Vaughan Gregory
Signatory: Vaughan Gregory
Date: 8/03/2024

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Spare test items will be held for two months unless otherwise requested.

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Accreditation Number: 10603

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measurements included in this document are traceable
to Australian/national standards.



WATER QUALITY DATA

Contact: Kian Rex
Customer: Tassal Barramundi Operations
Address: 1 Darkan Avenue, North Coogee, WA 6163

Date of Issue: 8/03/2024
Date Received: 12/02/2024
Our Reference: MPA23-16
Your Reference: Additional Baseline Data Collection

METHOD SAMPLE CODE	Sampling Date	2300 SILICATE µg.Si/L	2000 AMMONIA µg.N/L	4100 ORTHO-P µg.P/L	2100 NO3+NO2 µg.N/L	4700 TOTAL-P µg.P/L	2700 TOTAL-N µg.N/L	3000 CHLOROPHYLL'a' µg/L	3000 PHAEOPHYTIN'a' µg/L	2540D TSS mg/L	6200 POC mg/L
Reporting Limit		<2	<3	<2	<2	<5	<50	<0.1	<0.2	<1	<0.05
Analysis Date		20/02/2024	15/02/2024	15/02/2024	15/02/2024	21/02/2024	21/02/2024	28/02/2024	28/02/2024	21/02/2024	23/02/2024
File		24022001	24021501	24021501	24021501	24022102-2801	24022102-2801	24022802	24022802	24022101	24022301
Razor Island Ref Site 1_B	3/02/2024	200	23	6	6	24	190	0.3	0.3	13	0.29
Inner ref 1_S	3/02/2024	220	3	6	<2	17	130	0.3	<0.2	3	0.14
Inner ref 2_S	2/02/2024	160	16	4	6	15	120	0.2	<0.2	3	0.16
Inner ref 3_S	2/02/2024	310	<3	6	<2	16	150	0.3	<0.2	5	0.18
Inner ref 4_S	2/02/2024	220	<3	6	2	16	230	0.4	<0.2	4	0.15
Inner ref 5_S	2/02/2024	200	13	6	2	16	100	0.4	0.2	2	0.12
Inner ref 6_S	2/02/2024	130	<3	7	4	17	140	0.3	<0.2	3	0.09
Boundary ref 1_S	1/02/2024	140	<3	7	7	16	100	0.4	<0.2	1	0.13
Boundary ref 2_S	1/02/2024	140	<3	7	11	16	80	0.6	0.5	9	0.15
Boundary ref 3_S	1/02/2024	140	3	6	10	17	90	0.6	0.9	10	0.23
Boundary ref 4_S	1/02/2024	140	8	6	7	17	90	0.4	0.4	5	0.23
Boundary ref 5_S	1/02/2024	140	8	7	8	15	100	0.2	0.3	2	0.09

Note: For results for compliance purposes uncertainty of measurement (MU) will sometimes affect the interpretation whether the result passes or fails the compliance limit.

Tables for measurement uncertainty are available online at www.mafrl.murdoch.edu.au

Reporting limit for Chlorophyll 'a' analysis of Dorothy Island_B raised due to sample volume filtered

POC is outside the scope of NATA accreditation

Signatory: Vaughan Gregory
Date: 8/03/2024

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WATER QUALITY DATA

Contact: Kian Rex
Customer: Tassal Barramundi Operations
Address: 1 Darkan Avenue, North Coogee, WA 6163

Date of Issue: 7/12/2023
Date Received: 6/11/2023
Our Reference: MPA23-17
Your Reference: Additional Baseline Data Collection

METHOD SAMPLE CODE	Sampling Date	2300 SILICATE µg.Si/L	2000 AMMONIA µg.N/L	4100 ORTHO-P µg.P/L	2100 NO3+NO2 µg.N/L	4700 TOTAL-P µg.P/L	2700 TOTAL-N µg.N/L	3000 CHLOROPHYLL'a' µg/L	3000 PHAEOPHYTIN'a' µg/L	2540D TSS mg/L	6200 POC mg/L
Reporting Limit		<2	<3	<2	<2	<5	<50	<0.1	<0.2	<1	<0.05
Analysis Date		16/11/2023	9/11/2023	9/11/2023	9/11/2023	10/11/2023	10/11/2023	22/11/2023	22/11/2023	14/11/2023	21/11/2023
File		23111601-02	23110901-02	23110901-02	23110901-02	23111001-02-2402	23111001-02-2402	23112202	23112202	231114-15	23112101-2202-2301-2401
Cecelia Island_S	26/10/2023	140	<3	8	<2	17	80	0.3	<0.2	1.4	0.10
Cecelia Island_B	26/10/2023	150	<3	9	<2	17	80	0.6	0.2	3.5	0.15
Edeline Island North_S	26/10/2023	180	<3	8	<2	17	70	0.7	<0.2	2.0	0.11
Edeline Island North_B	26/10/2023	130	9	9	<2	21	170	0.8	0.4	6.8	0.17
Dorothy Island_S	28/10/2023	170	<3	9	2	16	80	0.6	<0.2	1.1	0.10
Dorothy Island_B	28/10/2023	180	7	11	9	22	170	1.0	1.6	16	0.45
Edeline Island South_S	26/10/2023	180	<3	8	<2	16	100	0.2	<0.2	1.6	0.08
Edeline Island South_B	26/10/2023	170	120	18	6	94	1400	0.6	1.0	38	0.67
Mary Island_S	26/10/2023	180	<3	9	2	17	70	0.4	<0.2	1.5	0.12
Mary Island_B	26/10/2023	190	19	11	4	27	220	0.6	0.4	14	0.34
Bayliss Island_S	28/10/2023	170	5	8	3	16	70	0.8	<0.2	3.1	0.15
Bayliss Island_B	28/10/2023	170	5	9	3	19	100	0.9	0.3	6.5	0.32
Razor Island_S	25/10/2023	150	<3	6	<2	16	100	0.9	<0.2	2.3	0.17
Razor Island_B	25/10/2023	230	36	11	6	25	340	0.7	0.4	9.2	0.62
Koolan Island_S	27/10/2023	200	<3	9	5	16	70	0.5	<0.2	2.1	0.09
Koolan Island_B	27/10/2023	200	<3	10	5	20	100	0.5	0.2	4.6	0.15
Crocodile Creek_S	27/10/2023	190	<3	9	3	16	110	0.5	<0.2	2.2	0.10
Crocodile Creek_B	27/10/2023	160	7	9	3	18	140	0.7	0.4	7.3	0.21
Conilurus Island_S	27/10/2023	190	<3	9	<2	17	80	0.4	<0.2	0.9	0.08
Conilurus Island_B	27/10/2023	190	<3	10	2	20	100	0.5	<0.2	3.6	0.23
Extra Crocodile Creek 2_S	27/10/2023	190	<3	8	<2	17	110	0.4	<0.2	1.0	0.06
Extra Crocodile Creek 2_B	27/10/2023	200	3	9	2	17	100	0.6	<0.2	2.1	0.16
Extra Conilurus Island 2_S	27/10/2023	190	<3	8	<2	16	90	0.5	<0.2	1.0	0.11
Extra Conilurus Island 2_B	27/10/2023	200	<3	10	2	22	140	0.5	<0.2	2.4	0.26
Extra Bayliss Island 2_S	28/10/2023	170	<3	9	<2	16	80	0.7	<0.2	3.2	0.13
Extra Bayliss Island 2_B	28/10/2023	170	<3	8	3	18	100	0.8	0.3	4.9	0.21
Strickland Bay Ref Site 1_S	26/10/2023	160	<3	8	<2	16	70	0.5	<0.2	1.6	0.12

Signatory: Vaughan Gregory
Date: 7/12/2023

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Contact: Kian Rex
Customer: Tassal Barramundi Operations
Address: 1 Darkan Avenue, North Coogee, WA 6163

Date of Issue: 7/12/2023

Date Received: 6/11/2023

Our Reference: MPA23-17

Your Reference: Additional Baseline Data Collection

WATER QUALITY DATA

METHOD SAMPLE CODE	Sampling Date	2300 SILICATE µg.Si/L	2000 AMMONIA µg.N/L	4100 ORTHO-P µg.P/L	2100 NO3+NO2 µg.N/L	4700 TOTAL-P µg.P/L	2700 TOTAL-N µg.N/L	3000 CHLOROPHYLL'a' µg/L	3000 PHAEOPHYTIN'a' µg/L	2540D TSS mg/L	6200 POC mg/L
Reporting Limit		<2	<3	<2	<2	<5	<50	<0.1	<0.2	<1	<0.05
Analysis Date File		16/11/2023 23111601-02	9/11/2023 23110901-02	9/11/2023 23110901-02	9/11/2023 23110901-02	10/11/2023 23111001-02-2402	10/11/2023 23111001-02-2402	22/11/2023 23112202	22/11/2023 23112202	14/11/2023 231114-15	21/11/2023 23112101-2202-2301-2401
Strickland Bay Ref Site 1_B	26/10/2023	170	10	9	<2	19	160	0.5	<0.2	2.6	0.32
Strickland Bay Ref Site 2_S	26/10/2023	180	<3	8	<2	16	90	0.3	<0.2	0.9	0.10
Strickland Bay Ref Site 2_B	26/10/2023	170	8	10	<2	26	410	0.6	0.2	2.8	0.22
Strickland Bay Ref Site 3_S	26/10/2023	170	8	7	<2	16	80	0.3	<0.2	1.4	0.11
Strickland Bay Ref Site 3_B	26/10/2023	170	62	21	<2	43	620	0.8	0.4	6.1	0.26
Strickland Bay Ref Site 4_S	26/10/2023	150	<3	8	<2	17	80	0.5	<0.2	1.5	0.11
Strickland Bay Ref Site 4_B	26/10/2023	160	<3	9	<2	27	330	0.8	0.4	12	0.25
Bayliss Islands Ref Site 1_S	28/10/2023	170	<3	10	3	18	80	0.6	<0.2	2.1	0.09
Bayliss Islands Ref Site 1_B	28/10/2023	170	<3	9	6	20	80	0.8	0.7	9.5	0.19
Bayliss Islands Ref Site 2_S	27/10/2023	180	<3	8	3	18	70	0.4	<0.2	1.6	0.08
Bayliss Islands Ref Site 2_B	27/10/2023	180	3	9	3	18	250	0.5	0.3	3.8	0.14
Dorothy Island Ref Site 1_S	28/10/2023	170	<3	9	6	17	70	0.6	<0.2	2.7	0.10
Dorothy Island Ref Site 1_B	28/10/2023	170	<3	10	9	41	170	0.8	1.8	22	0.49
Conilurus/Crock Creek Ref 1_S	27/10/2023	170	<3	9	3	17	70	0.4	<0.2	3.0	0.10
Conilurus/Crock Creek Ref 1_B	27/10/2023	180	5	9	6	22	150	0.6	1.0	8.0	0.26
Conilurus/Crock Creek Ref 2_S	27/10/2023	200	<3	8	<2	17	70	0.3	<0.2	1.6	0.10
Conilurus/Crock Creek Ref 2_B	27/10/2023	190	15	7	<2	18	190	0.7	1.0	6.7	0.34
Conilurus/Crock Creek Ref 3_S	27/10/2023	180	<3	8	<2	15	50	0.2	<0.2	1.0	0.09
Conilurus/Crock Creek Ref 3_B	27/10/2023	190	<3	10	4	48	390	0.8	1.2	54	1.0
Koolan Island Ref Site 1_S	27/10/2023	210	<3	9	5	18	70	0.5	<0.2	4.0	0.13
Koolan Island Ref Site 1_B	27/10/2023	220	<3	9	5	20	90	0.5	0.3	4.9	0.15
Razor Island Ref Site 1_S	25/10/2023	190	<3	6	<2	18	100	0.9	<0.2	2.4	0.18
Razor Island Ref Site 1_B	25/10/2023	200	4	9	5	38	160	0.9	0.7	9.0	0.20
Inner ref 1_S	25/10/2023	310	<3	7	<2	17	90	0.6	<0.2	3.6	0.22
Inner ref 1_B	25/10/2023	310	<3	7	<2	30	160	0.9	0.5	25	0.50
Inner ref 2_S	26/10/2023	190	<3	8	<2	16	80	0.3	<0.2	2.1	0.13
Inner ref 2_B	26/10/2023	210	7	8	3	23	170	0.6	0.3	7.8	0.20

Vaughan Gregory

Signatory: Vaughan Gregory
Date: 7/12/2023

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Contact: Kian Rex
Customer: Tassal Barramundi Operations
Address: 1 Darkan Avenue, North Coogee, WA 6163

Date of Issue: 7/12/2023

Date Received: 6/11/2023

Our Reference: MPA23-17

Your Reference: Additional Baseline Data Collection

WATER QUALITY DATA

METHOD SAMPLE CODE	Sampling Date	2300 SILICATE µg.Si/L	2000 AMMONIA µg.N/L	4100 ORTHO-P µg.P/L	2100 NO3+NO2 µg.N/L	4700 TOTAL-P µg.P/L	2700 TOTAL-N µg.N/L	3000 CHLOROPHYLL'a' µg/L	3000 PHAEOPHYTIN'a' µg/L	2540D TSS mg/L	6200 POC mg/L
Reporting Limit		<2	<3	<2	<2	<5	<50	<0.1	<0.2	<1	<0.05
Analysis Date File		16/11/2023 23111601-02	9/11/2023 23110901-02	9/11/2023 23110901-02	9/11/2023 23110901-02	10/11/2023 23111001-02-2402	10/11/2023 23111001-02-2402	22/11/2023 23112202	22/11/2023 23112202	14/11/2023 231114-15	21/11/2023 23112101-2202-2301-2401
Inner ref 3_S	26/10/2023	410	<3	8	<2	18	80	0.5	<0.2	2.4	0.14
Inner ref 3_B	26/10/2023	420	10	8	<2	26	170	0.6	0.2	15	0.42
Inner ref 4_S	26/10/2023	180	<3	8	2	16	70	0.9	<0.2	2.2	0.14
Inner ref 4_B	26/10/2023	180	6	9	3	19	110	0.9	0.2	3.9	0.24
Inner ref 5_S	26/10/2023	150	<3	8	4	18	70	0.9	<0.2	3.6	0.17
Inner ref 5_B	26/10/2023	150	3	9	3	18	90	0.7	<0.2	2.8	0.17
Inner ref 6_S	28/10/2023	170	<3	9	3	17	100	0.6	<0.2	1.7	0.10
Inner ref 6_B	28/10/2023	180	4	9	4	17	110	0.7	<0.2	4.1	0.28
Inner ref 7_S	27/10/2023	200	<3	8	3	17	80	0.8	<0.2	2.3	0.15
Inner ref 7_B	27/10/2023	200	4	9	3	19	120	0.8	0.3	6.8	0.30
Inner ref 8_S	27/10/2023	230	<3	8	<2	16	90	0.5	<0.2	2.8	0.15
Inner ref 8_B	27/10/2023	220	<3	9	<2	21	160	0.8	0.3	7.5	0.20
Boundary ref 1_S	26/10/2023	180	<3	9	11	17	70	0.6	0.2	3.0	0.11
Boundary ref 1_B	26/10/2023	160	3	10	11	19	300	0.6	0.4	5.1	0.22
Boundary ref 2_S	28/10/2023	160	<3	9	9	17	80	0.6	0.3	3.0	0.11
Boundary ref 2_B	28/10/2023	170	4	9	10	22	220	0.7	0.7	7.6	0.22
Boundary ref 3_S	28/10/2023	160	<3	9	13	19	80	0.6	0.4	5.4	0.15
Boundary ref 3_B	28/10/2023	170	5	9	13	29	220	0.7	1.4	16	0.41
Boundary ref 4_S	27/10/2023	180	<3	9	5	17	70	0.4	<0.2	2.9	0.11
Boundary ref 4_B	27/10/2023	190	<3	9	9	20	200	0.5	0.3	6.8	0.28
Boundary ref 5_S	27/10/2023	140	<3	10	<2	16	60	0.1	<0.2	1.0	0.08
Boundary ref 5_B	27/10/2023	210	41	9	9	18	100	0.4	0.3	2.9	0.12

Note: For results for compliance purposes uncertainty of measurement (MU) will sometimes affect the interpretation whether the result passes or fails the compliance limit.

Tables for measurement uncertainty are available online at www.mafrl.murdoch.edu.au

Signatory: Vaughan Gregory
Date: 7/12/2023

The results only apply to the sample as received and to the sample tested.
Spare test items will be held for two months unless otherwise requested.

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**Marine and Freshwater
Research Laboratory
Environmental Science**

Tel: 08 93602907 Address: 90 South St, Murdoch, WA, 6150



Accreditation Number: 10603

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The results of the tests, calibrations and/or
measurements included in this document are traceable
to Australian/national standards.



Murdoch
UNIVERSITY

WATER QUALITY DATA

Contact: Kian Rex
Customer: Tassal Barramundi Operations
Address: 1 Darkan Avenue, North Coogee, WA 6163

Date of Issue: 12/01/2024

Date Received: 18/12/2023

Our Reference: TAS23-7

Your Reference: Additional Baseline Data Collection

METHOD SAMPLE CODE	Sampling Date	2300 SILICATE µg.Si/L	2000 AMMONIA µg.N/L	4100 ORTHO-P µg.P/L	2100 NO3+NO2 µg.N/L	4700 TOTAL-P µg.P/L	2700 TOTAL-N µg.N/L	3000 CHLOROPHYLL'a' µg/L	3000 PHAEOPHYTIN'a' µg/L	2540D TSS mg/L	6200 POC mg/L
Reporting Limit		<2	<3	<2	<2	<5	<50	<0.1	<0.2	<1	<0.05
Analysis Date		5/01/2024	4/01/2024	4/01/2024	4/01/2024	3/01/2024	3/01/2024	5/01/2024	5/01/2024	3/01/2024	4/01/2024
File		24010501	24010401-02	24010401-02	24010401-02	24010301-02-1001	24010301-02-1001	24010501	24010501	24010301	24010401-0501
Cecelia Island_S	8/12/2023	300	<3	8	2	18	90	0.3	<0.2	1.5	0.07
Cecelia Island_B	8/12/2023	290	5	11	9	17	110	0.4	<0.2	2.2	0.09
Edeline Island North_S	8/12/2023	330	<3	8	4	17	90	0.3	<0.2	1.7	0.06
Edeline Island North_B	8/12/2023	320	4	8	3	18	100	0.3	<0.2	1.9	0.09
Dorothy Island_S	9/12/2023	200	<3	9	5	18	80	0.3	<0.2	2.0	0.05
Dorothy Island_B	9/12/2023	200	6	9	5	17	150	0.4	<0.2	3.8	0.19
Edeline Island South_S	8/12/2023	280	<3	7	<2	17	80	0.2	<0.2	1.5	0.05
Edeline Island South_B	8/12/2023	280	<3	8	<2	18	100	0.2	<0.2	1.9	0.10
Mary Island_S	8/12/2023	250	<3	8	<2	16	80	0.2	<0.2	2.0	0.06
Mary Island_B	8/12/2023	260	6	9	3	18	110	0.3	<0.2	2.5	No result
Bayliss Island_S	8/12/2023	230	<3	7	<2	16	80	0.3	<0.2	2.3	0.05
Bayliss Island_B	8/12/2023	230	4	8	3	16	100	0.4	<0.2	2.9	0.13
Razor Island_S	7/12/2023	340	<3	7	2	18	110	0.6	<0.2	2.5	0.15
Razor Island_B	7/12/2023	380	16	10	4	150	280	0.6	<0.2	4.6	0.22
Koolan Island_S	9/12/2023	210	<3	8	3	18	80	0.3	<0.2	1.6	0.09
Koolan Island_B	9/12/2023	220	<3	9	5	17	110	0.4	<0.2	3.2	0.21
Crocodile Creek_S	9/12/2023	200	<3	8	<2	16	80	0.2	<0.2	1.2	0.06
Crocodile Creek_B	9/12/2023	220	7	9	3	25	150	0.7	0.8	28	0.43
Conilurus Island_S	9/12/2023	190	<3	8	<2	16	80	0.1	<0.2	1.5	<0.05
Conilurus Island_B	9/12/2023	220	9	8	4	20	120	0.5	0.6	14	0.25
Extra Crocodile Creek 2_S	9/12/2023	200	<3	8	<2	15	80	0.1	<0.2	1.7	0.05
Extra Crocodile Creek 2_B	9/12/2023	220	<3	8	<2	18	80	0.4	<0.2	3.7	0.12
Extra Conilurus Island 2_S	9/12/2023	200	<3	7	<2	16	80	0.2	<0.2	2.2	0.06
Extra Conilurus Island 2_B	9/12/2023	220	17	8	5	20	160	0.4	<0.2	4.2	0.18
Extra Bayliss Island 2_S	8/12/2023	230	<3	7	<2	17	80	0.3	<0.2	2.1	0.06
Extra Bayliss Island 2_B	8/12/2023	230	4	7	3	17	100	0.4	<0.2	2.3	0.07
Strickland Bay Ref Site 1_S	7/12/2023	240	<3	8	<2	16	80	0.1	<0.2	1.2	0.07

Vaughan Gregory

Signatory: Vaughan Gregory
Date: 12/01/2024

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**Marine and Freshwater
Research Laboratory
Environmental Science**

Tel: 08 93602907 Address: 90 South St, Murdoch, WA, 6150



Accreditation Number: 10603

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The results of the tests, calibrations and/or
measurements included in this document are traceable
to Australian/national standards.



Murdoch
UNIVERSITY

WATER QUALITY DATA

Contact: Kian Rex
Customer: Tassal Barramundi Operations
Address: 1 Darkan Avenue, North Coogee, WA 6163

Date of Issue: 12/01/2024

Date Received: 18/12/2023

Our Reference: TAS23-7

Your Reference: Additional Baseline Data Collection

METHOD SAMPLE CODE	Sampling Date	2300 SILICATE µg.Si/L	2000 AMMONIA µg.N/L	4100 ORTHO-P µg.P/L	2100 NO3+NO2 µg.N/L	4700 TOTAL-P µg.P/L	2700 TOTAL-N µg.N/L	3000 CHLOROPHYLL'a' µg/L	3000 PHAEOPHYTIN'a' µg/L	2540D TSS mg/L	6200 POC mg/L
Reporting Limit		<2	<3	<2	<2	<5	<50	<0.1	<0.2	<1	<0.05
Analysis Date		5/01/2024	4/01/2024	4/01/2024	4/01/2024	3/01/2024	3/01/2024	5/01/2024	5/01/2024	3/01/2024	4/01/2024
File		24010501	24010401-02	24010401-02	24010401-02	24010301-02-1001	24010301-02-1001	24010501	24010501	24010301	24010401-0501
Strickland Bay Ref Site 1_B	7/12/2023	250	10	8	<2	22	230	0.2	<0.2	2.1	0.19
Strickland Bay Ref Site 2_S	8/12/2023	250	<3	8	3	17	90	0.1	<0.2	6.1	0.09
Strickland Bay Ref Site 2_B	8/12/2023	250	5	8	3	18	130	0.2	<0.2	4.8	0.22
Strickland Bay Ref Site 3_S	8/12/2023	310	<3	7	<2	16	80	0.3	<0.2	1.8	0.06
Strickland Bay Ref Site 3_B	8/12/2023	240	5	8	<2	17	120	0.3	<0.2	2.3	0.10
Strickland Bay Ref Site 4_S	8/12/2023	280	<3	7	2	16	90	0.2	<0.2	2.0	<0.05
Strickland Bay Ref Site 4_B	8/12/2023	260	10	8	5	19	330	0.4	<0.2	2.6	0.21
Bayliss Islands Ref Site 1_S	8/12/2023	230	<3	7	3	17	110	0.2	<0.2	2.1	<0.05
Bayliss Islands Ref Site 1_B	8/12/2023	220	6	8	4	17	120	0.3	<0.2	2.2	0.10
Bayliss Islands Ref Site 2_S	8/12/2023	240	6	6	5	16	100	0.3	<0.2	2.9	0.06
Bayliss Islands Ref Site 2_B	8/12/2023	240	11	8	5	19	240	0.3	<0.2	2.5	0.17
Dorothy Island Ref Site 1_S	8/12/2023	200	3	7	<2	16	80	0.4	<0.2	1.9	0.06
Dorothy Island Ref Site 1_B	8/12/2023	200	72	12	6	22	380	0.4	<0.2	3.6	0.15
Conilurus/Crock Creek Ref 1_S	9/12/2023	190	<3	8	<2	17	90	0.2	<0.2	1.5	<0.05
Conilurus/Crock Creek Ref 1_B	9/12/2023	210	9	9	6	16	160	0.3	<0.2	2.8	0.11
Conilurus/Crock Creek Ref 2_S	9/12/2023	190	<3	8	<2	20	100	0.2	<0.2	0.7	<0.05
Conilurus/Crock Creek Ref 2_B	9/12/2023	210	5	8	2	18	160	0.5	0.2	5.6	0.17
Conilurus/Crock Creek Ref 3_S	9/12/2023	200	<3	8	<2	17	140	0.1	<0.2	2.0	0.13
Conilurus/Crock Creek Ref 3_B	9/12/2023	200	3	8	<2	20	140	0.7	0.4	7.9	0.23
Koolan Island Ref Site 1_S	9/12/2023	220	<3	8	<2	14	100	0.2	<0.2	1.7	0.07
Koolan Island Ref Site 1_B	9/12/2023	210	9	7	7	16	210	0.4	<0.2	2.6	0.21
Razor Island Ref Site 1_S	7/12/2023	300	<3	6	<2	17	120	0.5	<0.2	5.6	0.30
Razor Island Ref Site 1_B	7/12/2023	320	7	8	3	20	190	0.7	<0.2	5.1	0.55
Inner ref 1_S	7/12/2023	380	<3	6	<2	18	130	0.6	<0.2	5.8	0.26
Inner ref 1_B	7/12/2023	390	6	7	<2	21	190	0.8	0.3	6.3	0.35
Inner ref 2_S	8/12/2023	310	<3	7	<2	18	110	0.4	<0.2	2.4	0.07
Inner ref 2_B	8/12/2023	320	3	6	<2	19	130	0.4	<0.2	3.4	0.15

Vaughan Gregory

Signatory: Vaughan Gregory
Date: 12/01/2024

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WATER QUALITY DATA

Contact: Kian Rex
Customer: Tassal Barramundi Operations
Address: 1 Darkan Avenue, North Coogee, WA 6163

Date of Issue: 12/01/2024

Date Received: 18/12/2023

Our Reference: TAS23-7

Your Reference: Additional Baseline Data Collection

METHOD SAMPLE CODE	Sampling Date	2300 SILICATE µg.Si/L	2000 AMMONIA µg.N/L	4100 ORTHO-P µg.P/L	2100 NO3+NO2 µg.N/L	4700 TOTAL-P µg.P/L	2700 TOTAL-N µg.N/L	3000 CHLOROPHYLL'a' µg/L	3000 PHAEOPHYTIN'a' µg/L	2540D TSS mg/L	6200 POC mg/L
Reporting Limit		<2	<3	<2	<2	<5	<50	<0.1	<0.2	<1	<0.05
Analysis Date		5/01/2024	4/01/2024	4/01/2024	4/01/2024	3/01/2024	3/01/2024	5/01/2024	5/01/2024	3/01/2024	4/01/2024
File		24010501	24010401-02	24010401-02	24010401-02	24010301-02-1001	24010301-02-1001	24010501	24010501	24010301	24010401-0501
Inner ref 3_S	8/12/2023	500	<3	7	<2	18	110	0.5	<0.2	3.2	0.08
Inner ref 3_B	8/12/2023	500	8	8	<2	20	160	0.6	<0.2	3.3	0.16
Inner ref 4_S	8/12/2023	340	4	8	8	18	100	0.2	<0.2	2.4	0.07
Inner ref 4_B	8/12/2023	250	6	9	8	18	130	0.3	<0.2	3.2	0.12
Inner ref 5_S	8/12/2023	290	4	8	6	17	120	0.2	<0.2	2.3	0.05
Inner ref 5_B	8/12/2023	310	6	8	8	18	120	0.3	0.2	2.7	0.10
Inner ref 6_S	8/12/2023	210	<3	7	<2	15	90	0.3	<0.2	2.5	0.06
Inner ref 6_B	8/12/2023	220	5	8	<2	17	120	0.3	<0.2	3.2	0.15
Inner ref 7_S	9/12/2023	200	<3	6	2	16	100	0.2	<0.2	2.0	0.06
Inner ref 7_B	9/12/2023	200	57	8	3	19	260	0.5	0.3	9.9	0.22
Inner ref 8_S	9/12/2023	220	<3	7	<2	16	90	0.2	<0.2	2.8	0.08
Inner ref 8_B	9/12/2023	210	5	7	<2	15	120	0.3	<0.2	2.9	0.19
Boundary ref 1_S	10/12/2023	210	<3	7	5	16	90	0.3	0.2	4.0	0.09
Boundary ref 1_B	10/12/2023	210	8	8	7	18	180	0.4	0.5	7.0	0.40
Boundary ref 2_S	10/12/2023	200	<3	7	6	16	100	0.3	<0.2	3.1	0.16
Boundary ref 2_B	10/12/2023	200	9	8	5	19	180	0.4	0.2	3.6	0.27
Boundary ref 3_S	10/12/2023	190	<3	7	8	16	90	0.3	<0.2	4.3	0.05
Boundary ref 3_B	10/12/2023	190	4	8	10	17	110	0.7	0.3	5.1	0.47
Boundary ref 4_S	10/12/2023	190	<3	8	<2	16	80	0.2	<0.2	1.9	0.12
Boundary ref 4_B	10/12/2023	200	10	7	5	17	140	0.4	<0.2	5.6	1.1
Boundary ref 5_S	9/12/2023	240	5	8	<2	16	70	0.1	<0.2	1.7	<0.05
Boundary ref 5_B	9/12/2023	220	23	10	6	26	370	0.2	<0.2	3.2	0.45

Note: For results for compliance purposes uncertainty of measurement (MU) will sometimes affect the interpretation whether the result passes or fails the compliance limit.

Tables for measurement uncertainty are available online at www.mafrl.murdoch.edu.au

POC is outside the scope of NATA accreditation

Signatory: Vaughan Gregory
Date: 12/01/2024

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WATER QUALITY DATA

Contact: Kian Rex

Customer: Tassal Barramundi Operations

Address: 1 Darkan Avenue, North Coogee, WA 6163

Date of Issue: 24/01/2024

Date Received: 22/12/2023

Our Reference: TAS23-8

Your Reference: Additional Baseline Data Collection

METHOD SAMPLE CODE	Sampling Date	2300 SILICATE µg.Si/L	2000 AMMONIA µg.N/L	4100 ORTHO-P µg.P/L	2100 NO3+NO2 µg.N/L	4700 TOTAL-P µg.P/L	2700 TOTAL-N µg.N/L	3000 CHLOROPHYLL'a' µg/L	3000 PHAEOPHYTIN'a' µg/L	2540D TSS mg/L	6200 POC mg/L
Reporting Limit		<2	<3	<2	<2	<5	<50	<0.1	<0.2	<1	<0.05
Analysis Date		11/01/2024	8/01/2024	8/01/2024	8/01/2024	3/01/2024	3/01/2024	9/01/2024	9/01/2024	3/01/2024	5/01/2025
File		24011101	24010801	24010801	24010801	24010302-1001	24010302-1001	24010901	24010901	24010301	25010501
Cecelia Island_S	15/12/2023	210	<3	8	4	16	80	0.5	<0.2	3.2	0.08
Edeline Island North_S	15/12/2023	230	<3	8	2	16	90	0.6	<0.2	4.4	0.10
Dorothy Island_S	15/12/2023	210	<3	7	3	16	80	0.5	<0.2	3.0	0.06
Dorothy Island_B	15/12/2023	210	4	8	3	22	130	0.6	0.8	12	0.22
Edeline Island South_S	16/12/2023	300	<3	8	2	17	90	0.3	<0.2	4.6	0.07
Mary Island_S	16/12/2023	360	<3	8	<2	16	80	0.4	<0.2	4.6	0.09
Bayliss Island_S	15/12/2023	220	<3	8	3	16	80	0.5	0.2	4.8	0.07
Bayliss Island_B	15/12/2023	220	<3	8	4	17	120	0.7	0.4	6.0	0.15
Razor Island_S	13/12/2023	320	<3	7	<2	16	90	0.7	0.2	3.2	0.12
Razor Island_B	13/12/2023	380	14	11	3	33	260	0.9	0.2	4.7	0.31
Koolan Island_S	14/12/2023	220	<3	8	3	17	80	0.4	<0.2	3.6	0.07
Koolan Island_B	14/12/2023	220	<3	7	3	19	150	0.6	0.4	8.6	0.18
Crocodile Creek_S	14/12/2023	210	<3	7	<2	16	90	0.5	<0.2	3.8	0.07
Crocodile Creek_B	14/12/2023	220	<3	7	2	20	120	0.7	0.4	12	0.30
Conilurus Island_S	15/12/2023	210	<3	6	3	16	80	0.4	<0.2	3.2	0.05
Conilurus Island_B	15/12/2023	220	<3	8	3	17	90	0.4	<0.2	3.4	0.13
Extra Crocodile Creek 2_S	14/12/2023	210	<3	8	<2	16	80	0.5	<0.2	4.0	0.15
Extra Crocodile Creek 2_B	14/12/2023	210	<3	6	<2	18	120	0.5	<0.2	4.6	0.19
Extra Conilurus Island 2_S	14/12/2023	220	<3	7	<2	16	80	0.5	<0.2	3.9	0.08
Extra Conilurus Island 2_B	14/12/2023	220	6	10	4	17	90	0.5	<0.2	3.6	0.10
Extra Bayliss Island 2_S	15/12/2023	230	<3	6	3	16	80	0.5	0.2	3.9	<0.05
Extra Bayliss Island 2_B	15/12/2023	240	<3	8	4	16	100	0.6	0.3	6.3	0.13
Strickland Bay Ref Site 1_S	16/12/2023	260	<3	8	<2	16	80	0.3	<0.2	3.2	<0.05
Strickland Bay Ref Site 2_S	16/12/2023	300	<3	8	2	15	100	0.3	<0.2	4.0	0.08
Strickland Bay Ref Site 3_S	15/12/2023	260	<3	8	<2	16	80	0.4	<0.2	3.9	0.06
Strickland Bay Ref Site 4_S	15/12/2023	230	<3	8	<2	16	80	0.5	<0.2	4.1	0.10
Bayliss Islands Ref Site 1_S	15/12/2023	220	<3	7	6	17	90	0.5	0.3	4.8	0.06

Vaughan Gregory

Signatory: Vaughan Gregory
Date: 24/01/2024

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WATER QUALITY DATA

Contact: Kian Rex
Customer: Tassal Barramundi Operations
Address: 1 Darkan Avenue, North Coogee, WA 6163

Date of Issue: 24/01/2024
Date Received: 22/12/2023
Our Reference: TAS23-8

Your Reference: Additional Baseline Data Collection

METHOD SAMPLE CODE	Sampling Date	2300 SILICATE µg.Si/L	2000 AMMONIA µg.N/L	4100 ORTHO-P µg.P/L	2100 NO3+NO2 µg.N/L	4700 TOTAL-P µg.P/L	2700 TOTAL-N µg.N/L	3000 CHLOROPHYLL'a' µg/L	3000 PHAEOPHYTIN'a' µg/L	2540D TSS mg/L	6200 POC mg/L
Reporting Limit		<2	<3	<2	<2	<5	<50	<0.1	<0.2	<1	<0.05
Analysis Date		11/01/2024	8/01/2024	8/01/2024	8/01/2024	3/01/2024	3/01/2024	9/01/2024	9/01/2024	3/01/2024	5/01/2025
File		24011101	24010801	24010801	24010801	24010302-1001	24010302-1001	24010901	24010901	24010301	25010501
Bayliss Islands Ref Site 1_B	15/12/2023	220	4	8	4	17	140	0.5	0.4	5.7	0.12
Bayliss Islands Ref Site 2_S	15/12/2023	230	<3	8	4	16	80	0.4	<0.2	3.2	0.06
Bayliss Islands Ref Site 2_B	15/12/2023	230	<3	8	3	17	100	0.5	0.3	5.3	0.10
Dorothy Island Ref Site 1_S	15/12/2023	200	<3	8	4	15	80	0.5	<0.2	3.5	<0.05
Dorothy Island Ref Site 1_B	15/12/2023	210	5	8	4	22	160	0.6	0.8	16	0.25
Conilurus/Crock Creek Ref 1_S	15/12/2023	210	<3	8	3	15	90	0.5	<0.2	4.6	<0.05
Conilurus/Crock Creek Ref 1_B	15/12/2023	230	4	8	3	17	140	0.5	0.2	4.5	0.10
Conilurus/Crock Creek Ref 2_S	14/12/2023	200	<3	6	2	17	80	0.5	<0.2	3.6	0.10
Conilurus/Crock Creek Ref 2_B	14/12/2023	210	<3	8	3	18	150	0.7	0.4	8.7	0.20
Conilurus/Crock Creek Ref 3_S	14/12/2023	210	<3	8	3	16	80	0.5	<0.2	4.4	0.11
Conilurus/Crock Creek Ref 3_B	14/12/2023	210	<3	8	<2	17	90	0.6	0.2	5.9	0.11
Koolan Island Ref Site 1_S	14/12/2023	210	<3	7	<2	16	70	0.3	<0.2	2.8	0.08
Koolan Island Ref Site 1_B	14/12/2023	220	<3	11	4	62	480	0.5	0.3	6.1	0.15
Razor Island Ref Site 1_S	13/12/2023	280	<3	7	<2	17	90	0.4	<0.2	4.0	0.15
Razor Island Ref Site 1_B	13/12/2023	310	3	8	<2	18	160	0.7	0.4	9.3	0.30
Inner ref 1_S	16/12/2023	360	<3	8	<2	17	100	0.8	<0.2	6.8	0.17
Inner ref 2_S	16/12/2023	450	<3	8	<2	17	100	0.7	0.2	6.4	0.15
Inner ref 3_S	15/12/2023	500	<3	7	<2	17	100	0.8	<0.2	8.0	0.23
Inner ref 4_S	15/12/2023	200	<3	7	2	16	90	1.0	0.3	7.1	0.14
Inner ref 5_S	15/12/2023	210	<3	6	<2	16	90	0.9	0.2	5.4	0.12
Inner ref 6_S	15/12/2023	240	<3	6	3	17	80	0.5	0.2	3.9	0.09
Inner ref 6_B	15/12/2023	240	8	7	5	16	130	0.5	0.2	5.1	0.12
Inner ref 7_S	14/12/2023	220	<3	6	<2	16	100	0.5	<0.2	2.9	0.11
Inner ref 7_B	14/12/2023	230	9	13	2	22	220	0.5	<0.2	4.8	0.50
Inner ref 8_S	14/12/2023	210	<3	8	<2	16	70	0.4	<0.2	3.2	0.14
Inner ref 8_B	14/12/2023	220	<3	10	3	16	120	0.4	<0.2	4.8	0.26
Boundary ref 1_S	14/12/2023	220	<3	8	7	17	90	0.5	0.3	4.6	0.09



Signatory: Vaughan Gregory
Date: 24/01/2024

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Spare test items will be held for two months unless otherwise requested.

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WATER QUALITY DATA

Contact: Kian Rex

Customer: Tassal Barramundi Operations

Address: 1 Darkan Avenue, North Coogee, WA 6163

Date of Issue: 24/01/2024

Date Received: 22/12/2023

Our Reference: TAS23-8

Your Reference: Additional Baseline Data Collection

METHOD SAMPLE CODE	Sampling Date	2300 SILICATE µg.Si/L	2000 AMMONIA µg.N/L	4100 ORTHO-P µg.P/L	2100 NO3+NO2 µg.N/L	4700 TOTAL-P µg.P/L	2700 TOTAL-N µg.N/L	3000 CHLOROPHYLL'a' µg/L	3000 PHAEOPHYTIN'a' µg/L	2540D TSS mg/L	6200 POC mg/L
Reporting Limit		<2	<3	<2	<2	<5	<50	<0.1	<0.2	<1	<0.05
Analysis Date		11/01/2024	8/01/2024	8/01/2024	8/01/2024	3/01/2024	3/01/2024	9/01/2024	9/01/2024	3/01/2024	5/01/2025
File		24011101	24010801	24010801	24010801	24010302-1001	24010302-1001	24010901	24010901	24010301	25010501
Boundary ref 1_B	14/12/2023	220	<3	10	9	22	150	0.6	0.5	7.2	0.25
Boundary ref 2_S	14/12/2023	210	<3	8	6	16	80	0.5	0.4	5.6	0.08
Boundary ref 2_B	14/12/2023	210	4	9	6	17	120	0.6	0.5	6.4	0.14
Boundary ref 3_S	14/12/2023	200	<3	8	3	15	80	0.4	<0.2	1.4	<0.05
Boundary ref 3_B	14/12/2023	190	4	9	6	19	120	0.5	0.5	7.8	0.17
Boundary ref 4_S	14/12/2023	200	<3	8	3	16	70	0.4	<0.2	2.9	0.06
Boundary ref 4_B	14/12/2023	200	7	9	3	30	290	0.5	0.8	12	0.19
Boundary ref 5_S	14/12/2023	200	<3	8	4	17	80	0.4	<0.2	2.0	0.06
Boundary ref 5_B	14/12/2023	200	3	8	4	38	260	0.5	0.4	7.9	0.18

Note: For results for compliance purposes uncertainty of measurement (MU) will sometimes affect the interpretation whether the result passes or fails the compliance limit.

Tables for measurement uncertainty are available online at www.mafrl.murdoch.edu.au

POC is outside the scope of NATA accreditation

Signatory: Vaughan Gregory
Date: 24/01/2024

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WATER QUALITY DATA

Contact: Sean Riley

Customer: Tassal Barramundi Operations

Address: Lot 6 Murakami Rd, Broome, WA 6725

Date of Issue: 27/03/2024

Date Received: 05/03/2024

Our Reference: TAS24-6

Your Reference: Additional Baseline Data Collection

METHOD SAMPLE CODE	Sampling Date	2300 SILICATE µg.Si/L	2000 AMMONIA µg.N/L	4100 ORTHO-P µg.P/L	2100 NO3+NO2 µg.N/L	4700 TOTAL-P µg.P/L	2700 TOTAL-N µg.N/L	3000 CHLOROPHYLL'a' µg/L	3000 PHAEOPHYTIN'a' µg/L	2540D TSS mg/L	6200 POC mg/L
Reporting Limit		<2	<3	<2	<2	<5	<50	<0.1	<0.2	<1	<0.05
Analysis Date File		12/03/2024 24031201-02	7/03/2024 24030701-02	7/03/2024 24030701-02	7/03/2024 24030701-02	20/03/2024 24032001-03	20/03/2024 24032001-03	19/03/2024 24031902	19/03/2024 24031902	5/03/2024 24030501	6/03/2024 24030601-1101
Cecelia Island_S	26/02/2024	85	<3	7	<2	16	100	0.5	<0.2	2	0.06
Cecelia Island_B	26/02/2024	80	5	6	<2	16	110	0.4	0.3	4	0.09
Edeline Island North_S	26/02/2024	91	<3	6	<2	15	100	0.4	<0.2	2	<0.05
Edeline Island North_B	26/02/2024	96	<3	6	<2	21	100	0.5	0.5	10	0.12
Dorothy Island_S	25/02/2024	130	3	7	5	15	90	0.5	0.2	1	0.05
Dorothy Island_B	25/02/2024	140	6	8	8	17	120	0.7	0.5	6	0.15
Edeline Island South_S	26/02/2024	77	<3	6	<2	14	100	0.2	<0.2	2	<0.05
Edeline Island South_B	26/02/2024	80	<3	7	<2	14	90	0.2	<0.2	2	0.06
Bayliss Island_S	25/02/2024	89	<3	6	<2	15	90	0.5	<0.2	1	<0.05
Bayliss Island_B	25/02/2024	110	10	7	5	17	100	0.8	0.4	7	0.15
Razor Island_S	24/02/2024	75	<3	5	<2	14	90	0.2	<0.2	2	0.11
Razor Island_B	24/02/2024	73	5	7	2	20	140	0.7	0.3	7	0.16
Extra Bayliss Island 2_S	25/02/2024	91	3	7	<2	15	90	0.4	<0.2	1	0.08
Extra Bayliss Island 2_B	25/02/2024	93	5	7	2	17	100	0.6	0.3	6	0.09
Strickland Bay Ref Site 2_S	26/02/2024	79	<3	7	3	15	90	0.4	<0.2	1	<0.05
Strickland Bay Ref Site 2_B	26/02/2024	83	3	7	2	17	90	0.3	0.3	3	0.07
Strickland Bay Ref Site 3_S	26/02/2024	92	<3	7	2	15	80	0.4	0.2	3	0.06
Strickland Bay Ref Site 3_B	26/02/2024	96	<3	6	<2	19	90	0.2	<0.2	6	0.06
Strickland Bay Ref Site 4_S	26/02/2024	78	<3	6	<2	15	90	0.3	<0.2	1	<0.05
Strickland Bay Ref Site 4_B	26/02/2024	75	3	7	<2	15	110	0.3	<0.2	2	0.07
Bayliss Islands Ref Site 1_S	25/02/2024	94	4	7	<2	15	100	0.6	<0.2	2	0.07
Bayliss Islands Ref Site 1_B	25/02/2024	100	16	7	2	18	180	0.9	0.5	6	0.15
Bayliss Islands Ref Site 2_S	25/02/2024	87	<3	7	2	15	100	0.5	0.2	2	0.08
Bayliss Islands Ref Site 2_B	25/02/2024	88	<3	7	3	15	90	0.5	0.4	2	0.08
Dorothy Island Ref Site 1_S	25/02/2024	150	7	8	8	18	90	0.5	0.2	1	0.06
Dorothy Island Ref Site 1_B	25/02/2024	160	6	8	10	18	110	0.6	0.5	4	0.10
Razor Island Ref Site 1_S	24/02/2024	76	<3	5	<2	15	80	0.3	<0.2	2	0.06



Signatory: Vaughan Gregory
Date: 27/03/2024

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WATER QUALITY DATA

Contact: Sean Riley

Customer: Tassal Barramundi Operations

Address: Lot 6 Murakami Rd, Broome, WA 6725

Date of Issue: 27/03/2024

Date Received: 05/03/2024

Our Reference: TAS24-6

Your Reference: Additional Baseline Data Collection

METHOD SAMPLE CODE	Sampling Date	2300 SILICATE µg.Si/L	2000 AMMONIA µg.N/L	4100 ORTHO-P µg.P/L	2100 NO3+NO2 µg.N/L	4700 TOTAL-P µg.P/L	2700 TOTAL-N µg.N/L	3000 CHLOROPHYLL'a' µg/L	3000 PHAEOPHYTIN'a' µg/L	2540D TSS mg/L	6200 POC mg/L
Reporting Limit		<2	<3	<2	<2	<5	<50	<0.1	<0.2	<1	<0.05
Analysis Date File		12/03/2024 24031201-02	7/03/2024 24030701-02	7/03/2024 24030701-02	7/03/2024 24030701-02	20/03/2024 24032001-03	20/03/2024 24032001-03	19/03/2024 24031902	19/03/2024 24031902	5/03/2024 24030501	6/03/2024 24030601-1101
Razor Island Ref Site 1_B	24/02/2024	75	<3	7	<2	18	90	0.3	<0.2	4	0.07
Inner ref 1_S	24/02/2024	200	<3	6	<2	14	100	0.4	<0.2	3	0.12
Inner ref 1_B	24/02/2024	150	<3	6	<2	22	110	0.6	0.4	8	0.13
Inner ref 2_S	26/02/2024	160	<3	6	<2	13	80	0.3	<0.2	2	0.05
Inner ref 2_B	26/02/2024	180	<3	6	<2	18	110	0.6	0.3	7	0.14
Inner ref 3_S	26/02/2024	390	<3	6	<2	17	100	0.6	0.2	5	0.12
Inner ref 3_B	26/02/2024	410	6	6	<2	22	140	0.8	0.3	8	0.14
Inner ref 4_S	26/02/2024	110	<3	6	<2	16	80	0.5	0.3	4	0.09
Inner ref 4_B	26/02/2024	110	<3	7	<2	19	120	0.7	0.4	6	0.12
Inner ref 5_S	25/02/2024	100	<3	6	2	16	90	0.5	0.3	4	0.08
Inner ref 5_B	25/02/2024	100	7	7	2	16	150	0.6	0.3	4	0.11
Inner ref 6_S	25/02/2024	100	4	7	<2	16	120	0.4	<0.2	2	0.07
Inner ref 6_B	25/02/2024	110	9	6	<2	17	110	0.6	0.3	5	0.11
Boundary ref 1_S	25/02/2024	71	<3	6	3	15	90	0.5	0.3	3	0.08
Boundary ref 1_B	25/02/2024	74	3	7	3	17	110	0.7	0.4	2	0.09
Boundary ref 2_S	25/02/2024	63	<3	7	3	15	80	0.4	0.2	2	0.07
Boundary ref 2_B	25/02/2024	67	6	7	2	17	120	0.8	0.7	4	0.11
Boundary ref 3_S	25/02/2024	150	<3	8	12	17	100	0.4	<0.2	1	<0.05
Boundary ref 3_B	25/02/2024	160	4	9	15	23	120	0.5	1.7	13	0.19
Boundary ref 4_S	25/02/2024	130	32	8	5	18	90	0.6	0.5	4	0.06
Boundary ref 4_B	25/02/2024	140	5	8	5	22	120	0.4	1.1	18	0.25
Boundary ref 5_S	25/02/2024	130	<3	8	4	16	90	0.5	0.3	2	<0.05
Boundary ref 5_B	25/02/2024	140	5	8	5	17	110	0.5	0.5	4	0.09

Note: For results for compliance purposes uncertainty of measurement (MU) will sometimes affect the interpretation whether the result passes or fails the compliance limit.

Tables for measurement uncertainty are available online at www.mafri.murdoch.edu.au

POC is outside the scope of NATA accreditation

Signatory: Vaughan Gregory
Date: 27/03/2024

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**Marine and Freshwater
Research Laboratory
Environmental Science**

Tel: 08 93602907 Address: 90 South St, Murdoch, WA, 6150



Accreditation Number: 10603

Accredited for compliance with ISO/IEC 17025 - Testing.
The results of the tests, calibrations and/or
measurements included in this document are traceable
to Australian/national standards.



WATER QUALITY DATA

Contact: Sean Riley
Customer: Tassal Barramundi Operations
Address: Lot 6 Murakami Rd, Broome, WA 6725

Date of Issue: 28/03/2024

Date Received: 11/03/2024

Our Reference: TAS24-11

Your Reference: Additional Baseline Data Collection

METHOD SAMPLE CODE	Sampling Date	2300 SILICATE µg.Si/L	2000 AMMONIA µg.N/L	4100 ORTHO-P µg.P/L	2100 NO3+NO2 µg.N/L	4700 TOTAL-P µg.P/L	2700 TOTAL-N µg.N/L	3000 CHLOROPHYLL'a' µg/L	3000 PHAEOPHYTIN'a' µg/L	2540D TSS mg/L	6200 POC mg/L
Reporting Limit		<2	<3	<2	<2	<5	<50	<0.1	<0.2	<1	<0.05
Analysis Date		21/03/2024	26/03/2024	28/03/2024	26/03/2024	20/03/2024	20/03/2024	20/03/2024	20/03/2024	15/03/2024	20/03/2024
File		24032101	24032601	24032801	24032601	24032001-02-03	24032001-02-03	24032001	24032001	24031501	24032001
Cecelia Island_S	3/03/2024	180	<3	8	5	16	90	0.4	<0.2	2	0.05
Cecelia Island_B	3/03/2024	180	8	8	9	18	110	0.6	0.2	3	0.06
Edeline Island North_S	3/03/2024	160	<3	7	<2	17	90	0.8	<0.2	3	0.10
Edeline Island North_B	3/03/2024	170	3	7	6	19	120	0.9	0.2	4	0.09
Dorothy Island_S	4/03/2024	190	4	8	14	18	100	0.4	<0.2	2	<0.05
Dorothy Island_B	4/03/2024	200	6	10	16	23	120	0.5	0.6	11	0.17
Edeline Island South_S	3/03/2024	150	<3	6	<2	17	90	0.6	<0.2	2	0.08
Edeline Island South_B	3/03/2024	160	3	7	2	18	110	1.1	0.2	3	0.14
Bayliss Island_S	4/03/2024	170	<3	8	6	17	130	0.7	<0.2	2	0.06
Bayliss Island_B	4/03/2024	170	4	8	8	19	140	0.9	0.3	4	0.11
Razor Island_S	3/03/2024	140	<3	6	<2	15	90	0.4	<0.2	2	0.07
Razor Island_B	3/03/2024	140	7	8	3	22	200	0.8	<0.2	5	0.26
Extra Bayliss Island 2_S	4/03/2024	160	<3	6	4	18	100	0.9	0.2	3	0.11
Extra Bayliss Island 2_B	4/03/2024	170	3	8	7	20	110	1.0	0.3	5	0.12
Strickland Bay Ref Site 2_S	3/03/2024	160	<3	7	<2	16	90	0.6	<0.2	2	0.08
Strickland Bay Ref Site 2_B	3/03/2024	180	4	8	9	19	120	1.1	0.3	6	0.10
Strickland Bay Ref Site 3_S	4/03/2024	170	<3	7	2	17	90	0.6	<0.2	2	0.05
Strickland Bay Ref Site 3_B	4/03/2024	160	5	7	3	18	120	0.7	<0.2	4	0.12
Strickland Bay Ref Site 4_S	4/03/2024	180	<3	8	7	17	120	0.4	<0.2	2	<0.05
Strickland Bay Ref Site 4_B	4/03/2024	180	4	9	14	18	140	0.4	0.3	4	0.09
Bayliss Islands Ref Site 1_S	4/03/2024	180	<3	8	12	19	110	0.8	0.3	5	0.09
Bayliss Islands Ref Site 1_B	4/03/2024	180	5	9	11	19	120	0.8	0.3	6	0.11
Bayliss Islands Ref Site 2_S	4/03/2024	140	<3	7	<2	17	100	0.8	<0.2	3	0.09
Bayliss Islands Ref Site 2_B	4/03/2024	160	6	8	8	18	140	0.8	0.3	4	0.10
Dorothy Island Ref Site 1_S	4/03/2024	190	<3	9	14	18	100	0.5	0.3	4	0.07
Dorothy Island Ref Site 1_B	4/03/2024	200	6	9	16	32	200	0.5	1.3	25	0.36
Razor Island Ref Site 1_S	3/03/2024	140	<3	6	<2	16	110	0.4	<0.2	3	0.08

Vaughan Gregory

Signatory: Vaughan Gregory
Date: 28/03/2024

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Contact: Sean Riley
Customer: Tassal Barramundi Operations
Address: Lot 6 Murakami Rd, Broome, WA 6725

Date of Issue: 28/03/2024

Date Received: 11/03/2024

Our Reference: TAS24-11

Your Reference: Additional Baseline Data Collection

WATER QUALITY DATA

METHOD SAMPLE CODE	Sampling Date	2300 SILICATE µg.Si/L	2000 AMMONIA µg.N/L	4100 ORTHO-P µg.P/L	2100 NO3+NO2 µg.N/L	4700 TOTAL-P µg.P/L	2700 TOTAL-N µg.N/L	3000 CHLOROPHYLL'a' µg/L	3000 PHAEOPHYTIN'a' µg/L	2540D TSS mg/L	6200 POC mg/L
Reporting Limit		<2	<3	<2	<2	<5	<50	<0.1	<0.2	<1	<0.05
Analysis Date File		21/03/2024 24032101	26/03/2024 24032601	28/03/2024 24032801	26/03/2024 24032601	20/03/2024 24032001-02-03	20/03/2024 24032001-02-03	20/03/2024 24032001	20/03/2024 24032001	15/03/2024 24031501	20/03/2024 24032001
Razor Island Ref Site 1_B	3/03/2024	170	4	6	6	19	140	1.0	0.3	6	0.16
Inner ref 1_S	3/03/2024	230	<3	7	<2	17	120	0.9	0.3	4	0.15
Inner ref 1_B	3/03/2024	200	8	7	<2	20	180	1.4	0.4	7	0.26
Inner ref 2_S	3/03/2024	320	<3	6	<2	16	120	0.5	<0.2	3	0.10
Inner ref 2_B	3/03/2024	210	<3	7	<2	20	120	1.1	0.3	5	0.14
Inner ref 3_S	3/03/2024	450	<3	7	<2	18	120	1.0	<0.2	5	0.20
Inner ref 3_B	3/03/2024	440	4	7	<2	21	140	0.9	0.3	12	0.36
Inner ref 4_S	3/03/2024	210	4	8	5	17	130	0.7	0.3	6	0.08
Inner ref 4_B	3/03/2024	220	5	9	7	17	130	0.7	0.3	6	0.15
Inner ref 5_S	3/03/2024	200	<3	9	6	16	100	0.5	0.3	3	0.08
Inner ref 5_B	3/03/2024	180	5	8	7	17	110	0.6	0.2	4	0.09
Inner ref 6_S	4/03/2024	140	<3	6	2	15	90	0.9	0.2	3	0.10
Inner ref 6_B	4/03/2024	160	3	7	5	18	110	1.1	0.3	5	0.12
Boundary ref 1_S	5/03/2024	180	4	8	20	19	120	0.5	0.3	4	<0.05
Boundary ref 1_B	5/03/2024	190	8	10	19	18	140	0.4	0.4	5	0.10
Boundary ref 2_S	5/03/2024	190	3	9	21	18	120	0.4	0.3	4	0.07
Boundary ref 2_B	5/03/2024	200	6	10	20	19	130	0.4	0.4	5	0.11
Boundary ref 3_S	4/03/2024	180	<3	10	18	18	130	0.5	<0.2	3	0.08
Boundary ref 3_B	4/03/2024	190	5	10	18	20	130	0.4	0.6	8	0.15
Boundary ref 4_S	4/03/2024	190	<3	9	5	17	90	0.4	<0.2	2	0.08
Boundary ref 4_B	4/03/2024	210	3	9	15	20	120	0.6	0.7	9	0.17
Boundary ref 5_S	4/03/2024	180	<3	7	<2	16	120	0.4	<0.2	2	0.07
Boundary ref 5_B	4/03/2024	200	5	10	14	18	140	0.4	0.4	4	0.08

Note: For results for compliance purposes uncertainty of measurement (MU) will sometimes affect the interpretation whether the result passes or fails the compliance limit.

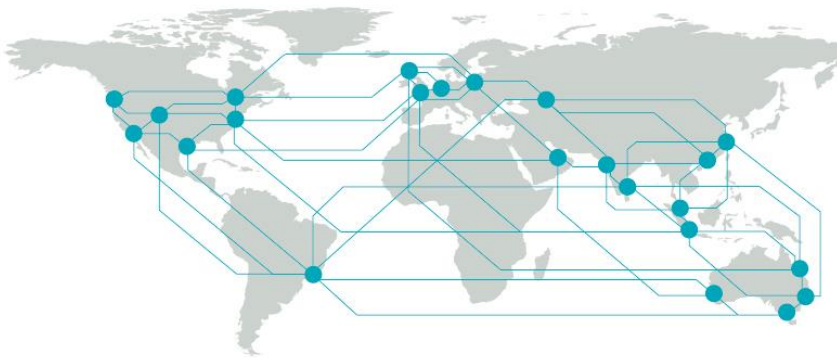
Tables for measurement uncertainty are available online at www.mafri.murdoch.edu.au

POC is outside the scope of NATA accreditation

Signatory: Vaughan Gregory
Date: 28/03/2024

The results only apply to the sample as received and to the sample tested.
Spare test items will be held for two months unless otherwise requested.

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