# Mangroves and Saltmarshes

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# April 07, 2023

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#### Methods Overview

Mangrove and saltmarsh areas that may be suitable for restoration were identified using the following methods

- **Step 1.** Identify potentially suitable substrates using the Environmental Sensitivity Coastline Index (ESCI). Suitable substrates include: gravel beach, mangrove, pocket accumulation, pocket beach, sand beach low energy, sheltered low reef (Figure 1).
- **Step 2.** Prioritize areas where mangroves could migrate inland, as identified by the Water Resources Protection Areas data layer (Figure 2). This layer is defined as the inland areas within 12m of the coastline and within 4m of sea level. This is the best available data due to current time constraints.
- **Step 3.** Prioritize areas that overlap with public land use using the National Parks and National Trust data layers. Prioritize Nature Reserves and National Trust Coastal Properties first (Figures 3-4), due to their environmental objectives, and prioritize Amenity Parks and Recreational Parks second (Figure 5).
- **Step 4.** Individually rank sites by proximity to mangroves (data from Sarah Brooks in 2023), where sites that are closest to mangroves are considered more suitable for restoration (Figure 6). Sites that were more than 50 m from a mangrove were excluded.

Additional mangrove and saltmarsh survey sites were included for spatial context, including sites surveyed by Robbie in 2020 (Figure 7, Table 1), and sites based on expert knowledge (Figure 8, Table 2).

#### Results Overview

Suitability rankings were identified as the overlap of data layers in the following scenarios:

- Ranking 1 First Priority: Environmental Sensitivity Coastline Index suitable substrates that overlap with nature reserves or National Trust Conservation Properties and Water Resources Protection Areas, individually ranked by proximity to mangrove sites (areas greater than 50m away were removed [Figure 9, Table 3]).
- Ranking 2 Second Priority: Environmental Sensitivity Coastline Index suitable substrates that overlap with amenity and recreation areas and Water Resources Protection Areas, individually ranked by proximity to mangrove sites (areas greater than 50m away were removed [Figure 10, Table 4]).
- Ranking 3 Third Priority: Environmental Sensitivity Coastline Index suitable substrates that overlap with nature reserves, National Trust Conservation Properties OR Environmental Sensitivity Coastline Index suitable substrates that overlap with Water Resources Protection Areas, individually ranked by proximity to mangrove sites (areas greater than 50m away were removed [Figure 11, Table 5]).
- Ranking 4 Fourth Priority: Environmental Sensitivity Coastline Index suitable substrates that overlap with amenity and recreational areas, individually ranked by proximity to mangrove sites (areas greater than 50m away were removed [Figure 12, Table 6]).
- Ranking 5 Last Priority: Environmental Sensitivity Coastline Index suitable substrates that do not overlap with additional layers, individually ranked by proximity to mangrove sites (areas greater than 50m away were removed [Figure 13]).

Final Suitability Maps: Final suitability maps that include all data are present in the following figures and tables:

• A faceted plot that shows all ranking groups side-by-side (Figure 14)

- A single plot with an overlay showing saltmarsh and mangrove sites surveyed by Robbie in 2020 (Figure 15, Table 7 [site reference table; identical to Table 1])
- A single plot with an overlay showing saltmarsh and mangrove sites surveyed identified by expert knowledge (Figure 16, Table 8 [site reference table; identical to Table 2])
- A single plot with the final suitability rankings, and nothing else (Figure 17)

### Methods In Depth

# Step 1. Identify potentially suitable substrates using the Environmental Sensitivity Coastline Index (ESCI)

Areas that may be suitable include:

- Gravel beach
- Mangrove
- Pocket accumulation
- Pocket beach
- Sand beach low energy
- Sheltered low relief

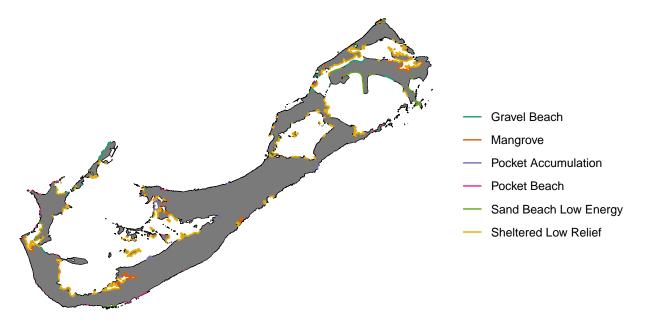


Figure 1: Substrates remaining for mangrove and saltmarsh restoration after unsuitable substrates are excluded.

### Step 2. Prioritize areas where mangroves could migrate inland, as identified by the Water Resources Protection Areas data layer

The Water Resources Protection Areas data layer includes areas that are 4m or less above sea level and within 12m of the coastline (or 17m from the Harrington Sound coastline), and are the best available data due to current time constraints. This layer inherently includes a border of all of Bermuda's coastline at some level. We are working to incorporate areas of this layer that are larger and venture more inland, to highlight

areas that are prone to flooding and sea level rise. Areas prone to sea level rise would also be prioritized, as this is where these habitats could potentially migrate inland with sea-level rise.

The Water Resources Protection Areas data layer was clipped to remove areas that are less than 20 m from Bermuda's coastline. The remaining areas were then extended using a buffer of 40 m to include shoreline areas adjacent to relevant WRPAs.

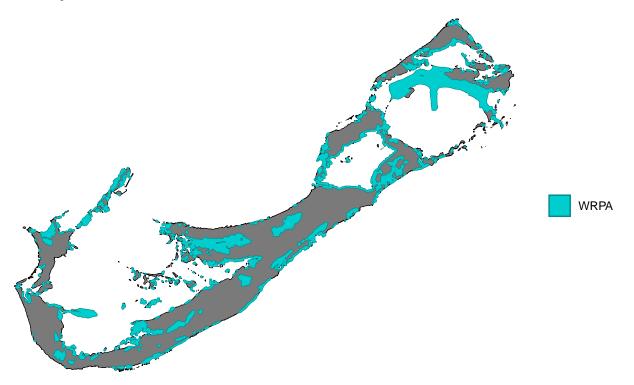


Figure 2: The Water Resource Protection Areas data layer used to help identify habitats for mangrove and saltmarsh restoration.

# Step 3. Prioritize areas that overlap with public land use using the National Parks and National Trust data layers

A full site assessment that includes addressing any conflicts with stakeholders will need to be assessed before a restoration project is implemented.

Step 3a. Prioritize Nature Reserves and National Trust Coastal Properties first, due to their environmental objectives



Figure 3: Areas that are identified as nature reserves within marine national parks.

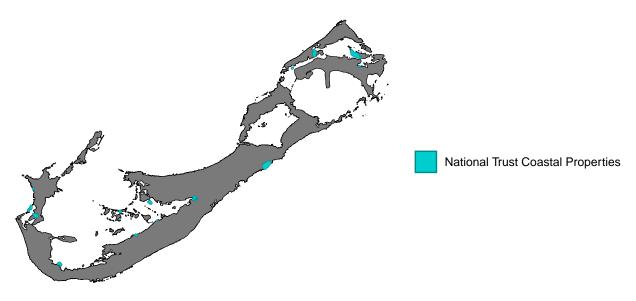


Figure 4: Areas considered National Trust Coastal Properties. Since areas are on land, a 50 m buffer was added to encompass any potential nearby mangrove habitats.

Step 3b. Prioritize Amenity Parks and Recreational Parks next

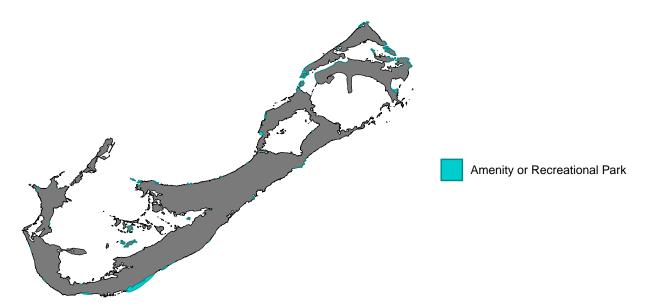


Figure 5: Regions identified as amenity and recreation areas within marine national parks.

Step 4. Individually rank sites by proximity to mangroves (data from Sarah Brooks 2023), where sites that are closest to mangroves are considered more suitable for restoration. Sites that were more than 50 m from a mangrove were excluded.

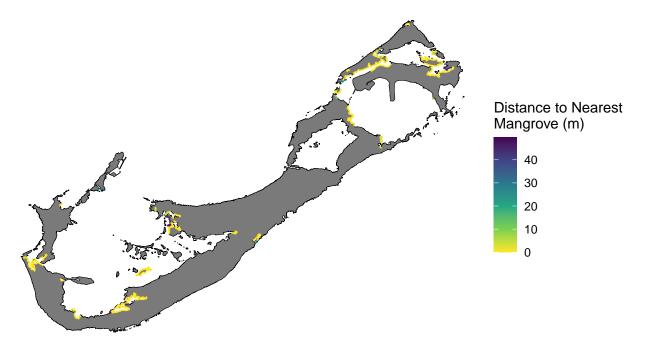


Figure 6: ESCI substrates remaining for mangrove and saltmarsh restoration after unsuitable substrates are excluded (see Step 1), colored by their proximity to mangrove sites (areas greater than 50m away were removed).

#### Additional Mangrove Datasets (Not Included in Ranking)

#### Robbie's Mangrove Sites

These are mangrove sites that Robbie surveyed in 2020 and assigned a ranking of 1 (scattered trees). These areas can potentially be augmented by infill planting. These data were not included in the ranking system, but were added here for spatial context.

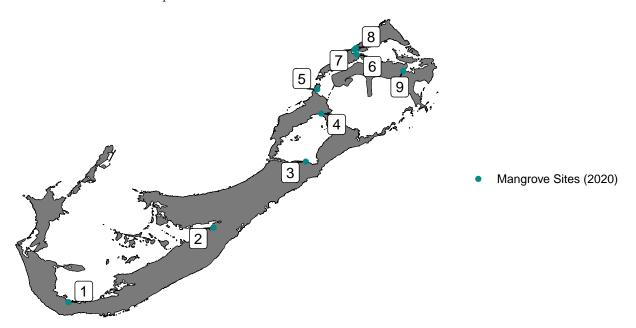


Figure 7: Sites that Robbie surveyed in 2020 and assigned a ranking of 1 (scattered trees).

Table 1: Mangrove and saltmarsh sites that Robbie surveyed in 2020 and assigned a ranking of 1 (scattered trees) for potential augmentation by infill planting.

ID	Site Name
1	Frank's Bay
2	Red Hole
3	Patton's Point
4	Dingle Bay
5	Coney Is S
6	Outer Mullet Bay SE
7	Outer Mullet Bay N
8	Rocky Hill Park
9	Dolly's Bay W

#### Mangrove and Salt Marsh Restoration Sites

These are additional sites based on expert knowledge. These data were not included in the ranking system, but were added here for spatial context.

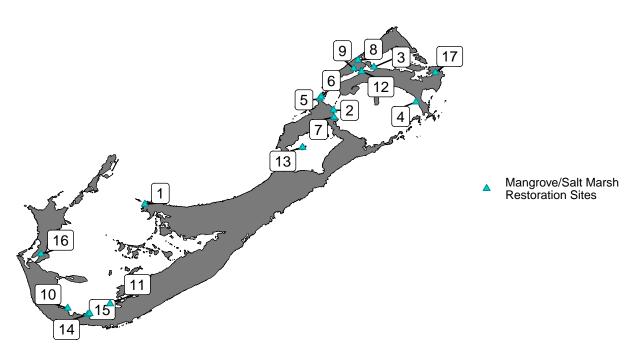


Figure 8: Add additional mangrove and saltmarsh sites based on expert knowledge.

Table 2: Mangrove and saltmarsh sites based on expert knowledge.

ID	Site Name	Habitat Type
1	Stovell Bay	Salt marsh and mangrove
2	Blue Hole	Salt marsh and mangrove
3	Stocks Harbour	Salt marsh and mangrove
4	Officers Beach / Goat Island	Salt marsh
5	Coney Island Road	Salt marsh
6	Coney Island	Salt marsh and mangrove
7	Walsingham pond	Salt marsh
8	Outer Mullet Bay West	Mangrove
9	Richardson's Bay	Mangrove
10	Buck Island	Mangrove
11	Spectacle Island	Mangrove
12	Ferry Reach South	Mangrove
13	Trunk Island	
14	Near 117 Middle Road	
15	Near 131 Middle Road	
16	Scaur Bay	
17	St David's Cricket Club	

### Results

Ranking 1 - First Priority: Environmental Sensitivity Coastline Index suitable substrates that overlap with nature reserves or National Trust Coastal Properties and Water Resources Protection Areas, individually ranked by proximity to mangrove sites (areas greater than 50m away were removed).

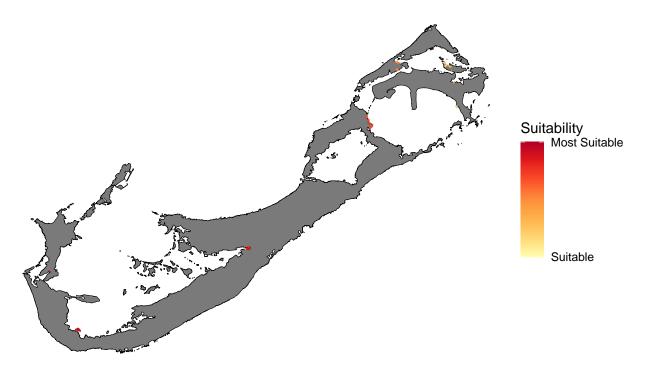


Figure 9: First Priority areas for mangrove and saltmarsh restoration.

Table 3: Potential suitable areas for mangrove or saltmarsh restoration within Ranking Group 1 (Environmental Sensitivity Coastline Index suitable substrates that overlap with nature reserves or National Trust Coastal Properties and Water Resources Protection Areas, individually ranked by proximity to mangrove sites [areas greater than 50m away were removed]).

`	Type of Area (if overlaps)	Area Name (if overlaps)	ESCI Substrate Type	Individual Suitability Ranking
	National Trust Coastal Property	Scaur Lodge	Sheltered Low Relief	1
	National Trust Coastal Property	Scaur Lodge	Sheltered Low Relief	2
onal Trust	National Trust Coastal Property	Buck Island	Sheltered Low Relief	3
onal Trust	National Trust Coastal Property	Buck Island	Mangrove	4
onal Trust	National Trust Coastal Property	Waterville	Pocket Accumulation	5

Individual Suitability Ranking	ESCI Substrate Type	Area Name (if overlaps)	Type of Area (if overlaps)	Distance to Mangrove (m)
6	Mangrove	Waterville	National Trust Coastal Property	0.00
7	Pocket Accumulation	Rances Boatyard	National Trust Coastal Property	0.00
8	Pocket Accumulation	Pembroke Hall	National Trust Coastal Property	0.00
9	Mangrove	Pembroke Hall	National Trust Coastal Property	0.00
10	Sheltered Low Relief	Walsingham	Nature Reserve	0.00
11	Sheltered Low Relief	Walsingham	Nature Reserve	0.00
12	Sheltered Low Relief	Walsingham	Nature Reserve	0.00
13	Sheltered Low Relief	Stokes Point Farm	National Trust Coastal Property	0.00
14	Sheltered Low Relief	Stokes Point Farm	National Trust Coastal Property	0.00
15	Sheltered Low Relief	Stokes Point Farm	National Trust Coastal Property	0.00
16	Mangrove	Stokes Point Farm	National Trust Coastal Property	0.00
17	Mangrove	David White Preserve	National Trust Coastal Property	0.00
18	Mangrove	David White Preserve	National Trust	0.00
19	Mangrove	David White Preserve	Coastal Property National Trust Coastal Property	0.00
20	Sheltered Low Relief	Smiths Island - Bourne Pr	National Trust	0.00
21	Sheltered Low Relief	Smiths Island - Bourne Pr	Coastal Property National Trust	0.00
22	Sheltered Low Relief	Smiths Island - Bourne Pr	Coastal Property National Trust	0.00
23	Sheltered Low Relief	Smiths Island - Bourne Pr	Coastal Property National Trust Coastal Property	0.00
24	Sand Beach	Scaur Lodge	National Trust	0.31
25	Low Energy Pocket	Waterville	Coastal Property National Trust	0.49
26	Accumulation Sand Beach	Cooper"s Island	Coastal Property Nature Reserve	7.25
27	Low Energy Sheltered Low Relief	Buck Island	National Trust Coastal Property	31.53
28	Pocket Beach	Cooper"s Island	Nature Reserve	45.26

Ranking 2 - Second Priority: Environmental Sensitivity Coastline Index suitable substrates that overlap with amenity and recreation areas and Water Resources Protection Areas, individually ranked by proximity to mangrove sites (areas greater than 50m away were removed).



Figure 10: Second priority areas for mangrove and saltmarsh restoration.

Table 4: Potential suitable areas for mangrove or saltmarsh restoration within Ranking Group 2 (Environmental Sensitivity Coastline Index suitable substrates that overlap with amenity and recreation areas and Water Resources Protection Areas, individually ranked by proximity to mangrove sites [areas greater than 50m away were removed]).

Individual Suitability Ranking	ESCI Substrate Type	Area Name (if overlaps)	Type of Area (if overlaps)	Distance to Mangrove (m)
29	Sheltered Low Relief	Darrell"s Island	Recreational Park	0.00
30	Sheltered Low Relief	Darrell"s Island	Recreational Park	0.00
31	Sheltered Low Relief	Darrell"s Island	Recreational Park	0.00
32	Pocket Accumulation	Crow Lane	Amenity Park	0.00
33	Sheltered Low Relief	Coney Island	Amenity Park	0.00
34	Mangrove	Coney Island	Amenity Park	0.00
35	Sheltered Low Relief	Ferry Point	Amenity Park	0.00
36	Mangrove	Ferry Point	Amenity Park	0.00

Individual Suitability Ranking	ESCI Substrate Type	Area Name (if overlaps)	Type of Area (if overlaps)	Distance to Mangrove (m)
37	Mangrove	Rocky Hill	Amenity Park	0.00
38	Sheltered Low Relief	Rocky Hill	Amenity Park	0.00
39	Gravel Beach	Kindley Field	Amenity Park	0.00
40	Mangrove	Great Head	Amenity Park	0.00
41	Sheltered Low Relief	Smith"s Island	Amenity Park	0.00
42	Sheltered Low Relief	Smith"s Island	Amenity Park	0.00
43	Mangrove	Tobacco Bay	Amenity Park	0.00
44	Sheltered Low Relief	Paget Island	Amenity Park	2.58
45	Gravel Beach	Ducks Puddle	Amenity Park	10.90
46	Sand Beach Low Energy	Rocky Hill	Amenity Park	11.18
47	Gravel Beach	Ferry Point	Amenity Park	25.08
48	Sheltered Low Relief	Ferry Point	Amenity Park	36.49
49	Gravel Beach	Rocky Hill	Amenity Park	39.53

Ranking 3 - Third Priority: Environmental Sensitivity Coastline Index suitable substrates that overlap with nature reserves, National Trust Coastal Properties, OR Environmental Sensitivity Coastline Index suitable substrates that overlap with Water Resources Protection Areas, individually ranked by proximity to mangrove sites (areas greater than 50m away were removed).



Figure 11: Third priority areas for mangrove and saltmarsh restoration.

Table 5: Potential suitable areas for mangrove or saltmarsh restoration within Ranking Group 3 (Environmental Sensitivity Coastline Index suitable substrates that overlap with nature reserves, National Trust Coastal Properties, OR Environmental Sensitivity Coastline Index suitable substrates that overlap with Water Resources Protection Areas, individually ranked by proximity to mangrove sites [areas greater than 50m away were removed]).

Individual Suitability	ESCI Substrate	Area Name (if	Type of Area (if	Distance to
Ranking	Type	overlaps)	overlaps)	Mangrove (m)
50	Sheltered Low Relief	Walsingham	Nature Reserve	0.00
51	Sheltered Low Relief	Walsingham	Nature Reserve	0.00
52	Mangrove	David White Preserve	National Trust Coastal Property	0.00
53	Mangrove	David White	National Trust	0.00
54	Mangrove	Preserve Waterville	Coastal Property National Trust	0.00
55	Sheltered Low	The Narrows Lot	Coastal Property National Trust	0.00
	Relief		Coastal Property	
56	Mangrove	Rances Boatyard	National Trust Coastal Property	0.00
57	Mangrove	Pembroke Hall	National Trust Coastal Property	0.00
58	Sheltered Low Relief	Smiths Island - Bourne Pr	National Trust Coastal Property	0.00
59	Mangrove	David White Preserve	National Trust Coastal Property	0.00
60	Sheltered Low Relief	Scaur Lodge	National Trust Coastal Property	0.00
61	Sheltered Low Relief		Coastar 1 Toperty	0.00
62	Sheltered Low Relief			0.00
63	Mangrove			0.00
64	Sheltered Low Relief			0.00
65	Mangrove			0.00
66	Sheltered Low Relief			0.00
67	Sheltered Low Relief			0.00
68	Mangrove			0.00
69	Sheltered Low			0.00
	Relief			
70	Mangrove			0.00
71	Sheltered Low Relief			0.00
72	Sheltered Low Relief			0.00
73	Sheltered Low Relief			0.00

Individual Suitability Ranking	ESCI Substrate Type	Area Name (if overlaps)	Type of Area (if overlaps)	Distance to Mangrove (m)
74	Sheltered Low Relief			0.00
75	Mangrove			0.00
76	Sand Beach			0.00
	Low Energy			
77	Sheltered Low			0.00
	Relief			
78	Sand Beach			0.00
	Low Energy			
79	Sheltered Low			0.00
	Relief			
80	Sheltered Low			0.00
	Relief			
81	Sheltered Low			0.00
	Relief			
82	Sheltered Low			0.00
	Relief			
83	Sheltered Low			0.00
	Relief			
84	Mangrove			0.00
85	Sheltered Low			0.00
	Relief			
86	Mangrove			0.00
87	Sheltered Low			0.00
	Relief			
88	Sheltered Low			0.00
	Relief			
89	Sheltered Low			0.00
00	Relief			0.00
90	Sheltered Low			0.00
0.1	Relief			0.00
91	Sheltered Low			0.00
00	Relief			0.00
92	Mangrove			0.00
93	Sheltered Low Relief			0.00
94	Mangrove			0.00
95	Pocket			0.00
90	Accumulation			0.00
96	Mangrove			0.00
97	Sheltered Low			0.00
31	Relief			0.00
98	Sheltered Low			0.00
30	Relief			0.00
99	Sheltered Low			0.00
33	Relief			0.00
100	Sheltered Low			0.00
100	Relief			0.00
101	Sheltered Low			0.00
101	Relief			0.00
102	Pocket Beach			0.00
102	1 Ochco Deach			0.00

Distance t Mangrove (m	Type of Area (if overlaps)	Area Name (if overlaps)	ESCI Substrate Type	Individual Suitability Ranking
0.0			Pocket Beach	103
0.0			Mangrove	104
0.0			Pocket	105
			Accumulation	
0.0			Sheltered Low	106
			Relief	
0.0			Mangrove	107
0.0			Sheltered Low	108
			Relief	400
0.0			Mangrove	109
0.0			Sheltered Low	110
0.0			Relief	444
0.0			Mangrove	111
0.0			Mangrove	112
0.0			Sheltered Low	113
0.0			Relief	114
0.0			Pocket Beach	114
0.0			Sheltered Low	115
0.0			Relief	116
0.0			Mangrove	116
0.0			Mangrove	117
0.0			Sheltered Low Relief	118
0.0			Mangrove	119
0.0			Sheltered Low	120
0.0			Relief	120
0.0			Sheltered Low	121
0.0			Relief	121
0.0			Sheltered Low	122
0.0			Relief	122
0.0			Sheltered Low	123
0.0			Relief	120
0.0			Mangrove	124
0.0			Sheltered Low	125
0.0			Relief	120
0.0			Mangrove	126
0.0			Mangrove	127
0.0			Sheltered Low	128
			Relief	
0.0			Sheltered Low	129
			Relief	
0.0			Mangrove	130
0.0			Sheltered Low	131
			Relief	
0.0			Sand Beach	132
			Low Energy	
0.0			Mangrove	133
0.0			Sheltered Low	134
			Relief	
0.0			Sheltered Low	135
			Relief	

Individual Suitability Ranking	ESCI Substrate Type	Area Name (if overlaps)	Type of Area (if overlaps)	Distance to Mangrove (m)
136	Gravel Beach			0.00
137	Mangrove			0.00
138	Mangrove			0.00
139	Sheltered Low			0.00
	Relief			
140	Sheltered Low			0.00
	Relief			
141	Sheltered Low			0.00
	Relief			
142	Mangrove			0.00
143	Mangrove			0.00
144	Sheltered Low			0.00
	Relief			
145	Mangrove			0.00
146	Mangrove			0.00
147	Sand Beach			0.00
	Low Energy			
148	Mangrove			0.00
149	Sheltered Low			0.12
	Relief			
150	Sand Beach			0.34
	Low Energy			
151	Sheltered Low			0.35
	Relief			
152	Sheltered Low			0.35
	Relief			
153	Sand Beach			0.70
	Low Energy			
154	Pocket Beach			0.76
155	Sheltered Low			0.81
	Relief			
156	Sheltered Low			1.81
	Relief			
157	Sheltered Low			2.58
	Relief			
158	Sheltered Low			2.64
	Relief			
159	Sheltered Low			2.74
	Relief			
160	Sand Beach			2.89
	Low Energy			
161	Sheltered Low			3.12
	Relief			
162	Sheltered Low			3.35
	Relief			
163	Sheltered Low			3.37
100	Relief			3.3.
164	Gravel Beach			6.52
165	Gravel Beach			7.17
166	Sand Beach			7.25
100				1.20
	Low Energy			

Distance to Mangrove (m)	Type of Area (if overlaps)	Area Name (if overlaps)	ESCI Substrate Type	Individual Suitability Ranking
10.21			Sheltered Low Relief	167
10.90			Gravel Beach	168
19.69			Sheltered Low Relief	169
20.03			Mangrove	170
23.25			Sheltered Low Relief	171
24.47			Pocket Beach	172
25.08			Gravel Beach	173
25.40			Pocket Beach	174
27.18			Sheltered Low Relief	175
27.18			Sheltered Low Relief	176
28.63			Sheltered Low Relief	177
30.13			Sheltered Low Relief	178
30.25			Sheltered Low Relief	179
36.49			Sheltered Low Relief	180
38.10			Pocket Beach	181
39.53			Gravel Beach	182
42.41			Mangrove	183
43.33			Sheltered Low Relief	184
43.33			Sheltered Low Relief	185
43.42			Pocket Accumulation	186
45.06			Sheltered Low Relief	187
45.26			Pocket Beach	188
48.03			Sheltered Low Relief	189
48.27			Pocket Accumulation	190
48.28			Gravel Beach	191
49.21			Sheltered Low Relief	192

Ranking 4 - Fourth Priority: Environmental Sensitivity Coastline Index suitable substrates that overlap with amenity and recreational areas, individually ranked by proximity to mangrove sites (areas greater than 50m away were removed).

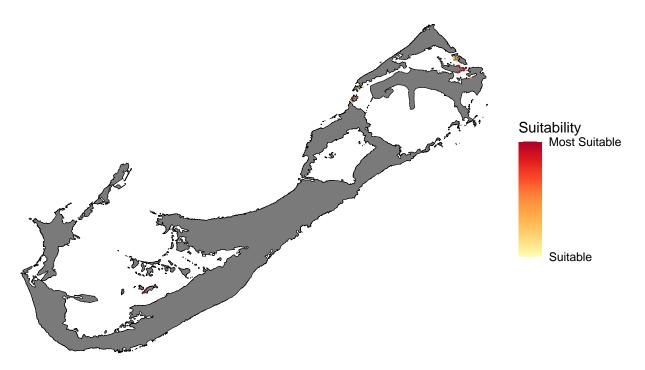


Figure 12: Fourth priority areas for mangrove and saltmarsh restoration.

Table 6: Potential suitable areas for mangrove or saltmarsh restoration within Ranking Group 4 (Environmental Sensitivity Coastline Index suitable substrates that overlap with amenity and recreational areas, individually ranked by proximity to mangrove sites [areas greater than 50m away were removed]).

Individual Suitability Ranking	ESCI Substrate Type	Area Name (if overlaps)	Type of Area (if overlaps)	Distance to Mangrove (m)
193	Sheltered Low	Darrell"s Island	Recreational Park	0.00
	Relief	a		
194	Sheltered Low Relief	Smith's Island	Amenity Park	0.00
195	Sheltered Low Relief	Coney Island	Amenity Park	0.00
196	Mangrove	Coney Island	Amenity Park	0.00
197	Mangrove	Tobacco Bay	Amenity Park	0.00
198	Sheltered Low Relief	Great Bay	Amenity Park	0.00
199	Sheltered Low Relief	Paget Island	Amenity Park	2.58
200	Gravel Beach	Ferry Point	Amenity Park	25.08
201	Sheltered Low Relief	Ferry Point	Amenity Park	36.49

Individual Suitability Ranking		Area Name (if overlaps)	Type of Area (if overlaps)	Distance to Mangrove (m)
202	Sheltered Low Relief	Coney Island	Amenity Park	49.69

Ranking 5 - Last Priority: Environmental Sensitivity Coastline Index suitable substrates that do not overlap with additional layers, individually ranked by proximity to mangrove sites (areas greater than 50m away were removed).

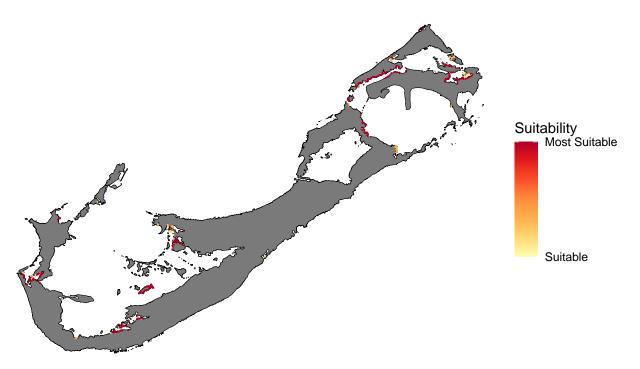


Figure 13: Least suitable areas for mangrove and saltmarsh restoration.

## Final Suitability Map

For the final suitability map, data were combined across the five suitability ranking categories as follows:

- Ranking 1 First Priority: Environmental Sensitivity Coastline Index suitable substrates that overlap with nature reserves or National Trust Coastal Properties and Water Resources Protection Areas, individually ranked by proximity to mangrove sites (areas greater than 50m away were removed).
  - Individually ranked by closest to mangrove areas 1-28
- Ranking 2 Second Priority: Environmental Sensitivity Coastline Index suitable substrates that overlap with amenity and recreation areas and Water Resources Protection Areas, individually ranked by proximity to mangrove sites (areas greater than 50m away were removed).
  - Individually ranked by closest to mangrove areas 29-49
- Ranking 3 Third Priority: Environmental Sensitivity Coastline Index suitable substrates that overlap with nature reserves, National Trust Coastal Properties, OR Environmental Sensitivity Coastline Index suitable substrates that overlap with Water Resources Protection Areas, individually ranked by proximity to mangrove sites (areas greater than 50m away were removed).

- Individually ranked by closest to mangrove areas 50-192
- Ranking 4 Fourth Priority: Environmental Sensitivity Coastline Index suitable substrates that overlap with amenity and recreational areas, individually ranked by proximity to mangrove sites (areas greater than 50m away were removed).
  - Individually ranked by closest to mangrove areas 193-202
- Ranking 5 Last Priority: Environmental Sensitivity Coastline Index suitable substrates that do not overlap with additional layers, individually ranked by proximity to mangrove sites (areas greater than 50m away were removed).
  - Individually ranked by closest to mangrove areas 203-20574

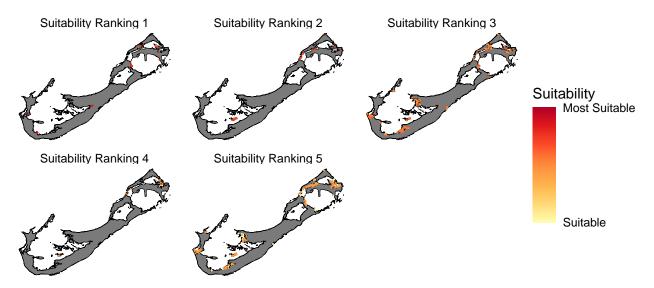


Figure 14: Suitability maps for each suitability ranking category (1-5). Areas within each category were individually ranked with areas closest to mangroves given higher suitability.

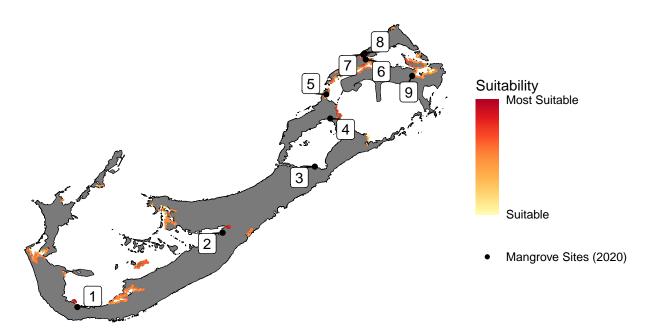


Figure 15: Final suitability map for mangrove and saltmarsh restoration with mangrove locations surveyed by Robbie in 2020 included. Areas of each suitability ranking category (1-5) were first ordered based on their distance to mangroves; areas closest to mangroves were given higher suitability and areas further than 50m from manngroves were excluded. The data within each category were then combined.

Table 7: Mangrove and saltmarsh sites that Robbie surveyed in 2020 and assigned a ranking of 1 (scattered trees) for potential augmentation by infill planting.

ID	Site Name
1	Frank's Bay
2	Red Hole
3	Patton's Point
4	Dingle Bay
5	Coney Is S
6	Outer Mullet Bay SE
7	Outer Mullet Bay N
8	Rocky Hill Park
9	Dolly's Bay W

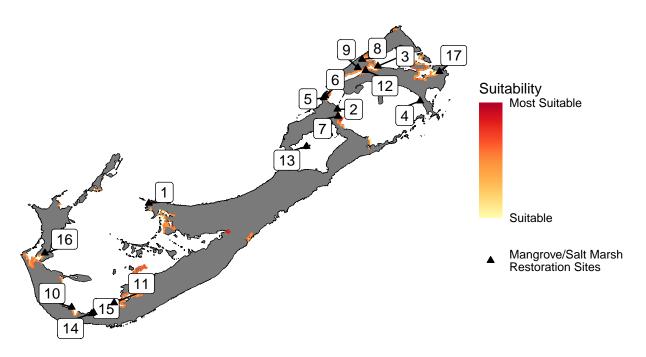


Figure 16: Final suitability map for mangrove and saltmarsh restoration with mangrove locations based on expert knowledge included. Areas of each suitability ranking category (1-5) were first ordered based on their distance to mangroves; areas closest to mangroves were given higher suitability and areas further than 50m from manngroves were excluded. The data within each category were then combined.

Table 8: Mangrove and saltmarsh sites based on expert knowledge.

ID	Site Name	Habitat Type
1	Stovell Bay	Salt marsh and mangrove
2	Blue Hole	Salt marsh and mangrove
3	Stocks Harbour	Salt marsh and mangrove
4	Officers Beach / Goat Island	Salt marsh
5	Coney Island Road	Salt marsh
6	Coney Island	Salt marsh and mangrove
7	Walsingham pond	Salt marsh
8	Outer Mullet Bay West	Mangrove
9	Richardson's Bay	Mangrove
10	Buck Island	Mangrove
11	Spectacle Island	Mangrove
12	Ferry Reach South	Mangrove
13	Trunk Island	
14	Near 117 Middle Road	
15	Near 131 Middle Road	
16	Scaur Bay	
17	St David's Cricket Club	

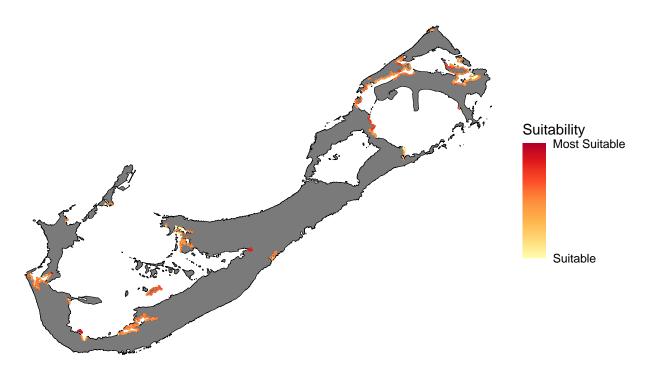


Figure 17: Final suitability map for mangrove and saltmarsh restoration. Areas of each suitability ranking category (1-5) were first ordered based on their distance to mangroves; areas closest to mangroves were given higher suitability. The data within each category were then combined.