



**St Helena
Government**



Landscape & Ecological Mitigation Programme (LEMP)

Annual Report

April 2020 – March 2021

1. Executive Summary

- 1.1. 2020/21 saw the LEMP project complete rehabilitation works on 2 sub plots across two main LEMP zones. This involved approximately 250m of fencing, and almost 800 plants planted over an area of approximately 680m², with over 4,800 plants planted overall by LEMP and partners. Works were also completed at Flagstaff scrubwoods, and pest control carried out within the Central Basin. Practical works were focused on intensive maintenance of established LEMP zones. Biological surveys were undertaken and a cautious survival rate of 77% has been calculated across all LEMP plantings.
- 1.2. In 2020/21 the project went through the final staff restructure where the team was reduced to six members of staff.
- 1.3. Unfortunately, funding was unable to be secured to support long-term maintenance of the LEMP zones. Project partners have committed to limited maintenance of selected LEMP zones, but with current resources already under pressure a dedicated budget is required in order to secure the legacy of this transformative project.

2. Partnerships

2.1. Environmental Management Division (EMD)

During the year EMD propagated over 2,500 plants for LEMP, the bulk of which were provided to the LEMP team for planting. This included 500 endemic plants pre-paid for in the previous year which were delayed due to propagation issues. EMD also provided endemic annuals seed which was sowed throughout LEMP zones at Bottom Woods to encourage development of an understory.

In previous years the LEMP has funded the employment of staff at the nursery to work on LEMP related activities such as seed collection, sorting and storage, and plant propagation as well as nursery and living gene bank maintenance, to support EMD in achieving deliverables agreed in a Service Level Agreement. The legacy of this agreement has resulted in the development and expansion of EMD endemic facilities and within endemic living gene banks across the island.

Moving forward post-LEMP, EMD has committed to a minimum of quarterly maintenance of zone 11 (which includes five sub-zones) at Cook's Bridge/ Fisher's Valley, where the LEMP created a St Helena Boxwood living gene bank.

2.2. St Helena National Trust (The Trust)

In August 2018 practical delivery of the LEMP was divested to the Trust, while SHG retained overall responsibility for the project. This arrangement continued to run well over the course of 2020/21. Quarterly meetings of the LEMP Governance Group (consisting of the Director of the Trust, the Director of the Environment & Natural Resources Directorate (ENRD), the DfID SHAP Programme Manager, and the LEMP Team Leader) were held to review progress against planned work and the forecasted budget. The Group also investigated options for funding of long-term maintenance of LEMP zones from April 2021, see section 2.5.

Over 1000 plants were supplied to LEMP from the Trust's endemic nursery this year; this included 500 endemics that were pre-paid for in the previous year which were delayed due to propagation issues. Other short-term contracts were successfully completed by the Trust including pest and predator control throughout LEMP sites and the Central Basin. Two LEMP-funded reports on St Helena invertebrates were finalised by the Trust and published on

<https://www.sainthelena.gov.sh/directorates/airport/airport-publications/>. The first presented the results of a survey of known endemic mole spider sites which was completed in the previous year (2019/20); and the second was a survey of invertebrate presence and nativity within selected LEMP plots, to explore whether native and endemic invertebrates were colonising and utilising LEMP areas.

Moving forward post-LEMP the Trust has committed to maintenance of selected LEMP areas near the Millennium Forest (zone 9). Unfortunately, with limited funding within the organisation, this will be on an ad hoc basis as resources allow. However, the Trust will continue to proactively seek funding both locally and internationally to support maintenance of the LEMP zones.

2.3. St Helena Airport Ltd. (SHAL)

The island-wide drought conditions began to ease early into the 2020/21 financial year, and continue with a considerable amount of rainfall throughout the 2020 winter and into 2021. A fault with the pump at Borehole 5's which impacted water extraction to SHAL's Tank 6, necessitated SHAL using metered water to fill Tank 6 and support essential airport operations. An ad hoc agreement was then reached between SHAL and LEMP to allow LEMP access for water for irrigation when required, with invoicing accordingly.

Site visits were made to the St Helena Airport with colleagues from ENRPD to discuss and agree manual methods of invasive plant removal; and to complete checks for the invasive Namibian ice plant (*Galenia papulosa*) within the security fence. Regular monitoring of sites at which this species has previously been found will be required, in order to continue the control of the spread of the species on St Helena. SHAL are committed to regular checks within the airport security fence.

LEMP worked with SHAL and SHAPE (<https://www.shapecharity.com/>) to produce planters for landscaping at the airport forecourt. These were made from recycled paper pulp and cement and have been planted with endemic scrubwoods. There has been rapid growth of the scrubwoods, which add a striking feature to the front of the airport terminal building.

SHAL has also committed to post-LEMP maintenance of the area near the sewage treatment plant, and the forecourt scrubwoods, in addition to the maintenance already undertaken by their team within the endemic landscaped precinct beds. LEMP assets including tanks and tools have been transferred to SHAL to support this.

2.4. Foreign, Commonwealth and Development Office (formerly DfID)

The FCDO generously confirmed that the Trust could retain ownership of the LEMP assets (excluding the water bowser which will be retained by SHG) after the LEMP ceases on 31 March 2021, with conditions imposed around re-sale and disposal of assets moving forward. This transfer of assets was because the work of the Trust promotes the development of St Helena through education, conservation and tourism.

The Trust then worked with local developmental organisations, community groups, and conservation partners to distribute assets such as tanks, to support their long-term objectives.

A final update to the LEMP Logical Framework was completed to outline achievements and work completed since the project began.

2.5. Other

At the end of the previous year (2019/20) two potential LEMP specifications still remained to be drafted, to outline actions required to reinstate sites temporarily disturbed under the airport project. However, the sites in question did not become available for mitigation works within the remaining LEMP timeframe, and one has also since been converted into SHG's COVID-19 quarantine facility.

Presentations were made to the Environment, Natural Resources and Planning Council Committee, and the full Legislative Council to update on LEMP progress throughout the project, discuss responsibilities for the LEMP zones moving forward, and highlight the post-LEMP maintenance responsibilities under the St Helena Airport Project's Environmental Statement. A detailed budget for maintenance requirements post-LEMP was drafted to support the search by both SHG and the Trust for post-LEMP funding.

Positive feedback was received from the Elected Members on the exemplary work and lasting term legacy achieved by the LEMP teams. The importance of securing funding to support long-term maintenance of LEMP zones was recognised in order to sustain the LEMP zones.

A local company Conservation & Clearance completed the LEMP biological monitoring and associated report for this year which is available on the SHG website (<https://www.sainthelena.gov.sh/directorates/airport/airport-publications/>). Some of the findings are discussed in section 3.3.

3. Delivery

3.1. Staff

This year saw the final staff restructure of the project to a reduced team of six, including a team leader, field supervisor, senior conservation worker, and three conservation workers.

Despite efforts by the LEMP Governance Group, unfortunately no funding was secured to continue maintenance of the LEMP sites in good time to extend the contracts of team beyond March 2021. One member of the team left the project in the February, and the remaining team members completed their contracts on 31 March 2021.

Capacity building in staff is a key legacy of the LEMP project. During 2020/21 the team engaged in eight training events covering manual candling, behaviour management and safeguarding, communication in the workplace, fire safety, first aider renewals, GIS and data management, and also attendance at the Virtual Island Summit Conference session in which St Helena was represented. In addition to this, LEMP staff engaged in several Trust team wellbeing days throughout the year.

The LEMP team leader gave a presentation promoting and highlighting the work and achievements of the project at the St Helena Research Institute's 'Discovery to Discovery' conference in November 2020 (<https://st-helena-conference.com/>).

3.2. Infrastructure & Facilities

The HTH nursery and Piccolo standing out area were handed back to SHG in the final quarter of 2020/21. The team completed general clean-ups and removal of LEMP assets at each site in preparation for this.

The LEMP field base at Millennium Forest was also closed down at the end of the period, with broadband and utilities disconnected and the office building and storage containers formally handed over to the Trust.

3.3. Surveys

130 follow-up surveys were completed for the LEMP biological monitoring in 2020/21. For the LEMP biological monitoring a baseline survey of marked plots was conducted, and numbers of endemic and native plants and percentage cover of all species present were recorded. Survival rate and changes in abundance of species were then monitored as further follow-up surveys were completed for each plot.

The 2020 survey report presented an overall survival rate of approximately 77% across all LEMP plantings; however, this number should be viewed cautiously as a margin of error is required to account for replacement planting conducted by the team throughout LEMP zones. There was also a quantifiable increase in native vegetation cover from ground level up to the 1-2m plant height band. These results are excellent considering the impact of the drought on the LEMP zones in the previous year. A number of recommendations were made including a commitment to long-term maintenance of LEMP sites including pest control, and further research possibilities be explored from LEMP activities and the considerable dataset accumulated.

The LEMP teams also completed one round of biannual zone monitoring checks; involving a thorough check of all LEMP sites to monitor fence condition, irrigation functionality, the condition of plants and to identify any other maintenance issues. Any significant issues were rectified by the team in anticipation of the handover of LEMP sites at the conclusion of the project on 31 March 2021.

The sixth and final photographic survey for the project under this funding stream was also completed and is available on request. 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

The focus in this final year of the funded programme was on completion of outstanding works in various zones, including compensatory works; completion of any replacement planting required; invasive vegetation management and maintenance of existing zones; and collection of irrigation infrastructure from zones no longer actively being irrigated. The LEMP propagation requirements were outsourced to EMD and the Trust since June 2018.

In 2020/21 LEMP rehabilitation works were completed in 2 sub plots at Zone 1 – Ruperts and Zone 20 – Deadwood Amenity Area. Over 200m of fencing was constructed, and almost 800 plants planted over an area of approximately 680m². Works were also completed at Flagstaff scrubwoods, and pest control carried out within the Central Basin. The wild population of scrubwoods at Flagstaff, a priority dryland compensatory habitat, have benefitted from LEMP 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. Targeted pest control within the Central Basin was also recommended to benefit endemic invertebrates only found within this small but internationally important habitat.

This year saw flushes of endemic seedlings germinating following the welcome rainfall; and endemic regeneration was observed by the LEMP team both within, and unexpectedly, outside of LEMP fences across the LEMP sites.

3.5. Challenges

Long-term maintenance of LEMP sites.

While the endemics planted in the LEMP zones are beginning the move toward self-sustaining populations; the threat of encroachment and competition from invasive plant species is constant. The LEMP plantings require the recommended long-term maintenance of five years in order to control this threat until the endemic canopy closes and begins to suppress invasive species and supports stable endemic regeneration. Long-term maintenance of the sites is an SHG responsibility under the St Helena Airport Project planning conditions; however the challenge of securing funding to support this post-LEMP remains.

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.

The LEMP was represented in presentations at two Conferences throughout this period, promoting and highlighting the work and achievements of the LEMP project. The first was the St Helena Research Institute's 'Discovery to Discovery' conference in November 2020 (<https://st-helena-conference.com/>), and the second was the UK Overseas Territories Conservation Forum 2021 conference in March 2021 (<https://www.ukotcf.org.uk/onlineconference2021>).

Updates on LEMP progress were also provided through local media, various reports uploaded to the SHG website, and in the Trust's international newsletter. Further information can be found through the following links:

- SHG website <http://www.sainthelena.gov.sh/airport-publications/>
- Trust website <http://www.trust.org.sh/>
- St Helena Independent newspaper <http://www.saint.fm/the-independent/>
- St Helena Sentinel newspaper http://www.sams.sh/L2_sentinel.html

4. Future Works

- 4.1. To safeguard the long term legacy of the LEMP additional funding must be secured to continue substantial long-term maintenance of the LEMP zones. Works must continue to remove and control invasive plant species from out-competing the endemic habitat and ornamental landscaping created. Funding to undertake recommendations arising from LEMP species, habitat and invertebrate surveys would also be valuable.

5. Conclusion

- 5.1. Despite the reduced budget, downscaling of works and the focus on preparing for project completion and handover in this final year of the LEMP, the restructured team was dedicated in completing the remaining planned works. Over 3,600 plants were produced for LEMP, and over 4,800 planted out by LEMP and partners. Key compensatory works were also completed at Flagstaff and the Central Basin.
- 5.2. The LEMP has truly transformed the landscape around the airport and associated road; in addition to compensatory works to secure and enhance natural dryland endemic habitat. This project has facilitated the restoration and creation of endemic habitat, and created opportunities for staff up-skilling and local resource capacity-building, leaving an incredible legacy for the island. Long-term maintenance will be vital in ensuring this legacy is preserved.

Acronyms and abbreviations

| | |
|-----------|--|
| DfID | Department for International Development (UK) (project funder) |
| EMD | Environmental Management Division (SHG) |
| ENRPD | Environment, Natural Resources and Planning Directorate |
| 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 2020 - Mar 2021

| Achievement | Details | Date | Delivered by |
|---------------------------------|---|---------------------------|---------------------|
| Plants grown and seed collected | 2,576 plants were grown for LEMP at the EMD nursery at Scotland and 1,436 of these planted into LEMP rehabilitation sites and seed orchards. 1,098 plants were supplied to LEMP from the Trust endemic nursery. Minor seed collections (scrubwood and boxwood) from LEMP zones taken to EMD or direct sown on site. 1000 tufted sedge seed provided by EMD for LEMP understory sowing throughout zone 9.1. | April 2020 to March 2021 | EMD / LEMP/ Trust |
| LEMP compensatory works | Compensatory works were completed at Flagstaff, the Central Basin, and Ruperts. | April 2020 and March 2021 | LEMP / Trust |
| LEMP rehabilitation plots | LEMP rehabilitation works were completed in 2 subplots across two zones. | April 2020 to March 2021 | LEMP |

| Zone | Subplot | Name of area | Works | Fence length (m) | Area (m²) | Irrigated area (m³) | No. plants |
|--|-----------------------|-----------------------|--|-------------------------|-----------------------------|---------------------------------------|-----------------------|
| 1 | Ruperts | Lower Burial Ground* | Clearance and treatment of acacia; planted ornamentals to delineate boundary | N/A | 150 | N/A | 360 from 1 species |
| 18 | Central Basin | Prosperous Bay Plain* | Limited invasive plant removal, and targeted pest and predator control | N/A | 752,647 | N/A | N/A |
| 20 | Deadwood Amenity Area | Deadwood/ Pipe Ridge | Clearance of invasive species; fenced, irrigated, endemics planted; wire grass transplanted; | 208 | 523 | 523 | 403 from 3 species |
| 24 | Flagstaff | Flagstaff scrubwoods* | Clearance of invasive species | N/A | 4425 | N/A | N/A |
| Totals | | | | 208 | 757,745 | 523 | 763 |
| Additional plants in other LEMP sites (seed orchards/replacements/additional planting etc.) | | | | | | | 4,084 |
| Total planted 2020/21 | | | | | | | 4,847 |

* Part or all compensatory works

Appendix 2 – Photographic Review: April 2020 - March 2021



2.1 Team photo at the St Helena Conference, Nov 20



2.2 Weeding at zone 9.1D (compensatory), Apr 20



2.3 Post-drought recovery at airport Precinct, May 20



2.4 Encroachment of kikuyu grass, zone 5, May 20



2.5 Removal of invasive *Galenia papulosa*, Jun 20



2.6 Clearance works at Flagstaff scrubwoods, Jul 20



2.7 Scrubwood planters - St Helena Airport, Mar 21



2.8 Lower Burial Ground ornamental planting, Oct 20



2.9 Deadwood amenity area Zone 20, 2016



2.10 Deadwood amenity area Zone 20, Feb 2021



2.11 Fixed point survey, Bottom Woods, 2015



2.12 Fixed point survey, Bottom Woods, 2021

Appendix 3 – LEMP Organogram: April 2020 (in-house)

LEMP Organogram April 2020

