



**St Helena  
Government**



**Landscape & Ecological Mitigation Programme (LEMP)**

**Annual Report**

**April 2018 – March 2019**

## 1. Executive Summary

- 1.1. During 2018/19 there were some significant changes within the LEMP: the team structure was reduced to eleven members of staff to reflect the changing budget profile; practical delivery of the project was divested to the St Helena National Trust; plant propagation at the nursery was downscaled and ultimately outsourced with surplus materials distributed to island endemic nurseries; and the field base was relocated to the Millennium Forest site. Despite these adjustments, the LEMP team remained stable throughout the year and achieved a substantial amount of work towards LEMP targets.
- 1.2. 2018/19 saw the LEMP project complete rehabilitation works on 4 sub plots across three main LEMP zones. This involved fencing of approximately 1.5km of fencing enclosing an area of 12.4 hectares, and over 17,000 plants planted by LEMP and project partners. Biological surveys were undertaken and focussed on completion of required baseline surveys in various zones.
- 1.3. Work continues between LEMP stakeholders on planning for and agreeing long-term maintenance responsibilities for LEMP zones following completion of current funding; ultimately SHG retains overall responsibility for ensuring long-term maintenance requirements are met, but current resources are already under pressure. However, a key achievement toward this was commitment from SHG's EMD to manage at least one LEMP sub-zone as a living gene bank for the IUCN Critically Endangered *Mellissia begoniifolia* post-LEMP.

## 2. Partnerships

### 2.1. Environmental Management Division (EMD)

LEMP funded one full time member of staff at the EMD endemic nursery to work on LEMP related activities such as seed collection, sorting and storage, plant propagation as well as nursery and living gene bank maintenance, to support EMD in achieving deliverables agreed in a Service Level Agreement.

During the year EMD propagated and supplied more than 6,000 plants as part of the Service Level Agreement with LEMP. Approximately 70% of these were planted by the EMD team within living gene banks or at LEMP compensatory sites at Peak Dale and 30% were provided to the LEMP team for planting in LEMP rehabilitation areas.

LEMP staff participated in promotional activities with EMD including a display and presentation at EMD's biennial Open Day. The LEMP team also completed two days of invasive clearance work at the wild scrubwood (*Commidendrum rugosum*) population at Flagstaff, which is a priority habitat identified by EMD for compensatory works.

EMD also committed in principle to long-term maintenance of one LEMP site at Cook's Bridge post-LEMP, the site will be maintained as a living gene bank for the endemic Boxwood (*Mellissia begoniifolia*) species. Due to limited resources EMD are unable to commit to any additional sites at this time.

### 2.2. St Helena National Trust (The Trust)

A significant development during the year was the divestment of the LEMP to the Trust. A substantial amount of work was completed by the LEMP Project Manager in partnership with key stakeholders to complete necessary actions in order to facilitate the divestment. Approval to proceed was received from the SHG Procurement Board and the divestment contract signed

on 24 July 2018. From 1 August practical delivery of the LEMP was officially divested to the Trust, although SHG retains overall responsibility for the success of the project.

The Trust successfully completed a contract for Phase 2 of the restoration works at Millennium Forest during which a further 600 plants were planted in the former access track rehabilitation area in LEMP zone 9.3. Two short contracts were also completed during which the Trust provided additional field support and pest/predator control for LEMP.

The construction of rabbit and sheep proof fencing to enclose a large natural scrubwood population at Blue Point on three sides, using the sheer cliffs as a natural barrier on the fourth, was also completed in July 2018. This was a particularly difficult site to work on with hard, rocky, uneven terrain and harsh weather conditions delaying works. Six drop traps were also installed along the fence line to provide a mechanism for on-going control of the rabbit population in that area. The Trust has completed two quarterly rounds of monitoring of the drop traps with five rabbits caught, and it is intended to continue this monitoring in the new financial year.

### 2.3. Basil Read

Site visits and meetings were held with Basil Read and Rupert's Valley residents to discuss required mitigation works in the area. Specifications were then issued by LEMP and ground preparation actions carried out by Basil Read on two sites within Rupert's Valley. This included removal of introduced material, clearance of invasive plant species, de-compaction of soil, and topsoil added to required areas where possible, in advance of LEMP planting to be carried out in the new financial year. Actions for three specifications are still to be reviewed and signed off by LEMP; actions for one specification are still to be started but depend on completion of other airport project works within Rupert's Valley.

Basil Read facilitated an environmental audit meeting which included a review of LEMP works completed and planned. Site visits and meetings also held with St Helena Airport staff to discuss and agree planned landscaping works in the airport precinct, and long-term maintenance requirements of landscaped areas.

Within the reporting period a new company - St Helena Airport Limited (SHAL) – was formed (October 2018) to assume airport operations, and undertake any remaining construction works following termination of the Basil Read contract. As the bulk of reinstatement actions had been completed by Basil Read prior to this, there was little to no impact on LEMP activities.

### 2.4. Department for International Development (DfID)

The DfID Deputy Programme Manager for St Helena Airport visited St Helena in late February/early March 2019. A familiarisation site visit was completed to review LEMP bases and rehabilitation sites; the new DfID Resident Representative for the island was also present. Positive comments on the works completed and visible progress within planted zones were received.

The LEMP Logical Framework and Project Plan was updated to outline achievements and work completed to date along with targets and priorities for the remaining 2 years of the funded LEMP programme.

A LEMP Governance Group was set up to oversee and monitor delivery of the LEMP work plan and budget to March 2021. The group meets quarterly and consists of the Director of the Trust, the Director of the Environment & Natural Resources Directorate (ENRD) and the DfID resident

representative, with the LEMP Team Leader reporting on progress, budget and other relevant business.

## 2.5. Other

Other contracts with local partners included one to propagate 1,400 ornamental plants for planting in zone 5 – Deadwood berms, which was completed in October 2018; and one short contract to provide database support for the LEMP biological monitoring database, which was completed in June 2018.

A survey was also commissioned to deliver an invertebrate survey of the Central Basin, which was identified as key compensatory habitat for the project. The survey will enable an assessment of the abundance of invertebrate species and a comparison of invertebrate presence in the Central Basin now, against the survey completed pre-construction activities for the airport, in 2003. The survey is largely complete and the final report will be finalised early in 2019/20.

## 3. Delivery

### 3.1. Staff

2018/19 saw a reduced LEMP team of eleven following the planned staffing restructure (due to the changing budget profile) at the end of the 2017/18 financial year. The new team structure comprises one team leader, a project support post, and two field teams each including a supervisor, a senior conservation worker and two to three conservation workers. All eleven members of staff have fixed term contracts to March 2020, when the project will go through a final downsize to one field team.

The LEMP Project Manager and LEMP Ecologist also completed short contract extensions for an additional 4 and 3 months respectively to support the transition to the new delivery structure, oversee divestment activities and finalise key documentation.

Despite the divestment to a new organisation and restructure to a smaller team, this year saw a settled staffing period with no staff movements during the year.

Capacity building in staff is a key legacy of the LEMP project. During this year staff members engaged in five formal training events, including team management, communication and supervision skills, GIS and mapping training/workshops, invasive species recording and collection for ID, and minute-taking. In addition, LEMP staff engaged in two Trust team days. Three members of staff also engaged in longer term training programmes; NVQ level 2 in Conservation (now completed), EDCL training, and PRINCE2 Practitioner training.

### 3.2. Infrastructure & Facilities

In February 2019 the LEMP field base (office unit and storage containers) was relocated from the SHG Horse Point Landfill site to the Trust's Millennium Forest base at Bottom Woods. Due to a shortage of secure storage space at the Millennium Forest, LEMP bulky materials were relocated to the Half Tree Hollow (HTH) nursery site for secure storage for the remainder of the project.

After observing significant corrosion on the roof of the office unit and subsequent leaks during periods of heavy rain, necessary repairs were carried out to prolong the life of this asset.

### 3.3. Surveys

44 baseline surveys for biological monitoring surveys were undertaken in 2018/19. Biological monitoring involves taking a baseline survey of marked plots and recording number of endemic and native plants and percentage cover of all species present. Survival rate and changes in abundance of species can then be monitored as further follow-up surveys are completed for each plot. The baseline surveys completed this year ensured all LEMP zones have now been baselined; however, no follow-up surveys could be undertaken during the year. Following divestment the Team Leader assumed additional project management responsibilities, thus due to limited capacity further biological monitoring surveys are likely to be outsourced for the remaining two years of the project.

The LEMP teams also completed two rounds of biannual zone monitoring checks; involving a thorough check of all completed rehabilitation sites to monitor fence condition, irrigation functionality, the condition of plants and to identify any other maintenance issues.

The fourth photographic survey for the project was also completed. This involved annual photographs of key LEMP sites taken from a fixed point to enable a review of progress year on year. This record shows real change and improvements across a range of areas impacted by construction activities.

### 3.4. Practical Works

As the project meets key targets and has begun to downscale, the need for large scale in-house endemic propagation has declined resulting in the conclusion of propagation at the Half Tree Hollow nursery in June 2018. While a small amount of materials and equipment were retained by LEMP to support any minor propagation requirements that might arise, the remaining nursery materials, tools and equipment were distributed to the Trust and EMD endemic nurseries to support endemic conservation efforts. The LEMP forward endemic propagation requirements were consequently outsourced to EMD and the Trust for the remaining two years of the project.

From April to June over 2,300 plants were propagated at the HTH nursery. All endemic batches were then relocated to the Piccolo standing out area by August 2018, with a few ornamental batches remaining at HTH for planting out at Rupert's Valley. A number of plants from stock produced in the previous year were also lost due to pests, diseases and delays in planting. Also propagated for LEMP were over 1,200 plants by the Trust and over 6,000 by the EMD nursery at Scotland.

In 2018/19 LEMP rehabilitation works were completed in 4 sub plots across three zones at Zone 9 – Bottom Woods, Zone 12 – Tungji Flats to Site Compound, and Zone 13 – airport precinct. Significant clearance works were begun in other sub plots and will be completed and reported on in next annual reporting period.

In total over 1.5km of fencing was used to enclose an area of approximately 12.4 hectares. Approximately, 9 hectares of land were laid with drip irrigation and planted using more than 6,000 plants. Survival rate and percentage ground cover were unable to be calculated as the follow-up biological monitoring surveys could not be completed; however visually there has been good plant establishment and growth. Manual irrigation has also ceased in several LEMP zones, with the plants becoming increasingly self-sufficient.

Real success has been seen in terms of natural regeneration of endemic plants both within rehabilitation plots and natural sites which have been fenced to exclude grazers. Seedlings from a number of species have been seen across several LEMP sites including at Cook's Bridge, Bottom Woods, and the airport precinct. The wild population of scrubwoods at

Flagstaff, a priority dryland compensatory habitat, also benefitted from clearance works around scrubwoods that were being over-crowded by invasive species such as tungi (*Opuntia* sp.) and wild coffee (*Chrysanthemoides monilifera*). Following clearance works there was a noticeable improvement in general health and appearance of the plants, with regeneration observed.

### 3.5. Challenges

#### *Weeds and invasive species*

The challenge of dealing with weeds and invasive species continues to increase, particularly in light of the reduced team size and the volume of maintenance required in completed zones. There was an abundance of weed germination and prolific weed growth in 2018 due to a particularly damp winter, which required significant time to control. The LEMP team also continue to monitor areas where the invasive ice plant species (*Galenia papulosa*) imported in airport construction materials has germinated, and removed and destroyed them when found.

#### *Access to irrigation water*

Conversely to the above an extremely hot and dry summer followed the 2018 winter, with little rainfall from September 2018 through to March 2019. This affected LEMP restoration sites, with noticeable drought responses present in the planted endemics. LEMP continued to bowser water for irrigation to priority areas (i.e. zones that were more recently planted) from the Borehole 5 source. Some maintenance issues with the Borehole 5 infrastructure intermittently affected LEMP access to the water, which in turn impacted irrigation of LEMP sites; this was largely resolved by the end of the reporting period.

### 3.6. Public Relations/Communications

Monthly highlight and progress reports were produced for partner stakeholders.

Meetings and site visits were held with various stakeholders throughout the year to review LEMP progress and contribute to future plans, particularly regarding mitigation works at Rupert's Valley. A public meeting was held for residents of the area in May 2018 to gather feedback on planned works.

The LEMP Team Leader gave a short presentation at the St Helena Conference on Natural Capital in the South Atlantic in March 2019, promoting and highlighting the work and achievements of the LEMP project to date (<https://st-helena-conference.com/programme/>).

Updates on LEMP progress and the divestment were also provided through local media and various reports uploaded to the SHG website. Further information can be found through the following links:

- SHG website <http://www.sainthelena.gov.sh/airport-publications/>
- St Helena Independent newspaper <http://www.saint.fm/the-independent/>
- St Helena Sentinel newspaper [http://www.sams.sh/L2\\_sentinel.html](http://www.sams.sh/L2_sentinel.html)

## 4. Future Works

- 4.1. The overall project plan clearly lays out the remaining works to be completed as part of the LEMP project. 2019/20 will focus on completing outstanding rehabilitation works and compensatory projects including Flagstaff and the Central Basin invertebrate survey, and compensatory areas at Bottom Woods and activities in Rupert's valley. There will also need to be considerable time invested in maintaining existing planting areas.

- 4.2. The long term sustainability of LEMP sites continues to be a major issue and partnership working over the next two years will be key in identifying who will assume longer term maintenance of rehabilitated and compensatory areas post-LEMP funding. Identification of additional funding to support the legacy of LEMP will be crucial to achieving this.
- 4.3. As the LEMP continues to achieve key targets, complete larger zones, and the budget downscales further, another restructure to just one field team is planned for the final year of the LEMP.

## **5. Conclusion**

- 5.1. Despite the numerous changes within the project this period such as divestment to the Trust, a reduction in team size, and relocation of the field base and bulky materials, there was significant progress toward LEMP targets. Considerable gains were made in delivering practical reinstatement and compensatory targets with over 11,000 plants produced for LEMP in 2018/19 and over 17,000 planted out by LEMP and partners.
- 5.2. Key compensatory works were progressed at Bottom Woods in preparation for planting in the 2019/20 year, and contracts such as the installation of a rabbit and sheep proof fence at Blue Point were completed or significantly advanced.
- 5.3. Through the on-going creation, enhancement and maintenance of self-sustaining endemic restoration areas; improvement of natural dryland endemic populations; and continuous staff and resource capacity-building, the LEMP continues to contribute an incredible legacy for endemic conservation on St Helena.

**Acronyms and abbreviations**

BR	Basil Read (Airport Project DBO contractor)
DBO	Design Build Operate (Contract)
DfID	Department for International Development (UK) (project funder)
EMD	Environmental Management Division (SHG)
ENRD	Environmental & Natural Resources Directorate (SHG); <i>from 1 April 2019, Environment, Natural Resources and Planning Directorate</i>
HTH	Half Tree Hollow (Island District)
LEMP	Landscape & Ecology Mitigation Programme
NGO	Non-Governmental Organisation
SHG	St Helena Government
SHAL	St Helena Airport Limited (airport operator)
The Trust	St Helena National Trust (Island NGO)



## Appendix 1 – Key LEMP achievements: Apr 2018 - Mar 2019

Achievement	Details	Date	Delivered by
Plants grown and seed collected	2,321 plants were potted on at Half Tree Hollow nursery (April – June 2018) 6,159 plants were grown for LEMP at the EMD nursery at Scotland and 4366 of these planted into LEMP rehabilitation sites and seed orchards 2,619 plants were supplied to LEMP from private nurseries	April 2018 to March 2019	EMD / LEMP
Site preparations	Ground preparation works were completed for three LEMP specifications, which require to be reviewed by LEMP.	April 2018 to September 2018	Basil Read
LEMP compensatory works	Compensatory works were completed at Blue Point, Peak Dale, Flagstaff and Pipe Ridge.	April 2018 and March 2019	LEMP / EMD / SHNT
LEMP rehabilitation plots	LEMP rehabilitation works were completed in 4 subplots across three zones.	April 2018 to July 2019	LEMP

Zone	Subplot	Name of area	Works	Fence length (m)	Area (m <sup>2</sup> )	Irrigated area (m <sup>3</sup> )	No. plants	No. sown
9	9.1C compensatory	Bottom Woods*	Cleared, irrigated and planted	N/A	6,491	2,509	3,411 from 4 species	N/A
12	12.12A	Site Compound	Fenced, irrigated and planted	281	3,349	3,349	1,227 from 7 species	N/A
13		Near airport sewage treatment plant/ airport terminal forecourt	Fenced, irrigated and planted	295	3,193	3,193	1,187 from 5 species	N/A
25	N/A	Blue Point*	Fenced and rabbit drop traps installed	1,055	118,000	N/A	N/A	N/A
<b>Totals</b>				<b>1,631</b>	<b>131,033</b>	<b>9,051</b>	<b>5,825</b>	<b>0</b>
<b>Additional plants in other LEMP sites (seed orchards/replacements/additional planting etc.)</b>							<b>11,599</b>	
<b>Total planted 2018/19</b>							<b>17,424</b>	

\* Part or all compensatory works

**Appendix 2 – Photographic Review: April 2018 - March 2019**



2.1 Team photo at the Trust's main office, August 18



2.2 Field base office and storage containers relocated to Millennium Forest, February 19



2.3 Planting gumwoods at Bottom Woods compensatory areas, April 18



2.4 Wirebird nesting within LEMP site at zone 12.12A, May 18



2.5 Sheep and rabbit proof fencing completed at Blue Point, July 18



2.6 Rabbit drop traps installed at Blue Point, Jul 18



2.7 Boxwood seed orchard at Cook's Bridge, June 18



2.8 Invasive ice plant, *Galenia papulosa*



2.9 Flagstaff scrubwood clearance, before



2.10 Flagstaff scrubwood clearance, after, October 18



2.11 Fixed point survey, Piccolo zone 7.5, 2017



2.12 Fixed point survey, Piccolo zone 7.5, February 19

Appendix 3 – LEMP Organogram: March 2019 (in-house)

LEMP Organogram  
March 2019

