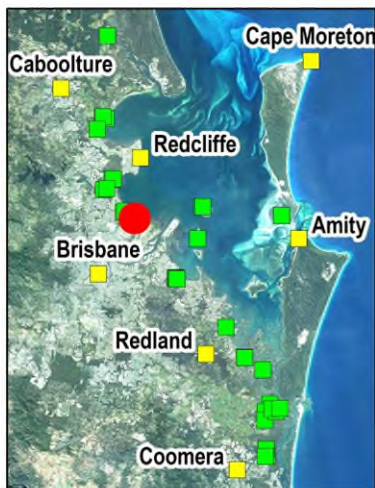
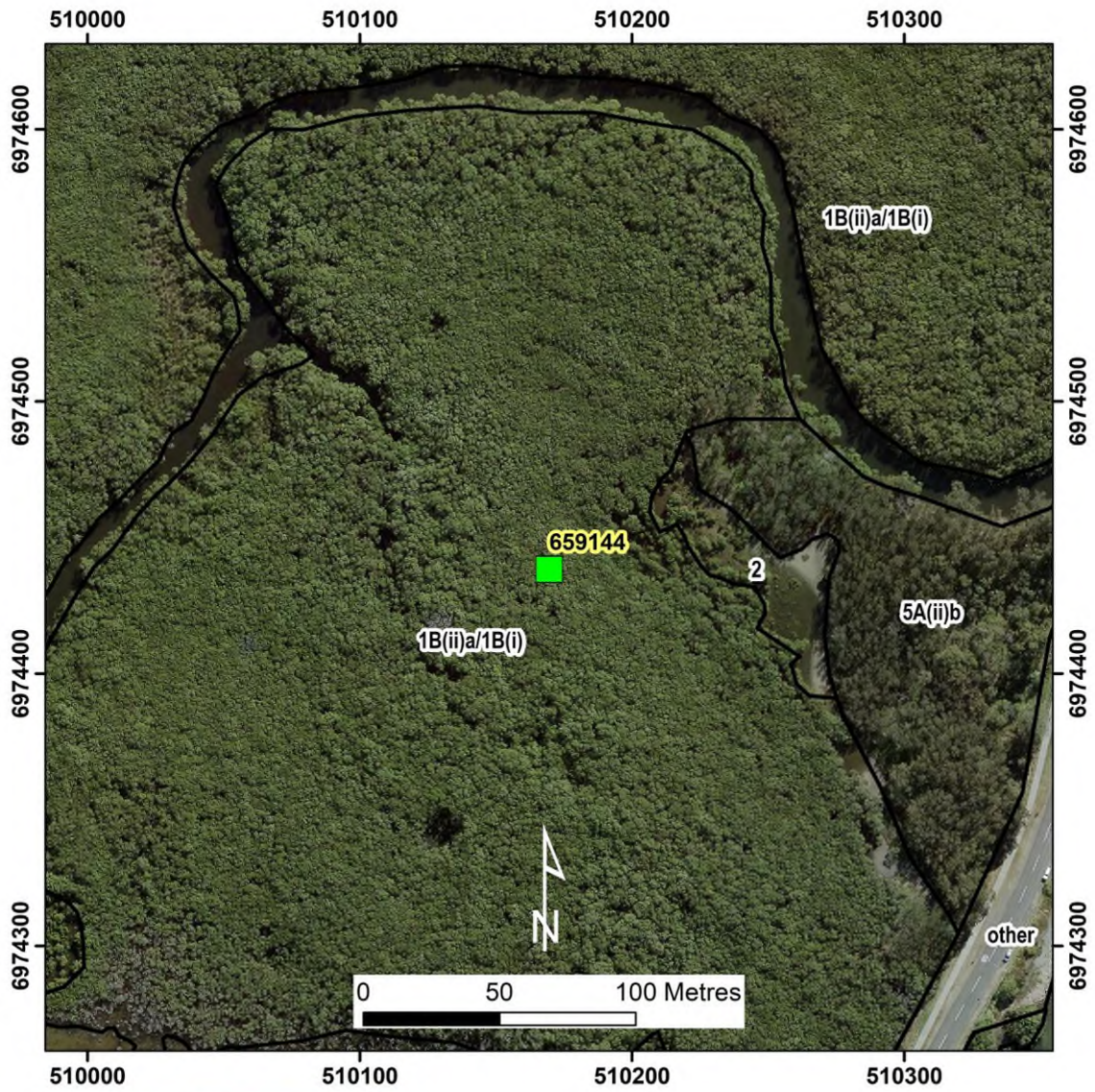


Nudge Beach (site ID = 659144) Low Closed Forest



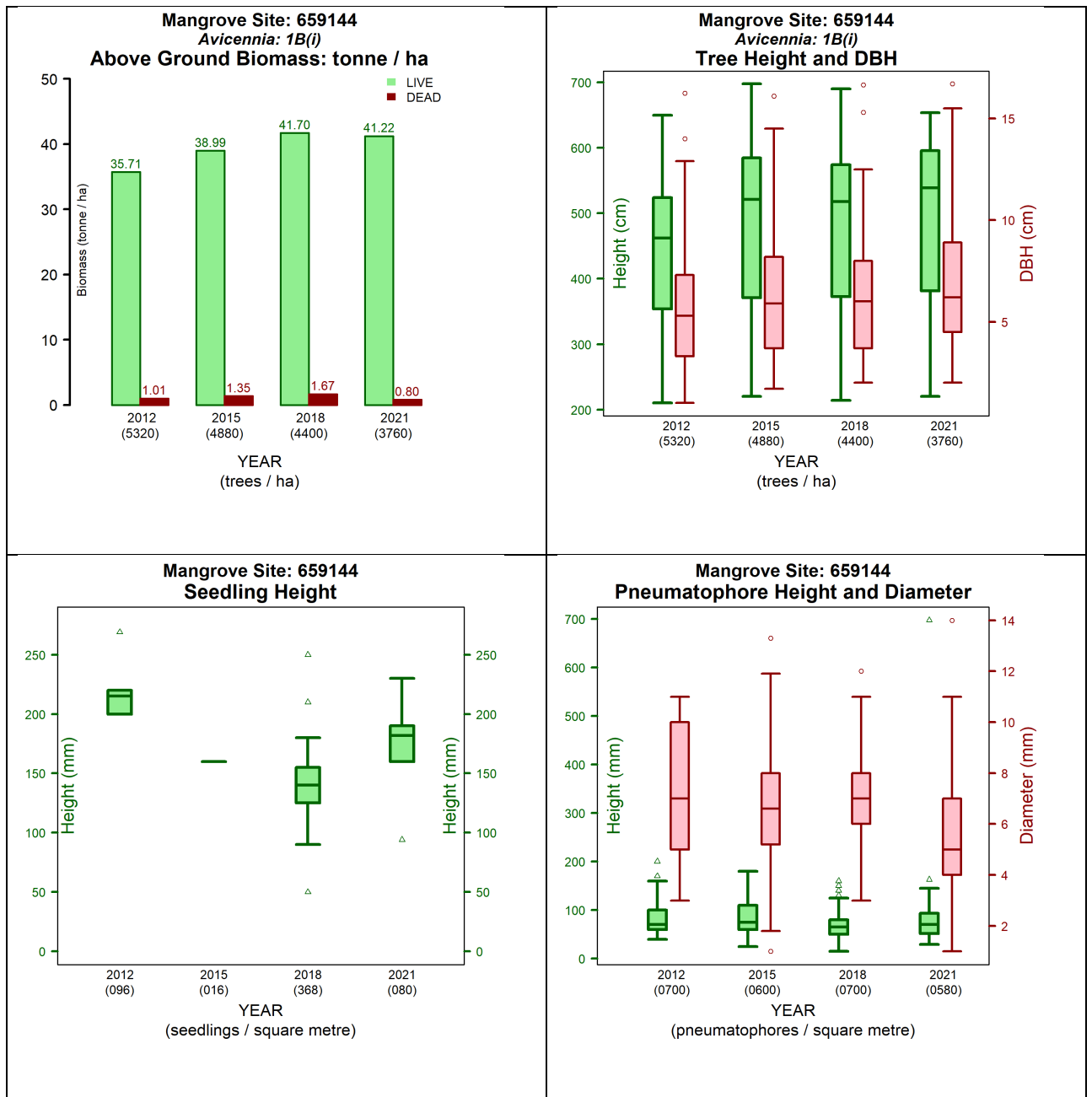


Figure 1. Measurements at site 659144 between 2012 and 2021 (left to right and top to bottom):

- Above ground biomass and density temporal assessment
- Tree height, diameter at breast height (DBH) and stem density temporal assessment
- Pneumatophores height, diameter, and density temporal assessment
- Seedling height and density temporal assessment.

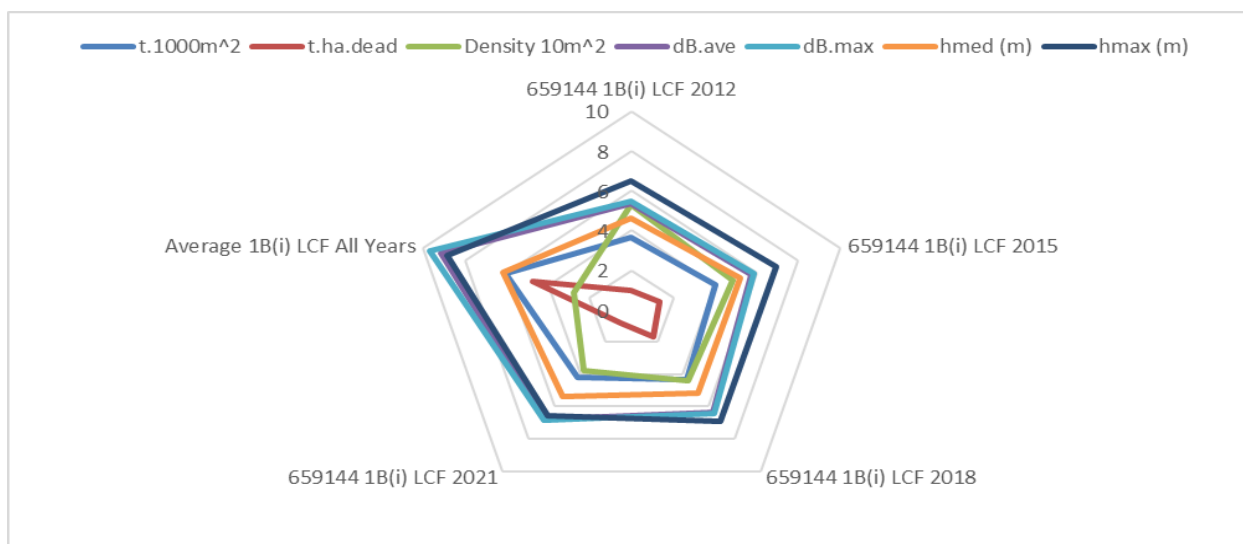


Figure 2. Structural changes over the years for Site 659144 in comparison to average of all sites of vegetation community type 1B(i) by structural formations. The graph indices: t.1000m² is the tonne of live biomass (tonnes) in 1000m square; t.ha.dead is the dead biomass (tonnes) in a hectare; Density 10m² is the number of trees in 10m square; dB.ave is the average diameter at breast height in centimetres; dB.max is the maximum diameter at breast height in centimetres; hmed (m) is the median tree height (meters); hmax (m) is the maximum tree height (meters).

Table 1. Queensland Biodiversity Ecological Information System (QBEIS) temporal assessment for site 659144.

Date	19.03.2012	13.04.2015	11.04.2018	23.04.2022
E Spp.				
T1 Spp.	<i>Avicennia marina</i> subsp. <i>australasica</i>	<i>Avicennia marina</i> subsp. <i>australasica</i>	<i>Avicennia marina</i> subsp. <i>australasica</i>	<i>Avicennia marina</i> subsp. <i>australasica</i>
T1 Med Canopy Height	5	5	6	6
T1 Range low	4	4	5	5
T1 Range High	6	6	7	7
T1 Crown Cover	95	95	95	94
T1 Stem Count	83	196	197	197
T2 Spp.		<i>Avicennia marina</i> subsp. <i>australasica</i> ; <i>Dead tree</i>	<i>Avicennia marina</i> subsp. <i>australasica</i>	<i>Avicennia marina</i> subsp. <i>australasica</i>
T2 Med Canopy Height		3	4	4
T2 Range low		2	3	3
T2 Range high		4	5	5
T2 Crown Cover		3	3	3
T2 stem count		32; 27	20	20
S1 Spp.	<i>Avicennia marina</i> subsp. <i>australasica</i>	<i>Avicennia marina</i> subsp. <i>australasica</i>	<i>Avicennia marina</i> subsp. <i>australasica</i>	<i>Avicennia marina</i> subsp. <i>australasica</i>
S1 Med Canopy Height	2	2	3	3
S1 Range low	2	2	2	2
S1 Range high	3	3	4	4

S1 Crown Cover	1	1	1	1
S1 stem count	24	?	1	1
S2 Spp.	<i>Ceriops australis</i>	<i>Ceriops australis</i>		<i>Ceriops australis</i>
S2 Med Canopy Height	1	1		0.8
S2 Range low	1	1		0.8
S2 Range high	1	1		0.8
S2 Crown Cover	+	+		+
S2 stem count	+	+		*
G Spp.	<i>Avicennia marina</i> subsp. <i>australasica</i>	<i>Avicennia marina</i> subsp. <i>australasica</i>	<i>Avicennia marina</i> subsp. <i>australasica</i> ; <i>Aegiceras corniculatum</i> ; <i>Ceriops australis</i>	<i>Avicennia marina</i> subsp. <i>australasica</i> ; <i>Aegiceras corniculatum</i> ; <i>Ceriops australis</i>
G Med Canopy Height	0.2	0.2	0.2	0.3
G Range low	0.1	0.1	0.1	0.1
G Range high	0.3	0.3	0.4	0.4
G Cover	20	5	13	11
Individual Covers	20	5	13; +; +	11; +; +

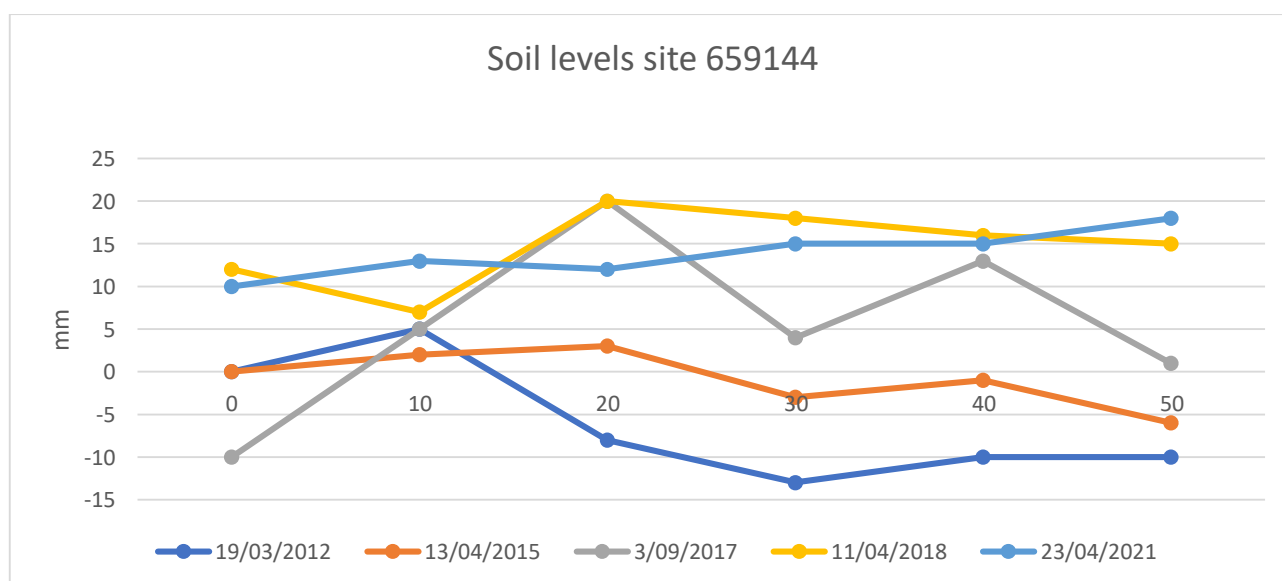


Figure 3. Soil surface elevation measurements (mm) are taken across the QBEIS sites using dumpy level.

Summary

1. Stable species composition in T1 and S1 whereas T2 has emerged in the later years; *Ceriops australis* occurring in 2012 and 2015 but not in 2018. *Aegiceras corniculatum* and *Ceriops australis* present in 2018 with *Avicennia marina* subsp. *australasica* in the ground layer.
2. T1 tree heights increased by 1m and stem count greatly increased; T2 tree heights increased by 1m but stem count decreased; S1 shrub heights increased by 1m, stem count largely reduced while ground species height has remained stable but reduced in cover.

3. Mean tree heights and mean DBH have slightly increased while densities have reduced by 20%, leading to an 18% increase in above ground biomass in the site.
4. Increase (from 2.7% in 2012 to 3.9% in 2018) of the proportion of dead to live biomass within the site.
5. Pneumatophores mean height and girth has slightly fluctuated over the years, but the range has narrowed.
6. Fluctuation in seedling density with a four-fold increase of seedlings in 2018 with a reduction in mean seedling heights over the period.
7. Soil max range level fluctuated with mix erosion and accretion over the period.
8. Soil levels have accreted over the period.



Figure 4. Photograph of Site 659144 *Avicennia marina* subsp. *australasica* community type 1B(i) Low Closed Forest