


An aerial photograph of a beach. The sand is a light tan color. A long, narrow, dark object, possibly a piece of driftwood or a log, lies diagonally across the lower half of the frame. The upper half of the image shows the edge of the beach meeting the ocean, with white foam from breaking waves visible.

Ascension Island Beach Nature Reserves Annual Review

Year 2: 1 June 2024—31 May 2025



The background of the slide is a photograph of a beach. In the upper portion, there are gentle waves with white foam washing onto a sandy shore. The lower portion of the image shows a wide expanse of sand, heavily marked with numerous footprints and tire tracks, suggesting frequent human activity. The overall lighting is somewhat dim, giving the image a moody, naturalistic feel.

The Ascension Island Beach Nature Reserve Management Plan set out how the three designated beach reserves will be managed over the five years between 2023-2028. Eight strategic objectives were produced with an action plan and opportunities for scientific monitoring and research identified to understand the reserve ecosystems and to conserve the species which utilise the reserves.

This review summarises the progress that has been made so far with some suggestions for the coming year.

Ascension Beach Nature Reserve Action Plan

Ascension Beach Nature Reserve Monitoring and Evaluation

Ascension Beach Nature Reserve
Year 2 Action Plan



1. Non-native plant removal

- Proposed:** Removal of all invasive plant species from the beach NRs plus 200m buffer zone.
- Purpose:** Protect the NR and relevant species from the threats of invasive species.
- Outcome:** No invasive plant species remain on the Nature Reserves or in surrounding buffer zones.

	Description	Year 1 Progress	Year 2 Progress	Year 3 Target																
1a	<p>Removal of all Mexican thorn, tree tobacco and other invasive plant species from beach NRs using best practice methods.</p> <p>Target– 100% of beaches free of Mexican thorn and tree tobacco by 2023</p>	<p>Substantial work has been undertaken to remove Mexican thorn and tree tobacco growing on the Beach NRs. This followed DPLUS134 which tested best practice methods to control these species on Ascension. The recommendation from this project was cut stump treated with Turbodor 29 mpa– a herbicide designed for Mesquite control.</p> <p>The DPLUS134 Project also produced a risk assessment for the release of a biocontrol agent– <i>Evippe</i> sp. #1, a leaf-folding moth– to assist with managing Mexican thorn.</p> <p>Mexican thorn and tree tobacco was cut and treated with Turbodor 29 mpa on the beach NRs. None of these invasive plants are growing on the beaches and work has begun to remove the remaining trees from the surrounding NR to prevent encroachment. Trees were tagged to allow further checks for regrowth.</p>	<p>Mexican thorn and tree tobacco was cut and treated on the beach NRs:</p> <table><tr><td></td><td>Mexican thorn</td><td>Tree tobacco</td><td>Horse tamarind</td></tr><tr><td>Long Beach NR</td><td>12</td><td>0</td><td>0</td></tr><tr><td>Pan Am NR</td><td>48</td><td>364</td><td>2</td></tr><tr><td>North East NR</td><td>517</td><td>7</td><td>0</td></tr></table> <p>The greatest achievement from year 2 of management is that Pan Am NR is now almost cleared of invasive species (four Mexican thorn remain at time of printing). There remains some seedlings of tree tobacco which is re-seeded from outside the buffer zone however AIG Conservation are also working to manage this (1b). Small seedlings are removed by hand when possible so there was more uprooted than the figures above suggest.</p> <p>Following a public consultation, <i>Evippe</i> sp. #1. was released on Ascension in April 2024. Although not currently released on the beach NRs, the long-term effects of this biocontrol will be advantageous to the NRs.</p>		Mexican thorn	Tree tobacco	Horse tamarind	Long Beach NR	12	0	0	Pan Am NR	48	364	2	North East NR	517	7	0	<p>Beaches remain free of Mexican thorn and tree tobacco.</p> <p>Continue to remove invasive plants from around the remaining NRs with focus on those closest to the beach which pose the most serious threat.</p> <p>Quarterly walk throughs of Pan Am NR to remove fresh tree tobacco seedlings.</p>
	Mexican thorn	Tree tobacco	Horse tamarind																	
Long Beach NR	12	0	0																	
Pan Am NR	48	364	2																	
North East NR	517	7	0																	

1b	<p>Removal of all Mexican thorn in 200m buffer zone around Long Beach, Pan Am and North East NR boundary using best practice mechanical and chemical methods.</p> <p>Target– no invasive plant species within 200m buffer zone of beach NRs by end of Y3</p>	<p>In Y1, 412 trees were removed from the buffer zone around the beach NRs (mainly Pan Am NR).</p>	<p>Work began on controlling the invasive plants in a 200m buffer zone around the beach NRs however the main focus was on clearing the reserves themselves. Mexican thorn and tree tobacco was controlled as in 1a.</p> <table><tr><td></td><td>Mexican thorn</td><td>Tree tobacco</td></tr><tr><td>Long Beach NR buffer zone</td><td>0</td><td>0</td></tr><tr><td>Pan Am NR buffer zone</td><td>12</td><td>32</td></tr><tr><td>North East NR buffer zone</td><td>0</td><td>0</td></tr></table>		Mexican thorn	Tree tobacco	Long Beach NR buffer zone	0	0	Pan Am NR buffer zone	12	32	North East NR buffer zone	0	0	<p>Remove invasive plants around the buffer zones of the NRs.</p>
	Mexican thorn	Tree tobacco														
Long Beach NR buffer zone	0	0														
Pan Am NR buffer zone	12	32														
North East NR buffer zone	0	0														
1c	<p>Annual weeds such as Mexican poppy (<i>Argemone Mexicana</i>) hand pulled from the beaches every six months.</p> <p>Target– no turtle hatchlings found in weeds unable to access the ocean</p>	<p>Weeds were removed on the three beach NRs as part of the annual island beach clean in Nov 2023.</p> <p>Further weeding was performed by AIGCFD staff.</p>	<p>Weeds were removed from the beach NRs during the annual island beach clean in November 2024 by 120 volunteers.</p> <p>Additional beach weeding was performed by AIGCFD conservation interns in Dec 2024 and Jan 2025 to prevent re-seeding the beach. High percentage of the beach covered in weeds during the early turtle season.</p>	<p>Continuation of annual weed removal to reduce spread and protect turtle nesting habitat.</p>												



2. Non-native species control

Proposed: Control the non-native species on the Nature Reserves

Purpose: Protect the turtles, land crabs and endemic invertebrates from non-native predators.

Outcome: No rodent or rabbit grazing on the green turtles, land crabs or endemic invertebrates habitats.

	Description	Year 1 progress	Year 2 progress	Year 2 target
2a	Set a network of rodent bait stations around Long Beach NR and North East Bay NR and replenish regularly. Target– rodent bait stations situated around all beach NRs	Two bait stations around the Long Beach hut and an additional nine along the back of the beach baited monthly. 14 rodent bait boxes in-situ at North East. 100% of bait taken every fortnight.	Stations at Long Beach baited monthly. Bait stations around North East beach baited fortnightly during turtle season– 100% of bait taken.	Increase the number of and frequency of baiting at North East Bay during turtle nesting season
2b	Non-native cricket control at North East Bay. Traps positioned every 100m along coastline towards Porpoise Point. Target– reduction in non-native cricket population	No progress. Expansion of NR still under discussion with MoD.	No progress. Expansion of NR still under discussion with the MoD.	Implement action when boundary expansion finalised.
2c	<i>Solenopsis globularia</i> non-native ant control at Long Beach NR. 10 ant traps deployed at 20m intervals along a 200m stretch of coast close to the beach hut. Target– reduction in the spread of non-native ants.	Difficulty in obtaining correct ant control so only implemented towards end of year one.	Action point not implemented.	Reprioritise and implement action point quarterly




3. Pollution

Proposed: Reduce the impact of pollution on the wildlife of the beach NRs

Purpose: Protect the native flora of the NRs from the impacts cause by pollution

Outcome: Turtle, land crab and endemic invertebrate population is not affected by pollution

	Description	Year 1 progress	Year 2 progress	Year 3 target
3a	<p>Beach cleans organised to remove marine debris and pollution. Attempt to remove all litter but focus on plastic items that pose greatest threat to ecosystems. Items too large to be removed, dragged clear of tide-line to prevent being swept into the ocean.</p> <p>Target– community beach cleans every six months on NRs</p>	<p>Community beach clean held on 04 November 2024 with 96 volunteers attending across the island.</p> <p>Additional cleans organised on beach NRs: Long Beach NR (14 April 2024) 22 attendees and Pan-Am NR (18 May 2024) 10 attendees.</p>	<p>Community beach clean held on 19 Oct 2024 with 120 volunteers attending across the island, removing marine litter and invasive weeds (overleaf).</p> <p>Additional beach cleans were organized throughout Y2 involving 30 community volunteers.</p>	<p>Annual island wide beach clean organized for Oct/Nov prior to turtle nesting season.</p> <p>Additional beach cleans organized for NRs</p>
				
3b	<p>Reduce plastic waste on island by prohibiting the import of certain single use plastics and improving waste management practices. Explore feasibility of local plastic recycling facilities.</p> <p>Target– reduce single use plastic items on beach reserves</p>	<p>South Atlantic Plastics Project produced a systems diagnosis of plastic consumption, waste management and pollution on Ascension with proposed opportunities for intervention.</p>	<p>Ascension Island Government initiated legislative changes to ban the importation of single-use vapes based on the impact they have on the local environment. Legislation expected to be introduced in Y3.</p>	<p>Work with the AIG to improve local recycling options and investigate the development of Single Use Plastic policies</p>

Volunteers perform a litter pick at Long Beach Nature Reserve



3c	<p>Replace all street lights adjacent to Beach NRs with red light bulbs. No installation of new public lighting visible from the beaches. Awareness campaign with local residents and beach users to reduce outside light usage at sensitive times .</p> <p>Target– red light bulbs installed in nearby street lights</p>	<p>Bulbs in street lights adjacent to Beach NRs changed to red bulbs.</p> <p>Public awareness posters displayed in all beach huts and in regular island haunts. Additionally, information distributed through social media campaign and island newspaper to raise awareness.</p>	<p>Public awareness campaign held at the beginning of the turtle season to highlight the importance of using red lights around beaches to minimise disturbance.</p>	<p>Continue with public awareness campaign through social media which has a wide reach.</p> <p>Articles/posters displayed in all beach huts and in island newspaper.</p>
3d	<p>Litter awareness campaign. Provide information on the negative impacts of litter, with a focus on plastics and organics, ensuring littering is seen as anti-social behaviour. Raise awareness of the law against littering, targeting beach huts and parking areas within NRs.</p> <p>Target– engage with at least 50 school children and 10% of island community</p>	<p>South Atlantic Plastic Project implemented a litter awareness campaign.</p> <p>DPL00010 installed cigarette bins in all beach huts and around popular island haunts. The project recorded 41% reduction in the number of cigarettes discarded around beach huts following the implementation.</p>	<p>In Y2, the AIGCFD performed monthly beach cleans (see 3b), using the opportunity to raise marine litter awareness and support local responsibilities for beaches and wildlife.</p>	<p>Continuation of litter awareness campaign. Create specific campaigns against repeatedly offending pollution items.</p> <p>Specific school lessons on impacts of plastics on Ascension’s wildlife.</p>



4. Allow ecosystem functioning

Proposed: Allow for climate change adaptations, natural ecosystem function and manage potential developments

Purpose: Protect the wildlife of the beach NRs and allow the ecosystem to behave naturally.

Outcome: Healthy beach ecosystem

	Description	Year 1 progress	Year 2 progress	Year 3 target
4a	<p>Enable landward migration of beaches through removing non-essential structures on the landward side of beaches. Allow sand to build up in these areas following high swell and storms. This will eventually result in the landward migration of the beaches.</p> <p>Target– barriers assessed in Y1 and removal of non-essential barriers by Y3.</p>	<p>Non-essential structures assessed and where possible removed– particularly large items of man-made items such as tyres, old signage and concrete blocks.</p> <p>Sand building up in the centre of Long Beach and moving naturally.</p>	<p>Non-essential structures assessed but none identified as cause of concern to restrict natural beach migration.</p>	<p>Quarterly inspection of beaches and assessment of non-essential structures.</p>
4b	<p>Beach shading- use results of trials to consider shading areas of beach habitat or translocate nests into purpose-built shaded hatcheries with the aim of reducing nest temperatures and producing male turtle hatchlings.</p> <p>Target– assess effectiveness by Y1 Install shaded areas if appropriate by Y3.</p>	<p>Results from shade trials published:</p> <p>Efficacy of artificial nest shading as a climate change adaptation measure for marine turtles at Ascension Island - Wiggins - 2023 - Wildlife Society Bulletin - Wiley Online Library</p>	<p>Action point completed in Y1.</p> <p>Decision to make no further changes.</p>	<p>Review action point and implement when deemed necessary.</p>





4c	<p>Establish an effective system of development control that includes the requirement for robust impact assessments before the administrator permits development within or in close proximity to the NRs</p> <p>Target– Environmental Impact Assessments carried out for development proposals that could impact beach NRs.</p>	<p>Two Environmental Impact Assessments were performed which affected Long Beach NR. Both were approved following mitigating recommendations from AIG Conservation.</p>	<p>Two Environmental Impact Assessments were performed which affected Ascension Beach NRs. Both were approved following mitigating recommendations from AIG Conservation.</p>	<p>Regular consultation with island stakeholders to ensure an EIA is performed prior to any works in close proximity of beach NRs.</p>
4d	<p>Retention of carcasses within coastal ecosystem to allow scavenging by endemic invertebrates. The exception will be where a carcass is in the vicinity of a beach hut or other well-used area where it may pose a risk to human health or peoples' enjoyment of the area.</p> <p>Target– animal carcasses left on beach or buried</p>	<p>No large animals e.g. turtles or cetaceans washed up on the beach NRs during this time period.</p>	<p>Several turtle carcasses washed up on the shores which were returned to the ocean for scavengers.</p> <p>There was several small black triggerfish die-off events. Carcasses were removed from Turtle Shell Beach due to the distress to beach users but otherwise small numbers were left on each beach</p>	<p>Each large animal carcass assessed and where possible retained in-situ</p>



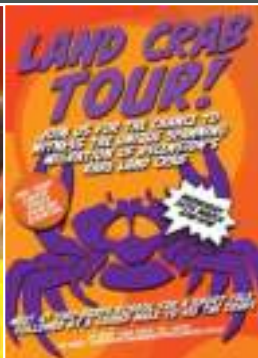
5. Public engagement

- Proposed: Organise public engagement events for school children and islanders.
- Purpose: Encourage recreational use of the beach NRs. Educate islanders about the importance of the NRs and the species found there.
- Outcome: Higher engagement between islanders and the beach NRs.

	Description	Year 1 progress	Year 2 progress	Year 3 target
5a.	<div>Turtle tours provided to islanders and visitors, imparting information and enabling people to view nesting turtles without causing disturbance.</div> <div>Target– weekly tours provided</div>	Turtle tours were provided to 145 participants during the 2024 turtle nesting season.	Turtle tours were provided to 226 participants during the 2025 nesting season (p13). In addition, 266 volunteer hours were provided for Beach NRs.	Turtle tours provided weekly to islanders and island visitors.
				
5b	<div>Turtle watching guidelines. Presentations to islanders and school children ahead of turtle nesting season describing responsible turtle watching behaviour</div> <div>Target– information distributed ahead of turtle nesting season</div>	Turtle watching guidelines produced and displayed at all beach huts and other popular island haunts. Guidelines published regularly through social media posts.	<div>Presentation to local RAF detachment on how to watch turtles safely (p13).</div> <div>Turtle watching guidelines displayed at all beach huts and other popular island locations. Guidelines published through social media and in official government notices.</div>	Turtle guidelines re-energised for distribution.



5c	<p>Land crab awareness campaign. Public tours to North East Bay NR to coincide with mass spawning events. Poster and road sign campaign to reduce land crab road deaths.</p> <p>Target— no land crabs killed on the roads</p>	<p>DPL1066 project: Claw and Order, making Ascension safe for Land Crabs created a campaign to raise awareness of land crab conservation. New signage was ordered but is yet to be installed.</p> <p>A short, animated film about land crab ecology created and shown through social media and at local cinema.</p> <p>Tours organised during mass spawning events— one cancelled due to inclement weather. 32 participants attended a land crab tour in March 2024.</p>	<p>Free tours provided to 33 islanders during peak spawning events.</p> <p>Road closure to NE beach during peak spawning dates. Public campaign to highlight importance of land crabs.</p> <p>New road signs installed around island (following a public consultation) to protect land crabs during migration when they use the roads towards the mountain (pg 13).</p>	<p>Provide public tours to North East NR during spawning events.</p> <p>Local media campaign to raise awareness of the species and to remind road users to be mindful when driving during migrations.</p>
5d	<p>Invertebrate awareness campaign. Install interpretation sign at North East Bay describing endemic invertebrates and highlight their role in coastal ecosystems.</p> <p>Produce a booklet of Ascension's endemic invertebrates.</p> <p>Target— signage installed and booklet distributed</p>	<p>It was decided that short animated videos would have a higher impact, reaching a wider audience about Ascension's endemic invertebrates. Several videos were created including the endemic scaly cricket (<i>Discophallus ascension</i>) found on North East NR.</p> <p>Several scientific manuscripts were published regarding Ascension's invertebrates which were publicized through AIG Conservation's social media pages.</p>	<p>A guide to the wildlife of Ascension was produced and distributed in Y2 which incorporated the endemic invertebrates found on beach NRs.</p> <p>Several social media articles generated feature the NR invertebrates.</p>	<p>Regular articles and social media posts generated featuring the invertebrates of the beach NRs</p>
5e	<p>Events at Long Beach Visitor Centre to celebrate the importance of Ascension's Beach Nature Reserves and encourage stewardship of the areas. Events aimed at school pupils, employing organisations and the general public.</p> <p>Target— annual events on beach NRs to engage a minimum of 200 people.</p>	<p>Location of annual Ascension Marine Festival moved to Georgetown Pierhead to enhance public enjoyment of the event.</p> <p>Long Beach Visitor Centre used for Ascension Explorers sessions, booked out 16 times for private functions including two island weddings. The Visitor Centre is used informally at weekends and evenings without being booked out.</p>	<p>The Long Beach Visitor Centre used for Ascension Explorers session and used weekly by islanders for informal BBQs, yoga practice, line dancing practice, children's parties and other private functions.</p> <p>Annual bonfire event at Long Beach NR attracted 100+ islanders.</p>	<p>Investigate new ways to improve the Visitor Centre to encourage use.</p>





Ascension Beach Nature Reserve
Year 2 Monitoring and Evaluation



Monitoring and Evaluation

Monitoring the natural features of the Beach Nature Reserves

Four areas were identified for monitoring the health of the natural features of the Beach Nature Reserves. These intend to monitor if the reserve biodiversity is declining because the action plan was not completed or if the action plan was sufficient to achieve the NR objectives.

1. Turtle nesting and productivity

a. Number of emerging green turtle females on the three protected beaches (annual)

	Number of emerging turtles Y1 (2024)	Number of emerging turtles Y2 (2025)
Long Beach NR	1, 923	9, 250
Pan-Am NR	452	2, 217
North East NR	280	1, 472





b. Number of emerging green turtle females and nesting attempts on all Ascension beaches (every 5 years)

A census of all nesting beaches was performed in Y1 of this management plan. The results were 4,550 emerging female turtles with 1,350 nests (23% success rate). In comparison to the previous census performed in 2016, the green turtle population on Ascension Island is stable. Annual fluctuations are expected of a healthy population however this highlights the importance of this long-term dataset to be able to draw lasting conclusions.

c. Beach area, nest location, temperature and hatch success (15 nests on each NR annually)

A review in Y1 suggested that there was sufficient data to identify a relationship between the number of tracks and the number of nests annually. Therefore in Y2, AIGCFD did not record individual nests.

Temperature loggers were installed in 55 randomly selected nests throughout the season which were later excavated for productivity monitoring. As this was a bumper nesting year, some loggers were lost as they were dug-up and moved by other nesting turtles. Further excavations are required to complete the turtle season however the results from the first nests excavated to date on each beach are:

	Average hatch success	Average temperature
Long Beach	85.2%	30.53°C
Pan-Am	53.6%	30.92°C
North East Bay	55.4%	32.82°C



d. Monitor the beach NRs for stranded turtles and assist them back into the ocean.

Although not noted in the five-year management plan for the beach NRs, daily checks are performed to ensure any turtles stuck in rocks or rock pools are extracted and returned to the ocean before the temperature becomes too unmanageable for them. This includes Long Beach and Pan Am NRs as well as other hotspots such as Deadman's Beach.

On Pam Am NR, a crack in the bedrock was a hotspot for turtles to become wedged. This is an annual problem and unfortunately each year, several turtles perish as a result. There has been ongoing discussions and efforts to solve this issue and in Feb 2025, an excavator was brought in to break up the surrounding bedrock to prevent the turtles becoming stuck here. In addition, the excavator also softened the gradient of the surrounding rocks to prevent turtles from being injured as they made their way back to the ocean. An Environmental Impact Assessment was performed and under permissions from the Administrator, it was agreed that the long-term positive impacts of the works outweighed any harm caused. The AIG Conservation Directorate thank the United States Space Force for using their equipment, staff time and expertise to perform this work. (right above).

In April 2025, a turtle dug underneath a boulder on the Long Beach NR which moved and rolled on top of her. Unable to move the boulder, it was necessary to bring in heavy machinery to shift the rocks and allow a rescue attempt. The turtle was injured from the event however was returned to the ocean to give her the best opportunity to recuperate. The AIG plant team then repositioned surrounding boulders to prevent this event from reoccurring. The AIG Conservation are grateful to the AIG plant team for their quick response (right below), returning the turtle to the water within 30 minutes of her initial discovery.



2. Land crab abundance and growth

a. Number of land crabs on a 100m transect on North East Bay during spawning events.

Surveys were performed five times during each month of the peak spawning events in Jan-May inclusively. All females were marked and counted during a 15 minute survey. All new individuals encountered during the subsequent survey was also marked, producing a total for that area each evening. This is the second year of this monitoring method, the results from 2024 was 10,565 and in 2025 was 10,330 suggesting the spawning population remains stable.

b. Growth rates of individually tagged crabs (measurements taken annually)

Discussions with field experts in Y1 resulted in a decision to stop measuring crab carapaces to calculate growth rates due to the high volume of data already collected. This data is currently being processed with the ambition to publish in a scientific manuscript as soon as possible.



3. Scaly cricket recovery, catch per unit effort of scaly cricket in non-lethal traps deployed at North East Coast Nature Reserve (Biannual)

Talks remain on-going with the Ministry of Defense (MoD) with regards to land use around the North East Coast. It was initially planned to expand the NR boundary to incorporate a strip of the coast which was identified as important scaly cricket habitat. During the first two years of this management plan, no monitoring was conducted for this species until a full resolution with the MoD is found.

4. Public attitudes (Biennial)

- a. Percentage of island community aware of Beach Nature Reserves and threats they face
- b. Percentage of island community reporting pride in nature features of the Nature Reserves

A questionnaire is in development, seeking assistance of trained social scientists to capture the public attitudes towards the Beach NRs and the natural features they host.



Monitoring and Evaluation

Monitoring threats to the Beach Nature Reserves

1. **Non-invasive crickets—visual index of abundance of crickets caught in control traps (Twice annually)**

Traps were designed to be placed around the new boundary of the North East Nature Reserve. While land use discussions remain ongoing with the MoD, no traps were placed in this area until this is resolved.

2. **Litter accumulation and removal**

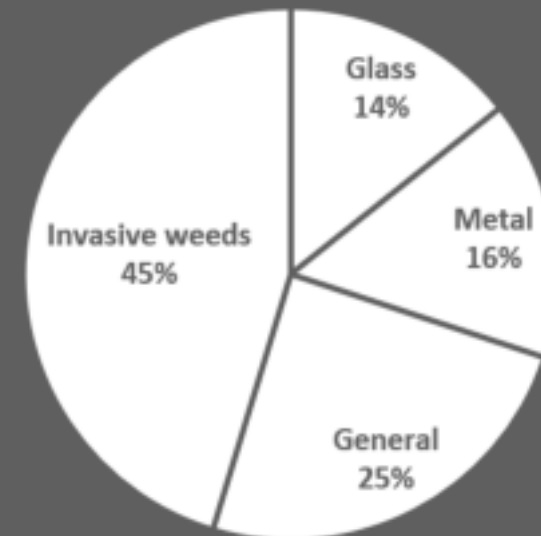
- a. Weight of litter accumulating on beaches per year categorised by type
- b. Weight of waste removed from beaches per year categorised by type

During monthly beach cleans performed on six beaches including the three beach NRs, a total of 692.6kg of invasive weeds and litter was removed. This incorporated glass and metal which were taken for recycling and general marine debris such as plastics and rubber tyres etc.

It is important to note that significantly more weeding occurred during the season however the weight was not recorded. AIG staff also regularly collect litter (mainly aluminum cans) found on the beaches while performing other duties.

The South Atlantic Plastics Project performed an intensive study of the litter which accumulated on the Beach NRs, categorizing the items collected. This will be repeated in Y3 to allow a comparison to be made to Y1.

ITEMS REMOVED FROM ASCENSION BEACHES



3. Light pollution– number, type and duration of lights visible from the Beach Nature Reserves (monthly Jan-May)

Weekly checks were performed from Jan-May to assess the number of lights visible from the Beach NRs. At Long Beach NR, the new water treatment plant adjacent to the beach has several lights which flash during the evenings. This was reported to the Director of Operations to make amendments.

New lighting was also installed around the fuel tanks at the airhead which lights up Pan Am NR during the operations here. Discussion was had with the MoD to reduce the length of time these are in operation during evenings where possible.

4. Non-native shrubs– number of non-native shrubs present with the Nature Reserves and buffer zones (annually)

Drone surveys have been conducted to understand and manage the number of non-native shrubs within the NRs and surrounding buffer zones. These surveys are conducted monthly to record the encroachment of invasive species onto the NRs and to record the progress of invasive species clearance by AIG Conservation and other island partners. The surveys were completed using a multispectral drone, collecting images in a range of formats (right) to record the chlorophyll levels in each tree (below right).

The main invasive species removal in Y2 were conducted at Pan Am NR where the drone is unable to fly so results are difficult to note in other NRs but this long-term dataset will prove invaluable in forthcoming years.

5. Non-native predators

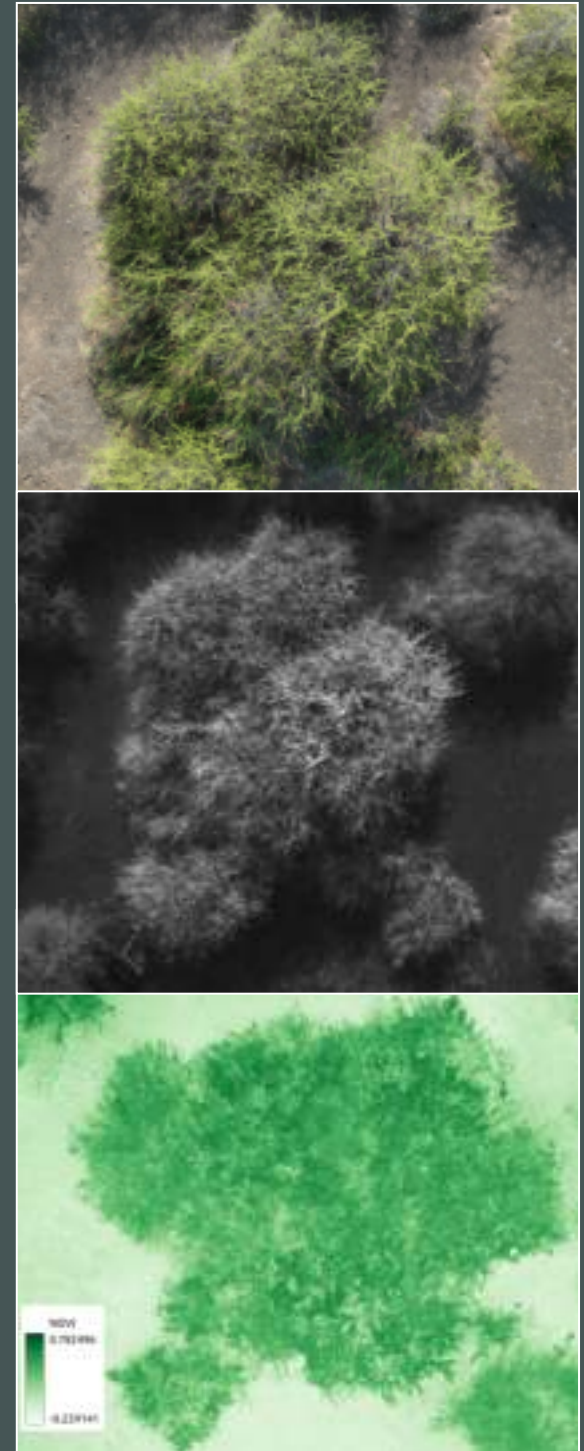
a. Amount of rodenticide bait taken on Long Beach and North East Bay

b. Incidence of rodent predation on hatchlings

Rodenticide is used fortnightly at North East Bay and monthly at Long Beach. During each replenishment, 100% of bait is taken, suggesting that the frequency of distribution may need to be increased.

A feasibility study 'Can Ascension be predator free?' (DPL0037) was conducted in January 2024 and a report drafted (Bell *et al.* 2024). The project provided the AIG Environmental Health department with on-site training and advice as well as formal recommendations on how to control the rodent population and price estimations for a complete eradication of invasive vertebrates. The recommendations are being put into practice to better control the rodents on island around essential settlements and in key biodiversity sites such as the Beach NRs.

A study to record the number of incidences of rodent predation on turtle hatchlings would be too labour intensive and therefore staff time was allocated to other conservation and monitoring tasks.



Ascension Beach Nature Reserve
Year 2 Research



Research

Knowledge gaps prevent the effective management of the Beach Nature Reserves and the protected and endemic species found there. The Ascension Island Government Conservation Directorate are eager to develop research opportunities to close knowledge gaps and will actively work with external partners to understand more about our native species.

Turtle Migration

In Y1, 11 satellite tags were deployed on green turtles to understand their migration patterns. Additional funding was obtained in Y2 for more tags however long lead-in times has resulted in the tags arriving at the end of the turtle season. These will therefore be deployed in Y3. Data from these tags will be analysed by experts at the University of Exeter and published as a peer-reviewed scientific manuscript (results from Y1 above right).

Climate Change

In Y1, a scientific paper was published by de Mora et al. (2024) with models that the Ascension MPA by 2040-2050 will become warmer (+0.9 to +1.2°C), with lower surface nutrient concentrations (-0.023 to -0.0141 mmol N m⁻³ and -0.013 to -0.009 mmol P m⁻³) This is obviously important in relation to the Green turtles and Land Crabs which use the Beach NRs but also rely on a healthy surrounding Marine Protected Area (MPA).

Land Crab biology

In Y2, AIG paired with researchers at Universidade Estadual Paulista in Brazil to understand the connectivity of land crabs across the South Atlantic islands. Tissue samples were collected for genetic studies and the researchers will also model larval dispersal through particle movement simulations for Ascension and the other islands where the species is found. Results to follow.



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