

## Darwin Plus: Overseas Territories Environment and Climate Fund Annual Report

To be completed with reference to the "Writing a Darwin/IWT Report" Information Note: (<https://dplus.darwininitiative.org.uk/resources/reporting-forms-change-request-forms-and-terms-and-conditions/>). It is expected that this report will be a maximum of 20 pages in length, excluding annexes)

**Submission Deadline: 30<sup>th</sup> April 2021**

### Darwin Plus Project Information

Project reference	DPLUS087
Project title	Transitioning Blue Iguana Conservation to Sustain Conservation Success
Territory(ies)	Grand Cayman
Lead organisation	National Trust of the Cayman Islands
Partner institutions	Wildlife Conservation Society (WCS), San Diego Zoo (SDZ), Queen Elizabeth II Botanical Park (QE11BP).
Grant value	GBP 197,902
Start/end dates of project	1 April 2019 – 31 March 2022
Reporting period (e.g. Apr 2019-Mar 2020) and number (e.g. Annual Report 1, 2)	April 2019 – March 2022 Annual Report #2
Project Leader name	Luke Harding
Project website/blog/social media	<a href="https://nationaltrust.org.ky/our-work/conservation/">https://nationaltrust.org.ky/our-work/conservation/</a> Facebook/Instagram: @BlueIguanaConservation
Report author(s) and date	Luke Harding, 7th May 2021 (agreed extension).

### 1. Project summary

The Grand Cayman blue iguana (*Cyclura lewisi*) is an endemic species which in the early 2000s was threatened with functional extinction. In response to this conservation crisis, the species was classified as Critically Endangered on the IUCN Red List of Threatened Species, with fewer than 25 individuals left. Urgent action was necessary to save the blue iguana from extinction and Blue Iguana Conservation (BIC), formerly the Blue Iguana Recovery Programme (BIRP) was set up by the National Trust for the Cayman Islands (NTCI) with the support by off-island stakeholders and other partners. This stimulated long-running and extensive efforts by BIRP to capture remaining wild specimens for breeding, head-start hatchlings at the captive facility and then to release and rebuild wild populations. Through on-island selective captive breeding efforts for population and genetic recovery, by 2012, blue iguanas had been downlisted to Endangered. Recovery and release efforts of captive-bred and head-started blue iguanas continued and, in 2018, the project celebrated the release of the 1,000<sup>th</sup> blue iguana into the Salina Reserve.

Since 1987, annual field census surveys have been carried out to monitor the wild blue iguana populations across three sites: Queen Elizabeth II Botanic Park, Salina Reserve and Colliers Wilderness Reserve. Through field data analysis, it has become apparent that there is little evidence of blue iguana hatchling survival mainly due to predation by feral cats, which are abundant in these three sites. In addition, adult blue iguanas are threatened by predation by

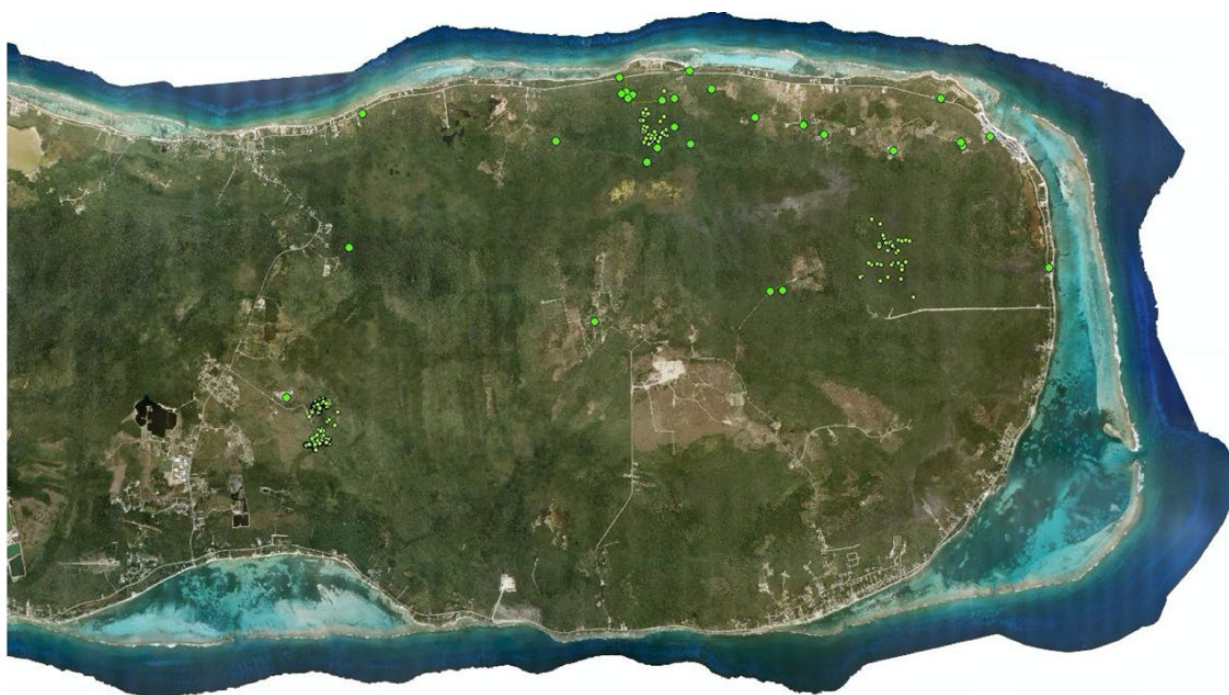
stray dogs and collisions with vehicles. These threats have proven that the captive breeding facility is highly essential to continue aiding the conservation strategy of this species.

Gap analysis indicated that the ageing BIC facility was in need of an upgrade to sufficiently hold the breeding captive population, whilst also generating species awareness and sustainable revenue through ecotourism and on-island capacity building. Key to the success of the captive breeding facility was the need to ensure greater biosecurity to protect the captive iguana population and prevent interactions with threatening invasive alien species. Alterations to the facility, such as the purchase and installation of better perimeter fencing was deemed essential. In addition, analysis showed that other necessary improvements should include raising the standards of captive husbandry, health welfare, behavioural and veterinary research, on-site nutritional resources and reproductive success.

Preliminary genetic research shows that the preservation of founder lines has resulted in the on-island captive population not expressing any inbreeding depression, therefore demonstrating that this conservation breeding programme is successful and continues to be genetically viable.

The BIC facility also provides the human resources and financial support to monitor 1,500 ha of natural blue iguana habitat. Three sites are surveyed in rotation over three years.

A revised Strategic Species Action Plan (SSAP) has been created and is a projection of the major objectives of this programme over the next five years (2021–2026), providing direction for the conservation of blue iguanas on Grand Cayman. The new SSAP was formed by an appointed Secretariat, with input from key project stakeholders and partners through a five-day workshop (2019) and a three-day meeting (2021) and additional reviews. The SSAP document serves as the most updated and accurate presentation of knowledge regarding captive and wild blue iguana populations and proposes achievable future plans for the project, including population data techniques, legal frameworks and permits, veterinary science and educational outreach.



**Figure 1.** Distribution of potential blue iguana populations (green dots) on the East End of Grand Cayman (2002, Cayman Islands Department of Environment).

## 2. Project stakeholders/partners

Blue Iguana Conservation (BIC) is managed under the National Trust for the Cayman Islands (NTCI), a registered non-profit organisation. The NTCI leads and supports BIC through committed maintenance of the captive breeding facility, threat identification and mitigation and ensuring suitable husbandry, welfare and release site/protected area management. The NTCI provides BIC staff at all levels, to ensure successful on-island capacity building.

The aims and objectives to save Grand Cayman blue iguanas have been assisted by long-term partnerships. Through collaboration and maintenance of strategic partnerships with local, regional and international collaborations, BIC has been able to implement species recovery efforts for over 20 years. Key partners include the Cayman Islands Department of Environment (DoE), Queen Elizabeth II Botanic Park (QEIBP), Wildlife Conservation Society (WCS), San Diego Zoo Wildlife Alliance Institute of Conservation Research (SDZWAICR), Fort Worth Zoo, International Reptile Conservation Foundation (IRCF), Mississippi State University and Harrisburg University. In 2020, BIC invited St. Matthew's University School of Medicine (SMU) to be project partner, increasing links to on island veterinary expertise and student education for capacity building.

BIC has an established Steering Committee, formed of representatives from NTCI, DoE, QEIBP, SMU and BIC. The Steering Committee meets quarterly to discuss issues and future plans directly involving the captive and wild populations of the blue iguanas. The last meeting was held in March 2021 (Annex 3.1) and the next meeting is scheduled for June 2021.

The BIC facility is based within the grounds of the QEIBP, a 24.3-hectare site consisting of gardens and woodland trails that is co-owned by the NTCI and the Cayman Islands Government. The BIC facility holds up to 200 captive blue iguanas for the purposes of targeted breeding under the Grand Cayman blue iguana studbook, rescue and rehabilitation. The QEIBP has a population of free-roaming blue iguanas which is monitored by the BIC team.

QEIBP supports NTCI through outreach from school and educational visits and has been assisting BIC closely with the planting plot design, seed collection, storage, plant choices and plant cultivation through this project (Output 3.0; Activities 3.2 and 3.3.). QEIBP will work closely with BIRP to ensure that construction and repairs provided for in Outputs 2.0 and 3.0 can be carried out with minimal disruption to other aspects of the BIC and Botanic Park activities. Staff at the QEIBP have been supportive to BIC by informing park visitors about the BIC facility, opening times, available tours and additional information. They also assist with invasive species monitoring and trapping. The QEIBP General Manager sits on the BIC Steering Committee to provide contributions to the project's progress.

The Wildlife Conservation Society (WCS) Zoological Health Program has provided veterinary support to BIC since 2001, in conjunction with the IUCN Iguana Specialist Group and SMU. Typically, WCS travel to Grand Cayman to carry out annual health assessments on captive blue iguanas and also evaluate pre-release candidates through gaining culture, parasite screens and baseline haematologic and biochemical data. However, Year 2 of this Darwin grant project was affected by the COVID-19 global pandemic and the WCS veterinary team, led by Dr. Paul Calle, was unable to visit in 2020. The 2020 health assessments were carried out in November 2020 by BIC staff and an on-island team from SMU, overseen remotely by Dr. Paul Calle and Dr. Ken Conley from WCS. BIC is offered regular support from Dr. Samantha Shields at SMU and veterinary students from this institution, including carrying out post-mortems and some on-island sample testing. Recognised local veterinarians offer clinical support to BIC where required, should illness or injury occur.

In addition, WCS assisted BIC in Year 2 of this project by providing vital input into biological and veterinary research including publications on issue such as the on-going *Helicobacter* cases, supporting veterinary evidence and methods for inclusion in the Strategic Species Action Plan (SSAP) (Output 1.0) and provided advice for welfare, body condition and nutrition, in association with SDZWAICR (Output 3.0). Continued partnerships with U.S. institutions have enabled international momentum for the first ever International Blue Iguana Day, to raise species awareness and is to be celebrated on 8th May each year. The centralised record-

keeping database, Species360, has enabled BIC staff to present accurate and timely weight graphs and body condition records to support veterinary monitoring through nutritional improvements. Species360 has been pivotal in enabling BIC to update records frequently and efficiently, whilst also enabling the partners and Steering Committee to easily access records where necessary.

Dr. Tandora Grant from SDZWAICR maintains the studbook for the captive blue iguana breeding programme and through determining critical genetic evaluation and demographic statistics, Dr. Grant has successfully managed breeding pairs and wild-release candidates for over 20 years. In this time, she has been able to avoid inbreeding depression in the blue iguana population, therefore providing more genetic diversity now than ever before. The SDZWAICR has also assisted with recommendations for the SSAP (Output 1.0) regarding breeding and releases.

After the success of the first five-day SSAP workshop in 2019, the second two-day meeting was postponed due to the COVID-19 pandemic until January 2021. This meeting was a success, with on-island partners gathering in person (Cayman Islands are free from COVID-19), whilst off-island partners joined and participated via Zoom. The participants were sent drafts of the SSAP and their reviews were returned in February 2021 for final edits and review from the NTCI Board of Trustees prior to publication.

TAB is the management group for the QEIBP, where the BIC facility is based. Due to the COVID-19 pandemic, BIC has suffered from a lack of revenue through limited ecotourism due to Cayman's travel borders being closed since March 2020. Once on-island lockdown restrictions were lifted in June, BIC was keen to attract local visitors and, later in the year, NTCI and QEIBP agreed upon an affordable, combined entry price for QEIBP and BIC facility. BIC had to be flexible to maximise revenue opportunities, therefore, although BIC offers guided tours on request, the facility has been open for self-guided tours between 10 am and 2 pm since October 2020, which has received a far better uptake and more enthusiastic feedback from on-island visitors who are able to take photographs, ask questions and walk around the facility at their own pace. Tour information and BIC facility opening times have been promoted at the QEIBP Visitors Centre, including the placement of a standing banner advertising the options and reasons to visit the BIC facility. The QEIBP team were supportive of BIC during several park events when BIC were conducting outreach efforts.

Throughout Year 2, BIC continued to receive sporadic food donations from the community 'Blue Iguana Champions' - mainly fruit and flowers to assist with feeding the facility's iguanas.

Since 2019, BIC has collected data on the loss of natural food plant collection sites around Grand Cayman. The captive blue iguanas are fed on wild native plants that are harvested sustainably, however, with the increase in housing developments and land alterations, BIC has lost over 20 food collection sites in 12 months. In April 2021, the NTCI created the Blue Iguana Gardens initiative, to encourage members of the community to either leave areas of wild vegetation on their land for BIC to utilise at the request of the landowner, or to purposefully grow certain species of native food plants that will increase resources for feeding the captive blue iguanas. This initiative originally gained excitement and momentum around island through word-of-mouth but is due to be launched officially in May 2021. A welcome pack (Annex 3.8) was designed for printing and copies will be taken to NTCI/BIC events, promoted in the NTCI and QEIBP visitor centres and a digital version will be shared on BIC and NTCI social media platforms, the NTCI website and via email to interested parties. The pack includes all of the information necessary to become a Blue Iguana Gardener, including instructions, a plant list and a registration form.

The annual blue iguana survey in 2020 was successful, with a team of international volunteers coming to assist the survey team in Colliers Wilderness Reserve. All survey members left Grand Cayman just before the borders closed, ending a successful survey season. Annette Gunn, an international volunteer, stayed to assist BIC throughout the pandemic. As Grand Cayman remains closed to visitors, Annette was subsidised by this Darwin Plus grant to assist with the March 2021 surveys, including preparation, methodologies, survey logistics, data collection, equipment, post-survey trapping and analysis. This change was accepted by Darwin

Initiative in October 2020. Preparatory work mainly consisted of cutting trails and putting up trail signs.

The 2021 annual surveys were carried out in the Salina Reserve in March by six on-island team members: three from NTCl; three from DoE. The surveys were planned thoroughly and ran smoothly, under the guidance from the BIC Steering Committee. The changeable weather caused the survey period to last 16 days and two days were repeated due to rain.

### **3. Project progress**

#### **Output 1: Strategic Species Action Plan (SSAP) 2020-2025 is delivered by key stakeholders.**

- 1.1 SSAP Secretariat made arrangements for the second meeting, which was delayed from September 2020 to January 2021 due to the unavailability of partners during the COVID-19 global pandemic. Invitations and an agenda (Annex 3.3) for the three-day meeting were sent to all participants.
- 1.2 SSAP workshop was held on the 21<sup>th</sup>-23<sup>th</sup> September 2021. Eighteen participants based on Grand Cayman attended the meeting in person, whilst thirteen off-island participants logged in via Zoom (Annex 3.3). The meeting was well received by all and feedback was very positive for both the event and for the SSAP. The key partners were representing WCS (Bronx Zoo), San Diego Zoo, Fort Worth Zoo, The Department of Environment (DoE), Harrisburg. The WCS annual veterinary visit did not occur due to the COVID-19 global pandemic but instead was carried out on island with SMU.
- 1.3 A post-meeting report was collated by the Secretariat (Annex 3.3 – see Annex 3.2 for 2019 meeting report). The newly appointed SSAP Secretariat drafted the SSAP document with input from key stakeholders and partners. The SSAP is completed and will be launched in May 2021.
- 1.4 All actions for the second SSAP meeting were delayed from September 2020 to January 2021 due to global pandemic restrictions and uncertainties but all actions were satisfied. Frequent communication between Secretariat and key stakeholders/ partners was made via videoconferencing and email.
- 1.5 The September 2020 workshop was postponed until January 2021 (*Figure 2*). The Secretariat prepared the on-island meeting location, invitations, agenda, meeting slides, Zoom links and draft document.
- 1.6 The SSAP, now dated 2021-2026, was approved by key stakeholders and partners and will be launched publicly in May 2021 (Annex 3.4).



**Figure 2.** The on-island participants of the second SSAP meeting, Grand Cayman (with off-island participants via Zoom) in January 2021.

## **Output 2: Captive Breeding Facility reconfiguration, biosecurity improvements carried out.**

2.1 CBF staff have completed the required repairs to existing concrete enclosures. Concrete, walled, semi-wild habitats were built to improve captive husbandry and welfare standards and breeding management.

2.2 CBF staff have completed the build work required to produce the planned amount of hatchling and subadult cages, the inclusion of dividing walls, has allowed greater flexibility so staff can adjust capacity, dependent on the changing number of animals held within the facility. All cages were utilised significantly during the 2020 breeding season and the dividable cages now house captive-bred individuals from 2019. Hatchling cages remain in use by 49 individuals, having released an additional 40 hatchlings in November 2020.

2.3 Staff and community volunteers have cleared all of the vegetation along the perimeter fence line; and the installation of new flashing and rollers to the fencing has been carried out thereby completing this objective. Regular inspection of the perimeter security will be ongoing and control of vegetation along the perimeter fencing will be continued by BIC staff and volunteers.

## **Output 3: Iguana nutrition improved and diversified by: (i) wild food plant cultivation plots built at Captive Breeding Facility; (ii) transportation, refrigeration purchased; (iii) recruitment partner supermarket.**

3.1 A baseline report was produced to summarise existing captive *Cyclura* diets and identify wild blue iguana plant knowledge (Annex 3.5). From this report, a workable, laminated plant handbook (Annex 3.7) has been designed for use at the CBF, in order for staff and volunteers to learn and collect suitable food plants from around the island and ensure that variety can be recognised and offered wherever possible (seasonally dependent). The increase of nutritional variation has shown significant improvements in the facility's iguana body condition scoring.

3.2 Wooden cultivation plots were designed for the CBF and a 180 ft planting bed was allocated for cultivation. In addition, a 23 ft planting bed has received natural growth of desired food plant species and all plots are being routinely maintained by staff and volunteers (Annex 3.6).

3.3 The cultivation plots were constructed and planted with seeds and seedlings of eight different food plant species. Various species have been trialled, including hibiscus, marigold,

Ganges rose and callaloo. Maintenance is carried out by staff and volunteers, with daily watering manually and through irrigation (Annex 3.6).

3.4 The partnership with Fosters supermarket enables continued support for BIC but they have reduced their donations of excess produce to once monthly based on our current use and demand but additionally supported with gift cards to use for extra items when needed, such as fresh fruit.

3.5 The hybrid vehicle continues to make a significant contribution to the work at the facility and is used daily by BIC staff for native plant food collection and supermarket donations, enabling us to offer a greater diversity of diet for the iguanas.

3.6 The new refrigerator continues to be used to increase the longevity and freshness of collected and stored food plant leaves, flowers and fruits. The team are able to collect larger volumes of food in one outing because food can be kept chilled at the facility, reducing total food collection time throughout the week.

#### **Output 4: Perform annual surveys of the Colliers and Salina Reserve wild populations.**

4.1 Analyses of special challenges for Colliers Wilderness Reserve and Salina Reserves were carried out and reported on during survey planning meetings. Suitable field survey candidates were selected.

4.2 Survey candidates were contacted to confirm participation and arrangements for travel and accommodation were made.

4.3 Trails were cleared and maintained in Colliers Wilderness Reserve to required survey standards and a temporary field shelter was erected in the camp. Work was completed on schedule and in time for the scheduled date for the surveys.

4.4 The field survey for blue iguana population census was successfully carried out in Colliers Wilderness Reserve over six days. The field shelter was dismantled at the close of surveys.

4.5 A verbal survey conduct report occurred and the team were debriefed on the success of the surveys.

4.6 Survey results were compiled and were comparable across previous years.

4.7 All steps were repeated for the Salina Reserve in 2021, on schedule for the March survey and which was carried out successfully. Relevant adjustments to 2021 survey were decided during survey planning meetings in early 2021 and a change request form was submitted to Darwin in October 2020, for the 2020 volunteer survey team member Annette Gunn to stay out to assist with the 2021 surveys.

### **3.1 Progress towards project Outputs**

**Output 1** concentrates on the Strategic Species Action Plan (SSAP) for BIC over the next five years. An SSAP was critical to ensure deliberate direction and focus for the project and transition from species recovery to species conservation. A SSAP Secretariat was appointed to prepare and host two focus workshops (2019, 2021) with a number of local and international key stakeholders and partners. The first draft was delayed due to personnel changes within the NTCI and the BIC Project Manager was appointed to the position of SSAP Secretariat instead in 2020. The COVID-19 pandemic caused further disruption, with limited communication with partners due to off-island staff being furloughed and self-isolating (see Section 12). However, work was continued by the Secretariat through the creation of several SSAP drafts, which were frequently reviewed by the NTCI and the BIC Steering Committee. A proposed 'first' draft was then circulated to participants ahead of the second meeting in January 2021.

The focus of this second meeting was primarily to review the necessity for and feasibility of the included objectives and actions discussed in 2019 and to update all participants on current information on captive husbandry, breeding and genetic knowledge, wild population estimates and generate ideas for education, outreach and standardisation of all BIC's aspects to ensure efficient transparency with all key stakeholders and partners. Due to restricted international

travel, off-island partners attended the meeting via Zoom videoconferencing, whilst the on-island participants were able to gather in a boardroom as Grand Cayman has been free of COVID-19 since June 2020. The broad representation of the participants made for two extremely successful events and a wealth of experience for input into the SSAP, despite the logistical complexities of a combined online and in-person event in 2021.

A final draft was reviewed by all 2021 workshop participants in February 2021 and final edits were made by the Secretariat for completion in April 2021.

**Output 2** focuses on the refurbishment and biosecurity improvements for the captive blue iguana facility. All building work associated with this grant project has now been completed following the proposed and slightly adjusted indicators, including repairs to existing concrete enclosures, the construction of additional concrete semi-wild habitat pens and also the building of additional hatchling and subadult cages. The BIC team evaluated several design ideas to improve health, welfare and function of captive environments, and chose to include removable dividing walls in meshed cages to increase flexibility to cater for fluctuating numbers of iguanas within the facility.

Biosecurity alterations to the BIC facility perimeter fence were necessary to reduce access for invasive alien species (green iguanas, cats and dogs) in order to protect the captive blue iguanas. The 8 ft high chain-link perimeter fence has had 4 ft of  $\frac{1}{4}$  inch mesh fixed to the bottom half of the fence, a 2ft cement foundation, 3 ft high sheets of flashing and rollers have been installed to replace barbed wire to exclude invasive species (*Figure 3*). The fence is 776.95 m long, which is an increase from the initial 275 m stated in the original log frame, in order to ensure exclusion around any possible entry point to the facility. Since the fence alterations began, a total of 160 green iguanas have been culled in and around the facility perimeter within the first year, four dogs and a number of cats have been trapped within the surrounding botanical park (Annex 3.9). Since completion of the fence improvements during year 2, the number of recorded invasive species has reduced and the last recorded green iguana within the facility was seen in October 2020 and there have not been any other invasive species recorded at the facility (Annex 3.10).

Boundary clearing was completed by BIC staff, community volunteers and labourers and any regrowth is maintained by BIC staff. Repairs and biosecurity achieved to standard as monitored by the Project Leader. Initial delays of the fence alterations and any construction were due to importation restrictions during COVID-19 (see Section 12) but all construction has now been completed at the facility.



**Figure 3.** Alterations to the fence at the Blue Iguana Conservation facility, February 2021.

Indicator 2.2 required the construction of 100 new subadult and 50 new hatchling cages. The adjustment on these plans proposed in Year 1 to make semi-wild pens with mesh sides and



roofing proved absolutely necessary to be completed by the 2020 breeding season due to such a successful output of eggs from the captive facility animals and reshuffling of older iguanas.

In addition, the dividable wooden standing cages enabled improved housing for the yearlings (2019 hatchlings), along with the opportunity for BIC to group-rear five separate clutches up to five months of age, after which they were released into the QEII Botanic Park in November 2020. The flexibility of these cages has enabled the BIC team to have more effective responses to changes, for example, injured or sick animals that require temporary housing and/or veterinary attention. The wooden dividers have prevented injuries from conflicts via access with neighbouring iguanas and the animals have been observed to be much calmer due to the provision of visual barriers.

**Output 3** concentrates on improving and diversifying the diet and nutrition for the captive blue iguanas at the facility. This includes a) implementation of wild food plant cultivation plots; b) vehicle for food collection, new refrigerator; c) recruitment of partner supermarket.

A baseline report was completed, consisting of information gathered from a literature review regarding *Cyclura* diets. From this report, and from trialling additional food plant species in 2020, BIC has been able to create a useable plant handbook for staff and volunteers, consisting of over 40 plant species. The working hypothesis from last year's report, suggesting a link between reproductive health and diet, is still in progress, as the increase in quantity of food offered, as well as diversity of plants offered, may have played a part in an extremely successful breeding season in 2020: BIC welcomed a total of 93 hatchlings to the programme in 2020, a new programme record.

The captive husbandry, welfare and nutritional aspects are consistently reviewed by the Operations Manager, the BIC Steering Committee and veterinarians from SMU and WCS. There have been major changes in standards since the start of this grant project, due to the application of new staff protocols and a new staff training programme. The body condition of the captive blue iguanas has been dramatically improved, as evidenced by the results of the annual health checks (*Figure 4*), carried out with an on-island team from BIC and SMU, supported by WCS, which show that each iguana has been continually and measurably putting on weight to the present day.



**Figure 4.** Annual health checks completed by an on-island team from BIC and St. Matthew's University School of Medicine, under online supervision from WCS (Bronx Zoo), November 2020.

In addition to the varied diet offered each day, dry food pellets have been sourced from Mazuri Exotic Animal Nutrition for emergency use at the facility as part of our project disaster planning (e.g., in the event of hurricanes when fresh food may be in short supply).

The four pilot cultivation planters, built for trials of Ganges rose, marigold and hibiscus plants have been dismantled as a Ganges rose plot has been established and hibiscus plants are now successfully growing throughout the facility.

The cultivation plots within the facility have been successful, particularly the large planting bed (180 ft/ 54.9 m) along one fence line, which has increased growth of callaloo and over 14 other native food plant species from seed, due to significant rainfall on Grand Cayman in late 2020. This has been an encouraging growth increase since mid-2019, when there were only three species growing, and the target of ten species by the end of the project term has already been surpassed. The project has received support from the community, with donations of plants from local plant nurseries Vigoro, Power Flower and also from private donors.

Irrigation systems and new hose connection points have been installed and are contributing to the success of maintaining the cultivation plots.

This output has expanded further, due to the concept of the NTCI/BIC Blue Iguana Gardens initiative (Annex 3.8), which will be launched across island in May 2021. This enterprise started from the trials conducted at the facility and serves to provide information and support to interested community members who would like to support BIC by either purposefully growing selected food plant species from seed, or by leaving areas of their private gardens for wild plant growth. The community participants will contact BIC when their produce is ready to harvest in a sustainable manner, therefore providing additional supplementary food resources for the captive blue iguanas. This initiative was derived having assessed the threats of increasing rates of anthropogenic activity on wild plant areas around Grand Cayman, which reduces the available food collection sites from which BIC staff can collect to feed the captive iguanas.

In 2019, a partnership was formed with Fosters supermarket to provide donations of suitable food items for supplementary iguana diet. These donations now occur on a monthly basis or when we make a request depending on demand and availability. This new partnership has also led to the donation of gift cards so that we can use the fund to purchase fresh produce if required for key items such as different locally grown fruits.

During 2020, several members of the local community, including farmers, came forward to become 'Blue Iguana Champions', by assisting BIC with food donations and this continues into 2021. This, and the Blue Iguana Gardens initiative enable the community across Cayman to become better engaged and raise awareness for this endemic species.

The hybrid motor vehicle that was purchased for food collection has continued to be a great asset for the project. BIC staff are easily able to travel around the island to seek natural food collection sites, liaise with landowners about food donations and access supermarkets. Food plant diversity has now reached a maximum of 52 species, from an original six species, including new discoveries such as wild lettuce, though diversity, volume and plant quality is seasonally dependent.

The target is to reduce staff time for food collection by 25% and that is still the goal. Due to several reasons, food collection time has not yet decreased to 25% but has reduced significantly. New staff have settled into the programme and have gained excellent working knowledge of the plant species in order to learn and identify suitable collection sites, despite the continuous losses of sites from housing developments and agricultural use. The loss of sites has meant that BIC staff have had to travel further around the island to collect optimal quantity and diversity of food. The project has lost 18 food sites during 2020 and this will continue to be a real threat to feeding the capacity of captive iguanas at the facility. In contrast, BIC released 43 iguanas in 2020, reducing the amount of food required for the facility during the dry season, when food diversity is more limited.

The new, economical refrigerator is in daily use, providing ample storage and increasing freshness of higher quantities of collected leaves, fruits and flowers, reducing total food collection time for the BIC staff.

**Output 4** encompasses the annual wild blue iguana surveys of Colliers Wilderness and Salina Reserves. In 2019, a group of suitable candidates were selected and preparation was made for their arrival, including preparing Colliers Wilderness Reserve trails and erecting a temporary shelter for the surveys in March 2020. The results of this successful survey were reported within the Year 1 Annual Report.

The March 2021 surveys were carried out using a solely on-island team, selected as planned in January 2021, as international candidates were not permitted to travel to the Cayman Islands due to the COVID-19 global pandemic. The survey team was compiled of six, skilled people from BIC and DoE, in three teams of two each day. The weather mid-survey became changeable and this caused interruptions to the survey, however, the work was completed successfully and within the allotted time period (Annex 3.11). One of the 2020 volunteer survey members had stayed on island throughout the pandemic to assist with BIC and NTCI work, helped to prepare trails for the 2021 surveys and also led a team during the 2021 surveys.

Whilst the NTCI awaits a detailed analysis of this survey from project partners DoE, early conclusions from Salina Reserve survey are that the results showed a lower density estimate than from previous years and that there is still no recorded sign of natural recruitment. A positive observation of the survey was that there was a notable growth difference with a number of individuals recorded to have gained size and weight in comparison to the previous surveys in this area.

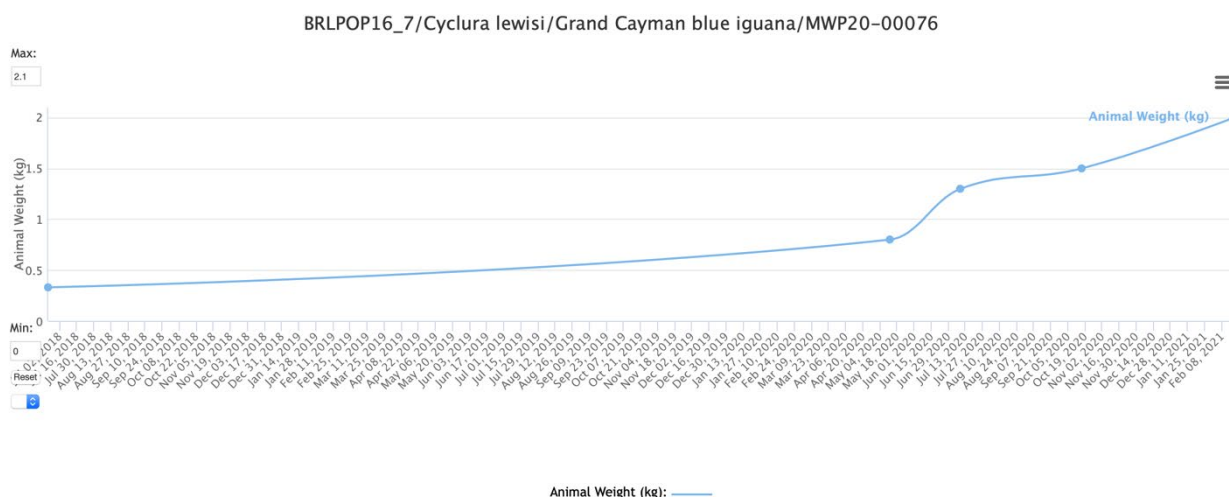
All survey candidates were debriefed appropriately, and results were discussed at length with the BIC Steering Committee.

### **3.2 Progress towards the project Outcome**

To transition from recovery to stabilised conservation requires the realisation of several key outcomes.

1. The SSAP workshops, collaboration between partners and introduction of new, relevant partners, has enabled the Strategic Species Action Plan (2021-2026) to be drafted, reviewed and completed. The SSAP will guide the direction of BIC over this time period, in order to maximise opportunities for research and filling data gaps, standardise records and other methods and also capitalise on the purpose of the BIC facility (husbandry, conservation breeding, education, fundraising, etc.). The second SSAP meeting was carried out in January 2021, with the final document being proposed for launch by the NTCI in May 2021.
2. The reconfigured captive blue iguana facility has been adapted to cater for future longevity due to current threats to blue iguanas still prevailing on Grand Cayman, through incorporating flexibility into pens and cages. Measurable animal husbandry and welfare standards have increased, there has been less behavioural conflict between iguanas due to more appropriate housing. Alterations to the fence have been made to significantly reduce the opportunity for invasive alien species to enter the captive breeding facility and the effects of this have been monitored, and will continue to be monitored through Year 3 (Annex 3.10)
3. Veterinary health has improved through increased nutritional diet and diversity. The aim to improve body condition of captive blue iguanas over the first two years has been documented through weight measurements and increases can be seen on individual weight graphs (*Figure 5*).
4. Trained candidates were recruited for annual surveys 2020 (international) and 2021 (on-island). Survey preparation, such as trail clearing, equipment and required signage were completed on time. Surveys were carried out to the highest standard, in order to ensure optimal data collection and accuracy, keeping in line with previous surveys to allow for data comparisons. Results have been able to benefit knowledge regarding wild blue iguanas, the objectives of the captive facility, alternative field methodologies that have been discussed with all partners to drive the focus for the SSAP up to 2026.

All agreed time frames set out in the log frame were met and the surveys were successfully completed.



**Figure 5.** Weight graph, showing a rise during this grant, from a subadult male housed at the Blue Iguana Conservation facility, Grand Cayman

### 3.3 Monitoring of assumptions

Some of the assumptions regarding the project objectives have changed and some were realised during the year. Please refer to Section 12 for aspects of the project that were impacted by COVID-19.

#### Assumption 1: SSAP

**Comments:** The risk that the SSAP is rejected by governmental bodies as a key source for a statutory species conservation plan is mitigated by DoE as a key stakeholder, has held true to date. The DoE have been valuable in the development of the SSAP due to knowledge on the likelihood of planning permits for housing, road developments and areas surround the protected reserves. BIC utilises their social media platforms to remind the general public that iguanas may be crossing roads during breeding season, and that proposals of building projects may cause a threat to blue iguana habitats.

#### Assumption 2: Change of Personnel

**Comments:** Assumption 2 indicates that unanticipated staff turnover might cause delay in delivery and that no significant risks are otherwise assumed which could cause delay in the delivery of the project outcomes. The assumption regarding the impact of staff turnover has proven true. Whilst there were several changes to personnel in Year 1, the second year has seen only two changes to personnel, but these have not affected the delivery schedule of this grant. There was one change in the Iguana Warden role at the captive facility in 2020. Additionally, Executive Director, Nadia Hardie, was replaced by Annick Jackman in September 2020. Any time lost or delayed from Year 1 has been regained in Year 2. The Strategic Species Action Plan was compiled using the same methodologies as past SSAPs but in a revised format in accordance with SSAPs for other species and to use the platform to offer the most updated information about the species.

#### Assumption 3: Cultivation of native plants at the captive facility

**Comments:** The unknown capacity for native plant cultivation at the captive facility has been counteracted by a great effort from the BIC team to achieve improved yields and plant diversity. The cultivation plots have become highly valuable for supplemental food resources and cooperation with the QEIIBP has enabled further plants to be propagated within their native plant nursery. The hurricane season in 2020 provided a considerable amount of heavy rain,

eventually become evident in the booming growth and health of the facility's plants, both in and out of the semi-wild habitats. The plots continue to be nurtured to ensure long-term success.

#### **Assumption 4: Field survey teams**

**Comments:** Assumption 4 concerns sufficient field team capacity is recruited within budget and that surveys are not delayed or extended by weather conditions (it is impossible to conduct the surveys accurately when overcast or in rain). These risks were mitigated in 2020 by offering funding for international volunteers and by conducting surveys in March (dry season) each year, also avoiding hurricane risks. In 2021, Cayman's closed travel borders due to the COVID-19 global pandemic meant that an international survey team could not be recruited. The weather in March 2020 was very favourable and the surveys were conducted in a timely fashion. The on-island team were affected by changeable weather in March 2021, although surveys were completed in the allotted time, several days were postponed or due to unsuitable survey weather.

#### **Assumption 5: Veterinary Partners**

**Comments:** Output 1 assumes that partner WCS continues to fund its attendance for annual veterinary monitoring. This remains the case to date and there has not been any indication that funding their travel will not continue. The veterinary team were unable to visit in 2020 due to Cayman's closed travel borders, however, a relationship has been struck between BIC/NTCI and SMU, who assisted with the annual health checks in November 2020.

#### **Assumption 6: Facility breeding levels and construction of habitats**

**Comments:** Output 2 assumes that resuming breeding blue iguanas to the same levels as that of the original recovery programme will not be necessary; no special assumptions will be required and no significant risks relating to the configuration and biosecurity elements; materials and capacity are readily available in the Cayman Islands; unanticipated staff turnover could affect delivery schedule for those elements to be performed by BIC staff. The assumption about the level of breeding required at the captive facility is now largely false, as surveys and camera trapping between 2019-2021 have provided evidence of little survival of wild hatchlings due to the existence of feral cats. This results in a critical need to increase breeding efforts within the captive breeding facility and research in 2020 has suggested that group-rearing hatchlings and hatchling release at five months, rather than three months, may be more beneficial to their survival than originally assumed. The SSAP workshop participants (both 2019 and 2021) agreed that the facility is no longer viewed as a temporary measure, hence why alterations were made to make facility reconstruction efforts more permanent, to ensure conservation breeding in the longer term. Materials for the construction work were delayed due to COVID-19 as discussed in Year 1 Annual Report but all work was regained to completion within Year 2.

The assumption of unanticipated staff turnover was discussed in Year 1 Annual Report and also above in 'Change of Personnel', but this aspect had been assumed in the project planning.

#### **Assumption 7: Cultivation plots and nutritional diversity**

**Comments:** Output 3 assumes that time spent on wild food collection will not be reduced due to the expectation of time taken to maintain cultivation plots. However, BIC staff are able to be present at the facility in order to allow for increased self-guided and guided tour opportunities that generate income and increased outreach for the programme. Plant beds are managed effectively and efficiently, ensuring that appropriate watering, harvesting and preening activities are carried out whenever necessary.

Replacement of aged or defunct donated equipment is necessary to alleviate staff shouldering financial burdens/depreciation of personal vehicles and to provide capacity for storage of donated produce. The purchase of the new hybrid vehicle has continued to be an invaluable asset to the project in Year 2.

Difficulty in transitioning adult captive blue iguanas to a greater diversity of wild food and/or larger percentage of non-native leafy vegetables is not expected, based on existing *Cyclura* husbandry research. Iguanas continue to be fed on a large diversity of wild food plant species,

due to the positive reception from the community prior to the launch of the Blue Iguana Gardens initiative and fruit and flower donations. Iguanas being conditioned for release into the wild will need only to be fed wild food in the lead-up to release.

Supermarket partner is unable to supply surplus produce at level of demand is not considered to be a significant risk as they supply hundreds of kilos of produce to a population of 63,000 people daily. The partnership with Fosters, a large supermarket chain on Grand Cayman, has enabled additional support with food donations, despite the challenges presented by COVID-19.

#### **4. Project support to environmental and/or climate outcomes in the UKOTs**

The Darwin Plus grant was awarded to assist the National Trust for the Cayman Islands with environmental protection through conservation and education across our three islands. The ongoing work by the NTCI is in line with the Environmental Charter signed by the UK government and Cayman Islands Government in 2001, along with the 2009 National Biodiversity Plan objectives. Blue Iguana Conservation also works in accordance with the Species Conservation Plan under the National Conservation Law, 2013.

Blue Iguana Conservation was originally founded to improve the recovery of the blue iguana population, which, in 2002, was classified as Critically Endangered on the IUCN Red List of Threatened Species. Although the species has made some recovery, the conservation programme still endeavours to safeguard the wild and captive populations. There is a clear necessity to conserve this species, due to remaining and ongoing threats across Grand Cayman.

The Blue Iguana Conservation captive breeding facility, supported by the NTCI and key partners, has been empowered by this grant project to provide captive blue iguanas with improved housing, diet and health, behavioural welfare and protection from threats, along with the opportunity for a more aesthetically pleasing and educational experience for visitors. A vital component of this project has been the development of the SSAP, projecting until 2026, in collaboration with key partners via two focused workshops. The SSAP will become the foundation of the National Conservation Council's statutorily mandated Species Conservation Plan.

The achievements within the first two years of this grant directly support Point 7, under the Guiding Principles of the UK/CIG Environment Charter 2001. In addition, this project supports the Cayman Islands under the Convention of Biological Diversity (Articles 6a, 7b, 8d, f, 9b, c, d, 10e, 13a), and Specially Protected Areas and Wildlife, Aichi Biodiversity Targets (1, 12, 17).

BIC is pleased with the achievements over the first two years of this grant, despite the global pandemic and changes in plans and personnel. The positive attitude towards the facility changes made in Year 1 and 2, including the successful annual health checks, research opportunities and breeding season, have provided BIC with a much-needed boost. BIC's Education and Public Awareness (Commitments 9 & 10) has improved greatly in Year 2 through outreach efforts, including fun events and school visits, to regain both national and international project interest, along on-island governmental support.

The rebranding of the programme from Blue Iguana Recovery Programme to Blue Iguana Conservation in 2019, as part of an objective from the previous Strategic Species Action Plan has been well-received by the on-island community and international supporters. The new logo is now visible on all BIC resources and outputs and provides a fresh and modern image to the programme.

BIC has received a major increase in social media followers through our active Facebook and Instagram platforms. In April 2021, BIC's Facebook page has reached over 10,500 followers (from 250 in 2019) and the Instagram account (new in 2019), has almost 1,800 followers – the

majority of which are based in George Town, therefore increasing local interest. The Blue Iguana Conservation area is still the most visited section on our [www.nationaltrust.org.ky](http://www.nationaltrust.org.ky) website.

## **5. OPTIONAL: Consideration of gender equality issues**

This project does not require the address of gender quality issues.

## **6. Monitoring and evaluation**

BIC considers monitoring and evaluation to be central to the project and a key tool in assessing the progress and success of the outcomes and outputs. The log frame is constantly used as a reference point for the tasks agreed and deadlines set. In addition, the completion of documents, such as the nutrition baseline report and the SSAP, are used to reflect project progress and reflect information, for example, from the Colliers surveys and the camera trapping. These documents are shared with the key stakeholders to keep them informed and also to gain their input and expertise into the content of these documents. Project activities and outputs are monitored regularly by the team, management and at the quarterly steering group meetings and form the basis of regular discussions with our key stakeholders.

## **7. Lessons learnt**

During Year 2 of this project, BIC had two unforeseen staff changes, with the replacement of the NTCI Executive Director and NTCI Finance Manager. These changes did not create any delays to the project progress, in comparison to personnel changes in Year 1.

No assumption was made regarding the impact of a global pandemic and this has been an enormous challenge over the past year (see Section 12). The continued closed travel borders, uncertainties and limitations of shipping and sending products in and out of the country remain difficult. The prolonged lack of tourism to date has affected tour revenue, delays with veterinary assistance, shipping samples, sourcing equipment and other essential project supplies.

The second SSAP meeting was held via a half in-person, on-island group and half off-island, virtual Zoom group. This was a complex method and although was a successful meeting, it did create issues when a power cut occurred and the meeting had to be recovered.

The lack of an international team for the 2021 surveys reiterated the importance of ensuring that there are enough on-island skills that, should travel borders need to be closed in future at this time of year, there are still enough trained candidates for survey participation.

The improved knowledge of cultivating target food plant species, combined with the losses of food collection sites has driven BIC and the NTCI to consider alternative methods for sustainably feeding the captive blue iguana population over the long term. The Blue Iguana Gardens initiative is an example of potentially successful mitigation for this issue.

## **8. Actions taken in response to previous reviews (if applicable)**

Our annual report in 2019/2020 was successful and we achieved an overall score of 2, which was well received by all project partners. It was recognised that changes in project staffing, initial budgeting issues and the COVID-19 global pandemic all affected the project timetable and outputs, but overall, the project was on target to meet all the agreed outcomes.

The one issue highlighted to be improved from the Year 1 Annual Report was that the contents of supporting evidence provided in Annex 3 were only snapshots of documents and were not legible because of poor quality imaging to reduce file size. The request was for the Year 2 Annual Report to have copies of original materials submitted alongside the report. We have ensured that all documents of supporting evidence are original and clear to read.

## **9. Other comments on progress not covered elsewhere**

N/A

## **10. Sustainability and legacy**

It is still anticipated that the completion of this project will help to ensure the continuation of BIC's efforts and will continue to complement other projects aimed at developing greater sustainability through the ecotourism value of the programme.

The objectives outlined at the commencement of this project will be sustained after the project is finished, through: (a) adoption of the new five-year SSAP (covering the period from 2021–2026). The SSAP is not expected to require further major revisions after the expiry as the programme transitions to a stable state of conservation management; (b) the purchase of a low-mileage, low maintenance, recent model year, hybrid vehicle, (c) the upgrades to the captive breeding facility have a conservative life-expectancy of at least 20 years.

Other projects in progress include improving sustainable funding via the acclaimed Blue Iguana Conservation facility tour by adding new tour packages, VIP events, educational tours, special events, such as the annual International Blue Iguana Day (Annex 3.13), and important upgrades to the facility such as essential wheelchair access. Ongoing BIC staffing is sustained by NTCI, in part from a government grant.

It is recognised that funding for future wild population surveys will need to be obtained, but the development of new survey methods should mean that there are less requirements for off-island assistance, which will help to minimise future costs for carrying out these surveys and build on-island capacity and skills.

## **11. Darwin identity**

Every effort is being made to publicise the Darwin Initiative, both for its support for BIC and the valuable work it carries out on a global scale. The Darwin logo is used alongside the NTCI logo and the newly created BIC logo in many documents publicising the work relating to this grant, such as the 2019/2020 NTCI Annual Report. Online publications are available from the NTCI website, the Darwin Initiative website and social media platforms (Annex 3.12). The Darwin Initiative is discussed during the Blue Iguana Conservation facility tours, where visitors are informed of the need to explore streams of funding and revenue to support the continuance of the project. BIC staff inform visitors about this Darwin Plus grant and how this has been utilised by BIC, as well as plans for the future outputs.

Darwin Initiative funding has been recognised as a distinct project, in order to keep identity of the outputs and outcome to which it relates. The Darwin Initiative is globally renowned and we are able to reference other Darwin projects which relate to the origin countries of our tourist visitors. The Darwin Initiative has a high public profile and so many of the residents and visitors to the island have a prior understanding and awareness of some of the Darwin projects and work. There is certainly knowledge of the Darwin Initiative within key on-island partners, e.g., partnership staff at the DoE and the QEIIIBP.

As of 2019, BIRP was rebranded to Blue Iguana Conservation (BIC), which has active Facebook and Instagram accounts. Posts have mentioned the Darwin Initiative grant and the work we have been able to carry out due to the support from Darwin funding (Annex 3.12). Any public announcements relating to construction work were not deemed in good taste due to the hardship experienced by many during COVID-19 lockdown, therefore social media posts



featuring construction work relating to this grant were released after July 2020, but especially at the 'reopening' of the newly renovated BIC facility in October 2020 (*Figure 6*). The Darwin Initiative will continue to be highlighted in posts related to all aspects of this grant.



**Figure 6.** Group photograph of BIC staff and volunteers at the facility 'reopening' at the completion of the construction work in October 2020.

The BIC social media channels have been successful in attracting more followers and recently our Facebook social media platform reached almost 11,000 followers with these numbers continuing to rise. We seek to promote awareness of both the species and also of the work at BIC. Through the relevant project work, the social media posts link back to the Darwin Initiative, informing followers on how the grant supports our work and our appreciation for receiving the grant (Annex 3.12).

## **12. Impact of COVID-19 on project delivery**

The COVID-19 global pandemic had an impact on the project schedule in a variety of ways. Unforeseen COVID-19 restrictions have delayed construction work and imports of specific materials, as despite the log frame assumption, not all materials were readily available in the Cayman Islands. There were delays for materials and supplies getting to the island and/or in short supply during lockdown.

Despite the completion of the March 2020 field surveys, one original team member decided against flying to Grand Cayman due to COVID-19 risks. This was mitigated by two additional volunteers joining the survey team. Follow-up capture surveys with San Diego Zoo representatives were scheduled for the end of March but were cancelled due to international borders closing and in-country staff were on restricted journeys across Grand Cayman during lockdown. By the end of 2020, it was apparent that the borders would not open in early 2021, therefore, making it impossible to bring international expertise to assist with the 2021 survey in Salina Reserve. A change request was submitted to Darwin Initiative in December 2020, to enable a temporary NTCI Field Officer with a stipend to carry out survey preparation, including equipment, trail clearing and to participate in surveys and assist with the post-survey analysis.

The second SSAP meeting originally proposed to be held in 2020 was delayed due to difficulties arranging off-island partners to either come to Grand Cayman due to restricted travel or being contactable due to work arrangements, furlough and health. Darwin Initiative approved the second meeting for January 2021, with the Secretariat arranging online videoconferencing via Zoom for off-island participants to attend. The SSAP draft was initially delayed, however, reviews and edits were completed quickly to ensure a completed SSAP by

the end of April 2021, ready for a launch around the first ever International Blue Iguana Day in May 2021 (Annex 3.13).

The global pandemic impacted donations from the community, not only during lockdown but also afterwards, as Grand Cayman began to struggle with fewer produce shipments arriving on the island. This result in less fruit donations and temporary reduced assistance from Fosters supermarket.

Health and safety of project staff was paramount at the height of the COVID-19 pandemic on Grand Cayman. All staff were provided with hand sanitisers, gloves, masks and other personal protective equipment where necessary. The BIC team worked in split shifts to reduce the risk of the entire team being affected by COVID-19. The COVID-19 restrictions impacted the income-generating facility tours, as the QEIBP and BIC facility were closed to the general public and exempted staff have kept necessary food collection during lockdown to a minimum. The lack of facility revenue from visitors was mitigated by a drive to increase online support, i.e., monetary donations and symbolic adoptions.

Grand Cayman was in lockdown for three months between March and June 2020, after which, there were no fatalities and the virus was restricted to the quarantine airport hotels. This meant that mask-free island life could resume and businesses were reopened, including the QEIBP and the BIC facility. Grand Cayman has remained in this locally open state since June 2020, however, the lack of tourism has greatly affected the island's economy. BIC and the NTCI were forced to rethink opportunities for gaining revenue from the community, rather than that of tourists. Facility revenue was mitigated by offering a new style of tour: two guided tours daily, whilst also having the facility open for self-guided tours at a cheaper rate and in conjunction with a special deal with the QEIBP. Aside from facility revenue, we do not foresee any other long-term delays regarding the impact of COVID-19 to complete this Darwin Plus grant project.

Since the introduction of Zoom videoconferencing, the NTCI and BIC have utilised this platform regularly in order to keep in regular contact with partners and the BIC Steering Committee. It is expected that Zoom may be used in this manner wherever necessary to improve relations, facilitate accurate and speedy communication and reduce carbon emissions through travel.

### 13. Safeguarding



The National Trust for the Cayman Islands (which oversees BIC) has the following procedures in place:

- National Trust Employee Handbook which sets out clear guidelines for expected and acceptable behaviour including a complaints and disciplinary process
- There are protocols and standards in place for all staff which outlines our expectations and procedures. This document must be read, understood and signed upon joining the National Trust
- The staff receive training in First Aid/ CPR
- Provision of *Darkness to Light* training for any employees that work or interacts with vulnerable adults and children.

The National Trust and Blue Iguana Conservation team is a small tight-knit unit working closely together and mutual respect is mandated for one another, as well as for the amazing volunteers who dedicate their free time to the programme's conservation efforts.

### 14. Project expenditure

**Table 1: Project expenditure during the reporting period (1 April 2020 – 31 March 2021)**

Project spend (indicative) in this financial year	2020/21 D+ Grant (£)	2020/21 Total actual D+ Costs (£)	Variance %	Comments (please explain significant variances)
Staff costs				
Consultancy costs				
Overhead Costs				
Travel and subsistence				
Operating Costs				
Capital items				
Others (Please specify)				
<b>TOTAL</b>				

**Annex 1: Report of progress and achievements against Logical Framework for Financial Year 2020-2021 – if applicable**

Project summary	Measurable Indicators	Progress and Achievements April 2020 - March 2021	Actions required/planned for next period
<p><b>Impact</b></p> <p>A permanent wild population of Grand Cayman endemic blue iguanas, safeguarded against a return to Critically Endangered status, supported by a healthy, sustainable and efficient captive breeding programme.</p>			
<p><b>Outcome</b></p> <p>Blue Iguana Conservation transitions from recovery to stabilized conservation: guided by updated planning; upgrading and innovation in captive breeding management and biosecurity; and through expanded wild monitoring.</p>	<p>0.1 By the end of the project BIRP is functioning in accordance with a Strategic Species Action Plan 2020-25 (SSAP)</p> <p>0.2 Captive Breeding Facility repairs and new biosecurity achieve improvement to husbandry and welfare of iguanas. By end of first year: all 16-year-old captive pens and cages refurbished/replaced with 32 pens and 150 new cages and CBF fencing is 100% alien green iguana proof</p> <p>0.3 Diversification of diet achieves improved captive iguana nutrition as measured by weight at body quality indices by end of second year. 36 adults, 80 2-5-year-olds and 10-15 juveniles (based on expected hatchlings per annum)</p>	<p>SSAP is completed, but dated 2021-2026 due to delays from COVID-19 pandemic</p> <p>CBF fencing work is completed and M&amp;E of efficacy is being carried out</p> <p>The diet has been enriched by the introduction of new plant species to the captive diet. There are now almost 50 plant species being fed regularly and more is offered (seasonal dependent). Regular weights and measures are carried out on all ages of the captive population within the facility. During annual health checks in November</p>	<p>Completed</p> <p>Monitoring and evaluation</p> <p>Seasonal variation of type and amount of food offered will continue as will the weights and measures of the captive population at the facility</p>

Project summary	Measurable Indicators	Progress and Achievements April 2020 - March 2021	Actions required/planned for next period
	<p>0.4 By survey season March 2020 capacity for annual surveys of the Colliers and Salina Reserve wild populations has been recruited. These eight persons are, trained and are producing reliable results according to established monitoring protocols across extensive and expanding areas of occupancy and ensuring quality of data is comparable across years.</p>	<p>2020, all captive iguanas had put on significant weight gains and improved body condition. CBF had a very successful 2020 breeding season. All are showing improved growth and egg laying numbers for 2021</p> <p>Due to the COVID-19 pandemic, the annual census surveys in March 2021 were carried out by an on-island, experienced and trained six-person team in the Salina Reserve. The weather was changeable; however, surveys were completed within the allotted time. Reliable data was gathered and is currently being analysed and evaluated and the outcomes will be shared with the key stakeholders soon.</p>	<p>Finalise survey report for 2021 and compare from across all three reserves between 2019-2021</p>
<p><b>Output 1.</b> Strategic Species Action Plan 2020-25 (SSAP) has been adopted by BIRP.</p>	<p>1.1 By September 2020 Strategic Species Action Plan (SSAP) is delivered by key stakeholders.</p> <p>1.2 Key stakeholders draft first version of SSAP at a 4-day workshop held in September 2019 following annual veterinary welfare visit.</p> <p>1.3 SSAP secretariat continues drafting of SSAP in communication</p>	<p>Compilation of the SSAP document was delayed due to COVID-19 pandemic. Final SSAP is completed to be launched in May 2021.</p> <p>First version of SSAP was drafted after September 2019 workshop</p> <p>SSAP Secretariat arranged the second meeting, including preparing and distributing the agenda, Zoom links and draft documents in early</p>	

Project summary	Measurable Indicators	Progress and Achievements April 2020 - March 2021	Actions required/planned for next period
	<p>with key stakeholders via monthly video conferencing.</p> <p>1.4 Key stakeholders complete and approve final version of SSAP at a 3-day workshop held in Q2 2020 following annual veterinary welfare visit.</p>	<p>January 2021. The final SSAP meeting was carried out at the end of January 2021, following initial viewing of document by key stakeholders.</p> <p>Post-meeting edits were made to the SSAP. Secretariat distributed the document for final review from key stakeholders. A final draft was completed. SSAP is now dated 2021-2026 due to delays from COVID-19 pandemic</p>	
<p>Activity 1.1</p> <p>SSAP Secretariat prepares for 2019 workshop, invitations, meeting location, accommodation, etc., for 8 overseas attendees (airfares for 3 paid by partners).</p>		<p>Completed</p>	<p>Completed</p>
<p>Activity 1.2</p> <p>Key stakeholders (8 overseas and up to 18 local) meet for 4-day workshop held in September 2019 following annual veterinary welfare visit draft first version of SSAP (most efficient means of gathering overseas personnel).</p>		<p>Completed</p>	<p>Completed</p>
<p>Activity 1.3</p> <p>SSAP Secretariat continues drafting of SSAP in communication with key stakeholders via monthly video conferencing.</p>		<p>Completed</p>	<p>Completed</p>
<p>Activity 1.4</p> <p>SSAP Secretariat prepares for 2020 workshop, invitations, meeting location, accommodation etc. for 8 overseas attendees (airfares for 3 paid by partners).</p>		<p>Completed</p>	<p>Completed</p>

Project summary	Measurable Indicators	Progress and Achievements April 2020 - March 2021	Actions required/planned for next period
Activity 1.5 Key stakeholders complete and approve final version of SSAP at a 3-day workshop held in Q2 2020 following annual veterinary welfare visit.		Completed	Completed
Activity 1.6  Publication of SSAP in Q3.		SSAP completed and scheduled for public launch May 2021	Completed
<b>Output 2.</b> Captive Breeding Facility reconfiguration, biosecurity improvements carried out.	2.1 Thirty-two captive breeding, concrete-walled pens are available for use by adult and breeding iguanas (80% increase in individual spaces by selective subdivision of existing large pens and walled sub-adult section no longer needed) 2.2 100 new sub-adult and 50 new hatchling cages are available for occupation.  2.3 275 m of 2.5 m high chain-link fencing is made secure against incursions by green iguanas and dogs.	Construction enclosures and biosecurity fence is completed  All construction has been completed and cages have occupancy  Biosecurity fence has been completed. Monitoring and evaluation in progress to measure efficacy of fence	
Activity 2.1.  Staff repair existing concrete enclosures and build sub-dividing walls for greater flexibility of adult maintenance and breeding.		Completed	Completed

Project summary	Measurable Indicators	Progress and Achievements April 2020 - March 2021	Actions required/planned for next period
<p>Activity 2.2.</p> <p>Staff replace breeding cages, 50 hatchlings, 100 sub-adults.</p>		Completed	Completed
<p>Activity 2.3</p> <p>Tenders requested, evaluated and contractor approved to install biosecurity upgrades (boundary clearing, flashing on existing 8 ft high chain-link fence and concrete footings to tie to ground to create green iguana exclusion fencing.</p>		Completed	Completed
<p><b>Output 3.</b> Iguana nutrition improved and diversified by (i) wild food plant cultivation plots built at Captive Breeding Facility, (ii) staff transportation and refrigeration replaced, (iii) recruitment of partner supermarket to supply excess produce.</p>	<p>Indicators</p> <p>3.1 Facility staff have decreased number of hours per week by 25% under baseline for collecting food in wild, by additional efficiencies from provision of a facility vehicle and refrigeration.</p> <p>3.2 By end of first year a 20 x 20 m pilot plot is established with 5 plant species growing in two treatments (a) 12 m<sup>2</sup> of raised tub plantings (b) 3 1 x 10 m beds managed according to permaculture techniques.</p> <p>3.3 End of third year cultivation plots providing 20% supplemental diet to CBF iguanas, with diversity of plants raised to 10 species.</p> <p>3.4 Facility has established relationship with one or more local</p>	<p>Vehicle and fridge are being utilised and time impact is being monitored.</p> <p>Completed</p> <p>Completed - Continued growth of cultivated plants has increased supplemental diet available at CBF to meet the targeted 20% with a diversity of over 52 species.</p>	



Project summary	Measurable Indicators	Progress and Achievements April 2020 - March 2021	Actions required/planned for next period
	<p>supermarkets for the regular supply of surplus leafy vegetables and fruit; is collecting 35-40 lbs of suitable produce per week.</p> <p>3.5 Weight and body condition of CBF iguanas maintained / increased over baseline.</p>	<p>Completed</p> <p>Completed</p>	
<p>Activity 3.1</p> <p>Draft Baseline Report including, perform literature review of <i>Cyclura</i> diets, describing current feeding protocol using primarily but limited diversity wild collected plant material, identifying issues with seasonality inefficiencies in collection methods. Identify preferred seasonal native plants to cultivate.</p>		<p>Completed</p>	<p>Completed.</p>
<p>Activity 3.2</p> <p>Design cultivation plots.</p>		<p>Completed</p>	<p>Completed</p>
<p>Activity 3.3</p> <p>Construct cultivation plots establish plants and perform routine maintenance.</p>		<p>Completed; routine maintenance continues; expansion of 25 plant species</p>	<p>Completed</p>
<p>Activity 3.4</p> <p>Hold meetings with / arrange partnership with one or more of the three major supermarkets in Grand Cayman to supply excess produce on weekly basis. Promote partnership.</p>		<p>Completed</p>	<p>Completed</p>
<p>Activity 3.5</p> <p>Hybrid vehicle purchased and fuel funded for wild food collection and pick up of supermarket produce.</p>		<p>Completed</p>	<p>Completed</p>

Project summary	Measurable Indicators	Progress and Achievements April 2020 - March 2021	Actions required/planned for next period
<p>Activity 3.6</p> <p>Old refrigerator replaced and additional refrigerator purchased.</p>		Completed	Completed
<p><b>Output 4.</b> Perform survey each year, alternating Colliers and Salina Reserves wild populations (approx. 250-300 wild iguanas per survey), with a survey at the QEIIBP population every third year. I.E., QEIIBP 2019, Colliers 2020, Salina 2021 and so on. (Note: QEIIBP free roaming iguana population is smaller and terrain is much less difficulty to survey, thus no additional capacity is required).</p>	<p>Indicators</p> <p>4.1 By survey season March 2020 a pool of individuals has been identified who are physically capable and available for foreseeable future from which 8 can be drawn for Colliers and Salina surveys, in addition to the 4 members of staff/DOE available.</p> <p>4.2 By end of February each year all trails at the relevant survey site are adequately cleared to perform surveys to required standards.</p> <p>4.3 Annual Surveys, Colliers 2020, Salina 2021, are completed in entire areas of occupancy at Colliers and Salina Reserves.</p>	<p>Completed</p> <p>Completed</p> <p>Completed</p>	
<p>Activity 4.1</p> <p>2019. Analyse special challenges of surveying the enlarged areas of occupancy at Colliers and Salina Reserves and produce Baseline Report. Identify survey candidates who are physically capable and available annually for foreseeable future.</p>		Field survey meetings were conducted with key stakeholders and partners on 31 October 2019 and 18 <sup>th</sup> January 2020 to discuss analysis challenges.	Completed
<p>Activity 4.2</p> <p>2019. Contact potential survey candidates, confirm participation, arrange travel and accommodation for four survey teams of two persons each.</p>		Completed	Completed

Project summary	Measurable Indicators	Progress and Achievements April 2020 - March 2021	Actions required/planned for next period
Activity 4.3 February 2020. All trails at Colliers adequately cleared to perform surveys to required standards; temporary field shelter erected.		Completed	Completed
Activity 4.4 March 2020. Colliers survey conducted in entire areas of occupancy; field shelter dismantled.		Completed	Completed
Activity 4.5 April 2020. Survey conduct report compiled and survey participants debriefed; adjustments, if any, for 2021 considered.		Completed	Completed
Activity 4.6 Results of Colliers 2020 survey compiled and compared to prior years; adjustments, if any, for conduct of 2021 survey made.		Completed	Completed
Activity 4.7 Repeat steps 4.2-4.6 above for 2021 survey at Salina.		Completed. Partners from DoE compiling and analysing final results from 2021 survey.	Completed

## Annex 2: Project's full current logframe as presented in the application form (unless changes have been agreed) - if applicable

*N.B. if your application's logframe is presented in a different format in your application, please transpose into the below template. Please feel free to contact [Darwin-Projects@ltsi.co.uk](mailto:Darwin-Projects@ltsi.co.uk) if you have any questions regarding this.*

Project summary	Measurable Indicators	Means of verification	Important Assumptions
<b>Impact:</b>			
A permanent wild population of Grand Cayman endemic blue iguanas, safeguarded against a return to Critically Endangered status, supported by a healthy, sustainable and efficient captive breeding programme. [28]			
<b>Outcome:</b> The Blue Iguana Recovery Programme transitions from recovery to stabilized conservation: guided by updated planning; upgrading and innovation in captive breeding management and biosecurity; and through expanded wild monitoring. [26]	<p>0.1 By the end of the project BIRP is functioning in accordance with a Strategic Species Action Plan 2020-25 (SSAP)</p> <p>0.2 Captive Breeding Facility repairs and new biosecurity achieve improvement to husbandry and welfare of iguanas. By end of first year: all 16-year-old captive pens and cages refurbished/replaced with 32 pens and 150 new cages and CBF fencing is 100% alien green iguana proof.</p> <p>0.3 Diversification of diet achieves improved captive iguana nutrition as measured by weight at body quality indices by end of second year. 36 adults, 80 2-5-year olds and 10-15 juveniles (based on expected hatchlings per annum)</p> <p>0.4 By survey season March 2020 capacity for annual surveys of the Colliers and Salina Reserve wild</p>	<p>0.1 Annual reporting as mandated by the Strategic Species Action Plan.</p> <p>0.2 Repairs and biosecurity achieved to standard equivalent to original/those replaced and as monitored by Project Leader.</p> <p>0.3 Husbandry, welfare and nutrition achieved to standard set by SSAP and as monitored by Veterinary welfare partner WCS and evaluated by Steering Committee.</p> <p>0.4 Inspections and interim reports on preparations and on close of surveys (enabling adjustments for following season). Results of Annual Surveys demonstrate that they have been completed in entire areas of occupancy at Colliers and Salina Reserves in accordance with the SSAP and distance sampling protocols.</p>	<p>0.1 Risk that the SSAP is rejected by governmental bodies as a key source for a statutory species conservation plan is mitigated by DoE as a key stakeholder. Risk of development of roads in or near the protected areas is well understood and mobilization of public response would follow any such threat.</p> <p>0.2 Unanticipated staff turnover might cause delay in delivery; otherwise no significant risks.</p> <p>0.3 Risk of extent to which cultivation of native plants at the CBF can succeed has been tested previously by a small pilot bed in the early days of BIRP. This is countered by subsequent successful establishment of a Native Plant Nursery at the Park, the recent appointment of a new horticulturalist, and availability of larger area for growing. It is recognized that such production will</p>

Project summary	Measurable Indicators	Means of verification	Important Assumptions
	<p>populations has been recruited. These eight persons are, trained and are producing reliable results according to established monitoring protocols across extensive and expanding areas of occupancy and ensuring quality of data is comparable across years.</p>		<p>remain supplemental to wild collected food.</p> <p>0.4 Assumption is that sufficient capacity can be recruited within budget and that surveys are not delayed or extended by weather conditions (it being impossible to conduct the surveys accurately in overcast or rain). This risk is mitigated by conducting surveys in March in the dry season, also avoiding hurricane risks.</p>
<p><b>Output 1</b> Strategic Species Action Plan 2020-25 (SSAP) has been adopted by BIRP.</p>	<p>1.1 By September 2020 Strategic Species Action Plan (SSAP) is delivered by key stakeholders.</p> <p>1.2 Key stakeholders draft first version of SSAP at a 4-day workshop held in September 2019 following annual veterinary welfare visit.</p> <p>1.3 SSAP secretariat continues drafting of SSAP in communication with key stakeholders via monthly video conferencing.</p> <p>1.4 Key stakeholders complete and approve final version of SSAP at a 3-day workshop held in Q2 2020 following annual veterinary welfare visit.</p>	<p>1.1 Strategic Species Action Plan (SSAP) is published and uploaded on NTCI and Bluelguana.ky websites.</p> <p>1.2. Workshop agenda and objectives document; attendance list; PowerPoint presentations; feedback sheets; minutes and actions circulate by SSAP Secretariat.</p> <p>1.3 SSAP secretariat maintains call logs, email and video conference output.</p> <p>1.4 Strategic Species Action Plan (SSAP) is published and uploaded on NTCI and Bluelguana.ky websites.</p>	<p>Planning for this output follows same/similar methodologies used to generate 2001-2006 and 2009-2011 Plans.</p> <p>Assumes that partner WCS continues to fund its attendance for annual veterinary monitoring.</p>

Project summary	Measurable Indicators	Means of verification	Important Assumptions
<b>Output 2</b> Captive Breeding Facility reconfiguration, biosecurity improvements carried out.	<p>2.1 Thirty-two captive breeding concrete-walled pens are available for use by adult and breeding iguanas (80% increase in individual spaces by selective subdivision of existing large pens and walled sub-adult section no longer needed).</p> <p>2.2 100 new sub-adult and 50 new hatchling cages are available for occupation.</p> <p>2.3 275 m of 2.5 m high chain-link fencing is made secure against incursions by green iguanas and dogs.</p>	<p>2.1 and 2.2. Repairs and improvements overseen by Operations Manager, standard equivalent to original/those replaced and as monitored by Project Leader.</p> <p>2.3 Verified by daily patrolling of the Captive Breeding facility by staff and results of dog trap monitoring. Maintenance of vegetation-clear zone around perimeter inspected and reported by Project Leader</p>	<p>Output 2 assumes that resumption of breeding of Blue Iguanas at the levels of the original recovery programme will not be needed</p> <p>No special assumptions required, or significant risks related to the configuration and biosecurity elements. Materials and capacity are readily available in the Cayman Islands. Unanticipated staff turnover could affect delivery schedule for those elements to be performed by BIC staff.</p>
<b>Output 3</b> Iguana nutrition improved and diversified by (i) wild food plant cultivation plots built at Captive Breeding Facility, (ii) staff transportation and refrigeration replaced, (iii) recruitment of partner supermarket to supply excess produce.	<p>3.1 Facility staff have decreased number of hours per week by 25% under baseline for collecting food in wild, by additional efficiencies from provision of a facility vehicle and refrigeration.</p> <p>3.2 By end of first year a 20 x 20 m pilot plot is established with 5 plant species growing in two treatments (a) 12 m<sup>2</sup> of raised tub plantings (b)</p>	<p>3.1 Baseline Report describing current feeding protocol (using primarily but limited diversity wild collected plant material), identifying issues with seasonality and other inefficiencies in collection methods, design for cultivation plots.</p> <p>3.2 Monthly Reporting by Operations Manager. Quarterly and Annual Reporting by Project Leader,</p>	<p>We expect that maintenance of cultivation plots does not exceed decrease in time spent on wild food collection. However, regardless of that trade off the increase in time staff are able to be at the facility enables the scheduling of a greater number of income-generating Blue Iguana Conservation Tours. Replacement of aged or defunct donated equipment is necessary to alleviate staff shouldering financial</p>

Project summary	Measurable Indicators	Means of verification	Important Assumptions
	<p>3.1 1 x 10 m beds managed according to permaculture techniques.</p> <p>3.3 End of third year cultivation plots providing 20% supplemental diet to CBF iguanas, with diversity of plants raised to 10 species.</p> <p>3.4 Facility has established relationship with one or more local supermarkets for the regular supply of surplus leafy vegetables and fruit; is collecting 35-40 lbs. of suitable produce per week</p> <p>3.5 Weight and body condition of CBF iguanas maintained / increased over baseline.</p>	<p>reviewed by Steering Committee/Vets.</p> <p>3.3 Annual Reporting by Operations Manager/Project Leader, reviewed by Steering Committee/Vets</p> <p>3.4 Monthly Reporting by Operations Manager.</p> <p>3.5 Annual Reporting by Veterinary Team, reviewed by Steering Committee.</p>	<p>burdens/depreciation of personal vehicles and to provide capacity for storage of donated produce.</p> <p>Difficulty in transitioning adult captive Blue Iguanas to a greater diversity of wild food and/or larger percentage of non-native leafy vegetables is not expected based on existing Cyclura husbandry research (Lemm et al 2010). Iguanas being conditioned for release into the wild will need to be fed wild only food in the lead up to release.</p> <p>Supermarket partner is unable to supply surplus produce at level of demand is not considered to be a significant risk as they supply hundreds of kilos of produce to a population of 63,000 people daily. The potential supermarket partners have a track record of community support.</p>
<p><b>Output 4</b></p> <p>Perform survey each year, alternating Colliers and Salina Reserves wild populations (approx. 250-300 wild iguanas per survey), with a survey at the QEIIBP population every third year. I.E., QEIIBP 2019, Colliers 2020, Salina 2021 and so on. (Note: QEIIBP free</p>	<p>4.1 By survey season March 2020 a pool of individuals has been identified who are physically capable and available for foreseeable future from which 8 can be drawn for Colliers and Salina surveys, in addition to the 4 members of staff/DOE available.</p>	<p>4.1.a Baseline Report in 2019 analyzing special challenges of surveying the enlarged areas of occupancy at Colliers and Salina Reserves (capacity problem, number of persons, kms of trails, heat, stealth etc required)</p>	<p>Assumptions are that sufficient capacity can be recruited within budget and that surveys are not delayed or extended by weather conditions (it being impossible to conduct the surveys accurately in overcast or rain). These risks are mitigated by offering funding for the</p>

Project summary	Measurable Indicators	Means of verification	Important Assumptions
<p>roaming iguana population is smaller and terrain is much less difficulty to survey, thus no additional capacity is required).</p>	<p>4.2 By end of February each year all trails at the relevant survey site are adequately cleared to perform surveys to required standards.</p> <p>4.3 Annual Surveys, Colliers 2020, Salina 2021, are completed in entire areas of occupancy at Colliers and Salina Reserves</p>	<p>4.1.b March 2020 report to Steering Committee.</p> <p>4.2 Trails are inspected by Survey Leader and/or Ops Manager.</p> <p>4.3 Results of Annual Surveys demonstrate that they have been completed in entire areas of occupancy at Colliers and Salina Reserves in accordance with the SSAP, distance sampling protocols and ensuring quality of data is comparable across years.</p>	<p>two significant out-of-pocket expenses for volunteers and conducting surveys in March in the dry season, avoiding hurricane risks also. However, the March date may not always be ideal for student and academic volunteers.</p>
<p><b>Activities</b> (each activity is numbered according to the output that it will contribute towards, for example 1.1, 1.2 and 1.3 are contributing to Output 1)</p> <p>Output 1 Strategic Species Action Plan 2020-25 (SSAP)</p> <p>1.1 SSAP Secretariat prepares for 2019 workshop, invitations, meeting location, accommodation, etc. for 8 overseas attendees (airfares for 3 paid by partners).</p> <p>1.2 Key stakeholders (8 overseas and up to 18 local) meet for 4-day workshop held in September 2019 following annual veterinary welfare visit draft first version of SSAP (most efficient means of gathering overseas personnel).</p> <p>1.3 SSAP Secretariat continues drafting of SSAP in communication with key stakeholders via monthly video conferencing.</p> <p>1.4 SSAP Secretariat prepares for 2020 workshop, invitations, meeting location, accommodation etc.</p> <p>1.5 Key stakeholders complete and approve final version of SSAP at a 3-day workshop held in Q2 2020 following annual veterinary welfare visit.</p> <p>1.6 Publication of SSAP in Q3.</p> <p>Output 2 Captive Breeding Facility reconfiguration, biosecurity improvements carried out.</p> <p>2.1 Staff repair existing concrete enclosures and build sub-dividing walls for greater flexibility of adult maintenance and breeding.</p> <p>2.2 Staff replace breeding cages, 50 hatchlings, 100 sub-adults.</p> <p>2.3 Tenders requested, evaluated and contractor approved to install biosecurity upgrades (boundary clearing, flashing on existing 8 ft high chain-link fence and concrete footings to tie to ground to create Green Iguana exclusion fencing).</p>			



Project summary	Measurable Indicators	Means of verification	Important Assumptions
<p>Output 3 Iguana nutrition improved and diversified by (i) wild food plant cultivation plots built at Captive Breeding Facility, (ii) transportation, refrigeration purchased, (iii) recruitment partner supermarket</p> <p>3.1 Draft Baseline Report including, perform literature review of <i>Cyclura</i> diets, describing current feeding protocol using primarily but limited diversity wild collected plant material, identifying issues with seasonality inefficiencies in collection methods. Identify preferred seasonal native plants to cultivate.</p> <p>3.2 Design cultivation plots.</p> <p>3.3 Construct cultivation plots establish plants and perform routine maintenance.</p> <p>3.4 Hold meetings with / arrange partnership with one or more of the three major supermarkets in Grand Cayman to supply excess produce on weekly basis. Promote partnership.</p> <p>3.5 Hybrid vehicle purchased and fuel funded for wild food collection and pick up of supermarket produce.</p> <p>3.6 Old refrigerator replaced and additional refrigerator purchased.</p> <p>Output 4 Perform annual surveys of the Colliers and Salina Reserve wild populations.</p> <p>4.1 2019. Analyse special challenges of surveying the enlarged areas of occupancy at Colliers and Salina Reserves and produce Baseline Report. Identify survey candidates who are physically capable and available annually for foreseeable future.</p> <p>4.2 2019. Contact potential survey candidates, confirm participation, arrange travel and accommodation for four survey teams of two persons each.</p> <p>4.3 February 2020. All trails at Colliers adequately cleared to perform surveys to required standards; temporary field shelter erected.</p> <p>4.4 March 2020. Colliers survey conducted in entire areas of occupancy; field shelter dismantled.</p> <p>4.5 April 2020. Survey conduct report compiled and survey participants de-briefed; adjustments, if any, for 2021 considered.</p> <p>4.6 Results of Colliers 2020 Survey compiled and compared to prior years; adjustments, if any, for conduct of 2021 survey made.</p> <p>4.7 Repeat steps 4.2-4.6 above for 2021 survey at Salina.</p>			

**Annex 3 Onwards – Supplementary material for Annex 3 will be sent in separate emails.**

Annex 3.1: Agenda for Steering Group Meeting, March 2021

Annex 3.2: Agenda and Report for SSAP Workshop, September 2019

Annex 3.3: Agenda and Report for SSAP Workshop, January 2021

Annex 3.4: Executive Summary from SSAP 2021-2026

Annex 3.5: Baseline Nutrition Report – see additional email.

Annex 3.6: Cultivation Plot

Annex 3.7: Plant Handbook Example Pages

Annex 3.8: Blue Iguana Gardens Welcome Pack – see additional email.

Annex 3.9: Invasive alien species (dog and cat traps; green iguana culls)

Annex 3.10: BIC Invasive Species Monitoring and Evaluation Sheet

Annex 3.11: March 2021 Field Census Survey

Annex 3.12: Publications of Darwin Initiative Grant and Social Media Mentions

Annex 3.13: General Advertisement for International Blue Iguana Day

## Checklist for submission

	Check
<b>Is the report less than 10MB?</b> If so, please email to <a href="mailto:Darwin-Projects@ltsi.co.uk">Darwin-Projects@ltsi.co.uk</a> putting the project number in the Subject line.	
<b>Is your report more than 10MB?</b> If so, please discuss with <a href="mailto:Darwin-Projects@ltsi.co.uk">Darwin-Projects@ltsi.co.uk</a> about the best way to deliver the report, putting the project number in the Subject line.	
<b>Have you included means of verification?</b> You should not submit every project document, but the main outputs and a selection of the others would strengthen the report.	
<b>Do you have hard copies of material you need to submit with the report?</b> If so, please make this clear in the covering email and ensure all material is marked with the project number. However, we would expect that most material will now be electronic.	
Have you involved your partners in preparation of the report and named the main contributors	
Have you completed the Project Expenditure table fully?	
Do not include claim forms or other communications with this report.	