



**St Helena
Government**

ST HELENA AIRPORT PROJECT

LANDSCAPE AND ECOLOGY MITIGATION PROGRAMME 2015-2021

BACKGROUND AND STATUS AS AT MAY 2017

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ACRONYMS AND ABBREVIATIONS

ADA	Airport Development Area
ANRD	Agriculture and Natural Resources Division (of ENRD)
BR	Basil Read (Pty) Ltd
DBO	Design/Build/Operate (Main Airport Contract)
DFID	Department for International Development (UK)
EIA	Environmental Impact Assessment
EMAS	Engineered Materials Arrestor System
EMD	Environmental Management Division (of ENRD)
EMP	Environmental Management Plan
ENRD	Environment and Natural Resources Directorate
ES	Environmental Statement
ESH	Enterprise St Helena
FY	Financial Year
IEMA	Institute of Environmental Management and Assessment (UK)
LDD	Landscape Detailed Designs
LEMP	Landscape and Ecology Mitigation Plan/Programme
NCA	National Conservation Area
OJEU	Official Journal of the European Union
OTEP	Overseas Territories Environment Programme
PMU	Project Management Unit
RSPB	Royal Society for the Protection of Birds
SHG	St Helena Government
The Trust	St Helena National Trust
SNCG	St Helena Nature Conservation Group
VO37	Variation Order No 37 (to the main works contract)

ST HELENA AIRPORT PROJECT

LANDSCAPE AND ECOLOGY MITIGATION PROGRAMME 2015-2021

1 INTRODUCTION

1.1.1 This document has two main purposes. First, it is the document against which the progress of the final five-year phase of the Landscape and Ecology Mitigation Programme (LEMP) and its progressive integration into the core functions of the relevant St Helena institutions will be assessed. It will be used by the project management team for internal monitoring of project delivery and for wider reviews on behalf of both the St Helena Government (SHG), as the implementing authority, and the UK Department for International Development (DFID) as the funding agency.

1.1.2 Second, it is intended as an accessible point of reference for all who have an interest in how the adverse effects of airport construction on the landscape, and on the associated flora and fauna, are being addressed. It aims to aid understanding of: what constitutes the LEMP; how it came about; the challenges it has faced; where it is heading; and what a successful outcome should look like. The technical detail is not included and can be found elsewhere¹. The document is intended to inform, among others: LEMP staff members; stakeholders and partners who are collaborating in its delivery; elected councillors; contractors; and the general public.

1.1.3 A Landscape and Ecology Mitigation Plan was formulated during the environmental impact assessment (EIA) of the proposed airport project in 2005/06, and included in the Environmental Statement (ES)² which was submitted to the Governor-in-Council as part of the application for planning consent for the airport in May 2008. It was intended that this plan should be implemented in parallel with airport construction, following several specific pre-construction survey and mitigation activities that had been identified during the EIA. However, the timing of the start and the progress of the implementation of the plan was delayed³.

1.1.4 Because the original Landscape and Ecology Mitigation Plan⁴ formed an integral part of the broader St Helena Airport Project, falling largely within the ambit of the wider Environmental Management Plan (EMP)⁵, DFID/SHG did not consider it appropriate or necessary at that time to create a separate project document. During a visit to St Helena in May 2015 the DFID/SHG UK-based environmental support consultant recommended that, since the LEMP was to have its remit and budget expanded and its life extended to 2021 it would be desirable to have a dedicated project document available for monitoring and reference. A logical framework was completed in December 2015 after which it was agreed by SHG and DFID in January 2016 that it should form the basis of a more substantial document that would meet the objectives stated in paras 1.1.1 and 1.1.2 above. This is that document.

¹ Many key documents may be found on the Airport Project's website at: <http://www.sainthelenaaccess.com/news/publications/>.

² Faber Maunsell/AECOM. 2007. *St Helena Airport and Supporting Infrastructure: Environmental Statement Vol 4 (Technical Appendices) Appendix 10.2 – Landscape and Ecology Mitigation Plan*. Available online as in Footnote 1.

³ A chronology of key events relevant to the LEMP since 2003 is given at Appendix 5.

⁴ The 'Plan' was later renamed as a 'Programme' better to reflect its operational nature. The acronym 'LEMP' is used interchangeably in this document.

⁵ Faber Maunsell/AECOM. May 2007 (Rev Feb 2011). *St Helena Airport and Supporting Infrastructure: Environmental Statement Vol 5 (Environmental Management Plan)*.

2 PROJECT DESCRIPTION

2.1 Summary

2.1.1 The construction of an airport and associated infrastructure where none had existed before, on an ecologically fragile site for which there was no practicable alternative has, as expected, resulted in some significant residual adverse environmental impacts. Efforts to mitigate as far as possible have been made during design, and through pre-construction mitigation activities and strict enforcement of a contractually binding Environmental Management Plan (EMP) during construction.

2.1.2 Permanent effects on the landscape character of Prosperous Bay Plain and its immediate surroundings, where the runway, airport terminal and associated infrastructure are located, were inevitable. There were also expected to be potential permanent visual effects along the route of the access road joining the Contractor's marine landing point for construction equipment and materials at Rupert's Bay with the airport site, particularly where the road and the airport were prominent within the views of residential properties.

2.1.3 The key aims for the LEMP and, therefore, the main problems to be addressed were:

- how to ensure sympathetic and high quality landscape design;
- how best to reinstate⁶ and improve in a sustainable way those areas of land temporarily disturbed by airport and associated infrastructure construction;
- how and where to provide habitat and landscape enhancements to compensate for land permanently lost under the airport footprint.

The key objectives of the LEMP in 2015 therefore remained essentially the same as those originally envisaged in 2007.

2.1.4 Major challenges to getting the programme started and delivering results on the ground included obtaining agreement as to who would manage the programme and how it would be delivered. Identification and procurement of a suitable delivery organisation resulted in significant delays in starting implementation. Following approval of the Airport Programme Board, a locally resourced management and delivery system was initiated in August 2013. The LEMP is managed on-island by a full-time project manager supported by a professional ecologist and by locally recruited field supervisory staff and conservation workers, as described in section 2.12 and Appendices 3 and 4 below. Specialist advice and support from UK-based landscape architects AECOM has been contracted by DFID. A UK-based environmental support consultant is also retained on a call-down basis by SHG. Partnership arrangements are in place between the LEMP and relevant SHG directorates and environmental NGOs on the island.

2.1.5 The LEMP is tasked with delivering the outputs and outcome shown in Table 1 below, with indicators (in the right hand column) against which progress will be measured⁷. The impact and outcome statements encapsulate the principal success criteria.

⁶ The words 'rehabilitate' and 'restore' have also been used in various airport-related documents to mean essentially the same thing. The term 'reinstate' is widely used in the Environmental Statement, and is used in this document.

⁷ Extract from the 2015 logical framework at Appendix 1 – subject to amendment at annual review.

Table 1 – LEMP deliverables and success criteria

Impact⁸ 1 Terrestrial and marine environment safeguarded for future generations of St Helenians (National Goal 3: Effective management of the environment. St Helena Sustainable Development Plan (2014-17): Strategic Objective 8.1.	Measurable Indicators 1.1 Level of public satisfaction with views over landscapes where airport-related works have taken place. 1.2 Status of plant and animal diversity in reinstated areas.
Outcome⁹ 1 Areas of land temporarily impacted by airport construction works sustainably reinstated and (where appropriate) improved, with compensatory habitat/landscape enhancements established for permanently lost land.	1.1 Status of reinstatement works within the Airport Development Area. 1.2 Status of compensatory works both within and outside the Airport Development Area.
Outputs¹⁰ 1 Appropriate and effective management structures and delivery systems in place.	1.1 Status of management team. 1.2 Status of institutional partnership arrangements. 1.3 Status of plant production and field operation teams.
2 Landscape Detailed Designs (LDD), Project Logical Framework, and Annual Work Plans in place.	2.1 Status of LDDs (to be updated annually). 2.2 Status of Project Logical Framework, (to be updated annually). 2.3 Status of Annual Work Plan (to be updated annually).
3 Local plant production capacity sufficiently increased so as to meet the requirements of the project and the island's potential future needs.	3.1 Production from project/government nurseries. 3.2 Production from private sector nurseries. 3.3 Plant production facilities upgraded and plant worker skills upgraded.
4 Mitigation planting and compensatory habitat enhancements.	4.1 Area (m ²) of sites reinstated by mitigation and compensatory planting. 4.2 Qualitative value of sites treated with compensatory habitat enhancements other than planting. 4.3 %age plant survival rate collectively across all zones.
5 A long-term landscape maintenance and management plan for reinstated and compensatory habitat/landscape enhancement sites.	5.1 Status of implementation of maintenance schedule for planted areas as part of LEMP Work Plan (2015-2021). 5.2 Status of arrangements for long-term (2021-2026) maintenance of planted areas post-LEMP.

2.2 Context – St Helena Airport Project

2.2.1 The site selected for the construction of an airport at St Helena is located within a kilometre of the eastern coast of the island, on Prosperous Bay Plain, a relatively level area (~2.25 km²) of dry, unpopulated land with little vegetation, at an elevation of around 300 m above sea level. It is bounded to the north, east and south by rugged topography and high sea cliffs. The Plain (outside the boundaries of the airport site) had been proposed as a National Conservation Area within the scope of a revised and updated Land Development Control Plan (April 2012), largely because

⁸ Impact – The higher level goal to which the project will contribute.

⁹ Outcome – The effect of the project resulting from the delivery of the sum of its outputs.

¹⁰ Outputs – The project deliverables for which financial resources have been made available so that the activities required to produce the outputs can be implemented.

of its unusual geological and landscape features and the unique invertebrate fauna (including a number of endemic species) associated with these.

2.2.2 The central basin of Prosperous Bay Plain, an area of about 70 ha, was confirmed in 2003/04¹¹ as a 'hotspot' for endemic invertebrates deserving of an enhanced level of protection and international recognition. The Plain is also an important habitat for the endemic Wirebird and a number of endemic and indigenous plant species.

2.2.3 It was expected that the construction of the airport, with associated earthworks, would involve the disturbance of approximately 100 ha of the land surface of Prosperous Bay Plain and adjacent areas, including approximately 15% of the area of the central basin. In determining the optimum runway alignment and the location of the terminal and other facilities, the feasibility study took account of the environmental factors noted above. The project also provides an opportunity to bring long-term benefits to the adjacent habitat whose global biodiversity significance is still being fully investigated.

2.2.4 Institutional arrangements for environmental management on St Helena mean that the Environmental Management Division (EMD) of the Environment and Natural Resources Directorate (ENRD) plays an important role in the delivery of the LEMP. It is also anticipated that the St Helena National Trust (the Trust) play a central role in its delivery.

2.2.5 The airport project has stimulated the development of important new and/or enhanced national environmental and land management policies, legislation and operational practices. It has also led to the review and a considerable strengthening of the capacity and technical competence and breadth of experience of the island's environmental management institutions and staff. A further benefit has been the amount of valuable conservation-related research that has been undertaken, particularly on previously little-studied groups, notably invertebrates.¹²

2.3 Background to the Landscape and Ecology Mitigation Programme

2.3.1 A landscape and ecological mitigation plan for the St Helena Airport Project was developed during the environmental impact assessment (EIA) undertaken by UK consultants (Faber Maunsell/AECOM) during the period Oct 2005-Dec 2007.^{13,14} Among its objectives, the EIA sought to lessen the severity of adverse effects of construction on St Helena's landscape by: (a) minimising the visual impacts of the airport and associated infrastructure through sympathetic and high quality landscape design; (b) the control of alien invasive plant species; and (c) the sensitive planting of native species, particularly endemics, that would also increase the biodiversity, ecological value and habitat interest of the areas treated.

2.3.2 A key document, arising from the EIA process was the Environmental Management Plan (EMP)¹⁵, which formed an integral part of the main works contract

¹¹ Ashmole, P. and Ashmole, M. 2004. *The Invertebrates of Prosperous Bay Plain St Helena*.

¹² Much of this work, stimulated by the airport project, has been supported by the UK government's Darwin Initiative, Darwin Plus (formerly the Overseas Territories Environment & Climate Fund) and its predecessor the Overseas Territories Environment Programme (OTEP). For a list of Darwin projects in St Helena, see: (<http://www.darwininitiative.org.uk/project/location/region/ukot/>).

¹³ Faber Maunsell/AECOM. 2007. *St Helena Airport and Supporting Infrastructure. Volume 4 (Technical Appendices) Appendix 10.2 – Landscape and Ecology Mitigation Plan* (Available online at: www.sainthelenaaccess.com/application/documents/Environmental-Statement)

¹⁴ Faber Maunsell/AECOM. 2007. *St Helena Airport and Supporting Infrastructure. Volume 2 (Technical Summary) Section 10 – Landscape and Visual Amenity*. (Available online as above)

¹⁵ Faber Maunsell/AECOM. May 2007 (Rev Feb 2011). *St Helena Airport and Supporting Infrastructure: Environmental Statement - Vol 5 (Environmental Management Plan)*. (Available online as above)

and which set out the respective responsibilities of the SHG and the main works contractor.

LEMP implementation 2007-2009

2.3.3 The LEMP is an integral component of the St Helena Airport Project Environmental Statement and as such formed part of the planning requirements for the airport.

2.3.4 Between 2007 and 2009 respective delivery responsibilities were agreed. The DBO contractor was responsible for works on the ground such as site preparation and planting but SHG were expected to complete soil testing and plant propagation trials with the aim of providing plant materials through the propagation of endemics and other species. During this period it was expected that LEMP activities that were the responsibility of DFID and/or SHG would be contracted to AECOM who already had an in depth knowledge of the project.

2.3.5 Preliminary LEMP activities commenced in 2008, including a seed collection and storage programme and the erection of an interpretation board at Central Basin.

2.3.6 The airport project paused in late 2008 but some LEMP-related activities, especially seed collection and storage, were continued by SHG staff, and volunteers working under the St Helena National Trust.¹⁶

2.3.7 A pre-construction Wirebird mitigation project¹⁷, funded by DFID, was successfully implemented by ANRD in association with the RSPB and the Trust during the period July 2008 to October 2011. Its purpose was to ensure a sufficient area of pasture land was restored and managed to compensate for Wirebird habitat unavoidably to be lost to the development of the airport and associated infrastructure.

LEMP implementation 2011-2013

2.3.8 The airport project and consequently the landscape reinstatement plan was reactivated in 2010. In November 2011 SHG contracted Basil Read (Pty) Ltd for the design, build and operation of the airport. An international open procurement exercise (through the OJEU process¹⁸) to contract a managing agent for the LEMP was started in May 2012.

2.3.9 Protracted contract negotiations between June and December 2012 failed to produce an acceptable outcome. In January 2013 options were considered for an alternative management approach.

2.3.10 Options considered were: (a) do nothing; (b) re-tender; (c) revert to the original proposal; (d) SHG to manage without further AECOM involvement; and (e) SHG to manage, but with AECOM as a partner. The Airport Programme Board identified Option (e) as the most practicable and potentially cost-effective solution, which would place project management at the point of delivery while retaining AECOM's specialist landscape design services and access to their intellectual property and local knowledge gained from their previous involvement. The Board approved this approach in February 2013.

¹⁶ AECOM. 2009. *Landscape and Ecology Mitigation Plan. Progress Report 2008-2009*.

¹⁷ Duncan D G (2012). *Mitigation for Impacts on the Wirebird Population Project – End of Project Report (Feb 2012)*.

¹⁸ Official Journal of the European Union (OJEU). A mandatory, and lengthy, EU procurement process for all projects above a certain cost threshold, which involves publication of calls for expressions-of-interest (EOI) and invitations-to-tender (ITT), at specified intervals, in this Journal.

LEMP implementation 2013-2015

2.3.11 SHG recruited and appointed a LEMP Project Manager in August 2013; initially part-time based in the UK and full time on island from January 2014. Priority tasks were planning a programme and assembling a staff team.

2.3.12 During this mobilisation period, in addition to staff recruitment and the establishment of plant nursery facilities, negotiations were undertaken with potential government and non-governmental delivery partners. The Trust declined a substantive contract in July 2014, but agreed to grow and supply plants from its nursery.

2.3.13 It became clear that SHG would not be able to meet all of its obligations to the Contractor within the construction phase of the airport project as required under the terms of the EMP, which formed part of the DBO contract¹⁹. It was therefore decided that certain aspects of the delivery of the LEMP that had been the responsibility of the Contractor should be transferred to SHG's LEMP team.

2.4 Change in LEMP delivery responsibilities in 2015

2.4.1 A variation order (VO37) which outlined changes to the main works contract with Basil Read was agreed in September 2015. The variation order meant that the contractor retained responsibility for bulk earthworks on rehabilitation sites (land-forming, application of soils where available and removal of invasive plants etc.) but that responsibility of site preparation (fencing and irrigation) and planting was transferred to SHG.

2.4.2 In order that a cost-neutral outcome could be achieved the Contractor handed over to the LEMP vehicles, equipment and supplies to offset the cost savings realised by relinquishing much of their planting and plant maintenance responsibilities under the EMP.

2.4.3 One of the consequences of the LEMP taking over the Contractor's responsibilities, was that the project had to seek additional financial resources from DFID to enable it to undertake its considerably expanded remit and work programme.

2.4.4 The new arrangement had considerable advantages. Among these were that the longer time-frame available for implementation post-construction, enabled: (a) carefully considered landscape and planting design to meet the 'as built' airport and associated infrastructure; (b) ease of co-ordination and efficient delivery of outputs under SHG's direct management control; (c) more effective use of local skills and knowledge, and opportunities for capacity-building; and (d) greater flexibility in programming nursery plant production schedules to meet requirements and to take advantages of opportunities on the ground.

2.5 Design

2.5.1 The conceptual design for the LEMP, based on the original reference design for the airport, was set out in the Environmental Statement²⁰. This provided the foundation on which the LEMP implementation programme was subsequently developed. 'Preliminary use' versions of the Landscape Detailed Designs (LDD), which form the basis of the LEMP landscape and ecological works, were produced by AECOM between February and July 2015. The airport construction design, as to be expected in an output based contract, evolved over time in some significant ways, with landscape designs having had to respond accordingly. For example: the runway

¹⁹ With hindsight, it was in any case probably unrealistic to expect that the LEMP could have delivered its obligations as first envisaged, i.e. to grow 400,000 plants ready to be planted out in a 2-3 month window at the end of construction.

²⁰ Faber Maunsell/AECOM. 2007. *St Helena Airport and Supporting Infrastructure. Volume 4: Appendix 10.2 – Landscape and Ecology Mitigation Plan and Vol 5: Environmental Management Plan* (Available online at: www.sainthelenaaccess.com/application/documents/Environmental-Statement)

specification went through several iterations to respond to advances in aircraft technology; water extraction locations and associated infrastructure from boreholes have moved significantly; road alignment from Rupert's Valley to the Airport has been amended several times; and the locations of navigational aids have in some instances changed.

2.5.2 The LDDs cover 23 geographical zones of activity, identified on a suite of comprehensive plans drawn to a scale of 1:1000. The LDDs comprise explanatory statements of landscape design and ecological and conservation functions, together with detailed schedules of plant species and numbers required, and suggested planting densities for each sub-zone. In areas where reinstatement and mitigation requirements are focused on important ecological factors, especially those identified as suitable for compensatory enhancement, treatment will follow specific Site Management Plans. Where there is overlap or close association with National Conservation Areas (NCA) due account will be taken of the relevant NCA management plans.

2.6 Logical Framework (Logframe)

2.6.1 The logical framework at Appendix 1 has been designed in accordance with DFID's current best practice.²¹

2.6.2 In the case of the LEMP, the logframe was developed in 2015 rather than at the planning stage of the project, and therefore not used as a conventional project planning tool. It does, however, encapsulate: (a) the project's intended impact (or goal) and outcome (or purpose); (b) what it is required to deliver in the form of outputs to achieve these; (c) the milestones against progress towards each output target can be monitored; and (d) indicators of successful delivery of each output. The logframe constitutes the 'core' of this document and together with the LDDs will be the key tool against which the project will be monitored, reviewed and evaluated. It will also facilitate the development of annual work programmes linked to milestones.

2.7 Impact and Outcome

2.7.1 The impact is not intended to be achieved by the project alone. It is a higher level identified situation that the project will contribute towards achieving. The desired project outcome is that those areas of land temporarily disturbed by airport construction works should be sustainably restored, and where appropriate, improved. The impact of the project will, therefore, contribute to the national goal of effective management of the environment for the benefit of future generations of St Helenians.

2.7.2 Indicators tell us what we are going to measure, not what is to be achieved. At the higher impact level indicators are: (a) that the public should be satisfied that previously familiar landscapes temporarily scarred by airport construction are healing and blending once again into their surroundings; and (b) that it can be demonstrated that the status of plant and animal diversity in the reinstated areas is at least as healthy as it is in comparable habitats nearby. These indicators will be measured respectively by public satisfaction surveys and routine monitoring of key indicator species by local experts.

2.7.3 At the outcome level, the indicators are less subjective and more robust. The first relates to reinstatement, largely by planting, of all the zones and sub-zones identified in the LDDs, together with ongoing maintenance. Measurement of progress and success will be undertaken through physical monitoring, using such parameters as plant survival rates and degree of ground cover achieved. The second indicator, which is concerned with habitat enhancement and subsequent maintenance in

²¹ (1) DFID. 2011. *Guidance on using the revised Logical Framework (v.2)*. (2) Patrick, D. 2015. *Logical Frameworks (Logframes) Guide*. DFID.

compensation for land lost under the airport footprint, will also be measured by physical monitoring, using parameters appropriate to type of enhancement selected.

2.7.4 Annual milestones, as indicated in the logframe, will be determined or updated annually as part of work programming for the following year.

2.8 Outputs and Indicators

2.8.1 The LEMP has five outputs that will, if delivered, provide the conditions necessary for the achievement of the project outcome, or purpose. These appear in Table 1 and in the logframe at Appendix 1. Many of these, where 'status' is to be assessed, will require a degree of subjective judgment by the monitor or reviewer in determining the extent to which achievement matches what was planned. Others, such as Output 3, which concerns plant production, can be measured more objectively in terms of numbers of plants produced, losses through disease and so on.

2.9 Success criteria and benefits

2.9.1 The LEMP's longer-term criteria for success in terms of its goal or impact, as stated in the logical framework, are that the rehabilitation works should bring the landscape and its distinctive habitats back up to standards that meet national goals for the management of the environment. In other words, that the reinstated areas, with well-established endemic and native plant and animal communities, should eventually blend as seamlessly as possible into the wider landscape to the satisfaction of the general public and visitors to the island, and as objectively assessed by systematic biodiversity surveys.

2.10 Long-term sustainability

2.10.1 Output 5 of the logframe requires the delivery of a long-term landscape management plan for the maintenance of reinstated and compensatory habitat and landscape enhancement sites. This plan, in preparation under AECOM's technical support consultancy, will comprise an initial 2-year establishment period to cover the more intensive post-implementation maintenance requirements, followed by an 8-year period of routine maintenance to consolidate establishment of the planted areas.

2.10.2 The plan will provide maintenance schedules for each of the zones identified in the LDDs. A high standard of maintenance will be required to ensure that the planted areas flourish and provide the desired level of habitat reinstatement, screening and visual amenity.

2.10.3 The 10-year Management Plan will align with the timeframe of this project document, therefore running from April 2015 to March 2025. The initial 2-year establishment period will be a rolling programme of start and end dates through the life of the six year LEMP.

2.10.4 Responsibility for the implementation of the long-term management plan will be determined in the light of whatever arrangements are negotiated on the closure of the Access Office for the progressive assimilation of the LEMP programme and functions either into a core SHG environmental management structure or into another appropriate organisation, possibly under a management contract with SHG retaining control of delivery. Either way, resourcing of the management plan beyond 2021 will need to be absorbed into SHG's recurrent budget in the same way that all other additional maintenance obligations arising as a consequence of airport construction and operation will be.

2.11 Management and institutional arrangements

2.11.1 The LEMP is managed by a full-time Project Manager, based in the Access Office, who initially reported through the Deputy Airport Project Director (Environment

and Operations) to the Airport Project Director. In October 2016 the LEMP moved from the Airport Directorate to the ENRD and this post now reports through the ENRD Director.

2.11.2 LEMP functions and identity will eventually need to be progressively merged with an appropriate and more permanent institutional structure well in advance of its scheduled end-date of March 2021. Transition to ENRD in October 2016 represents a positive step towards this.

2.12 Staffing

2.12.1 The LEMP staffing structure is set out in the organogram at Appendix 3, with a staffing programme showing periods of employment at Appendix 4. Both of these will be subject to amendment in response to changing needs or any new challenges arising during the course of the project. Staffing matters will be considered during internal annual progress reviews against work programmes.

2.12.2 Saint Helena's employment market is challenged by almost zero unemployment, which results in a high turnover of staff and low salaries across most sectors. A key part of the LEMP will be the attainment of formal (NVQ & ILM²²) and informal (work place) training by its staff, leaving a legacy of more skilled and experienced individuals re-entering the job market.

2.13 Partners and stakeholders

2.13.1 The LEMP has developed and will continue to maintain partnerships with several SHG divisions, particularly those of ENRD such as the Environmental Management Division, the Agriculture and Natural Resources Division (ANRD), the Transport and Infrastructure Division, and the Property Division. Non-SHG local stakeholders have included Enterprise St Helena (ESH); Basil Read (Pty) Ltd; the Project Management Unit, the St Helena National Trust and various private sector organisations and individuals.

2.13.2 DFID, as the funding agency, remains the principal external stakeholder, and AECOM will continue as the LEMP's main specialist external contractor until 30 September 2017.

2.13.3 A local Stakeholder Engagement Forum has been established for the wider airport project. Annual workshops are held to allow partners the opportunity to understand and comment on future LEMP plans. This group is kept informed about LEMP works and has the opportunity for input and comment.

3 IMPLEMENTATION

3.1 Overview of works to be undertaken

3.1.1 The LEMP covers two main categories of works:

- *Reinstatement works* for all temporarily disturbed ground impacted by the construction works of the Airport Project;
- *Compensatory works* at 1.5 times the footprint of those lands permanently lost due to the construction of the airport.

3.1.2 Appendix 6 shows a map of the areas initially identified for reinstatement; those that would be permanently lost to the airport; and those earmarked for compensatory habitat and landscape enhancement.

3.1.3 The Landscape Detailed Designs (LDDs) set out the overall plan of works expected to be delivered by the LEMP over its lifetime. First officially issued in

²² National Vocational Qualification (NVQ) Level 2 in Work-Based Environmental Conservation & Institute of Leadership & Management (ILM) Level 3 certificate.

February 2015, it is a set of living documents with subsequent iterations updated and distributed annually each February. As works are delivered on the ground, the LDDs become a mixture of as-built and planned design works with each iteration. LDDs consist of:

- LDD-Baseline (series of maps);
- Detailed Design Planting Schedules (spreadsheet of plants species, quantities, areas, and fence lengths);
- LDD Functions (descriptive functions and reasoning behind the zones).

3.2 Working with other contractors

3.2.1 As they are completed, the earthworks at the sites specified for habitat reinstatement are progressively being handed over to the LEMP by the main works contractor.

3.2.2 AECOM continue to provide support services. Key tasks have been the development and updating of the landscape detailed designs and provision of advice on environmental issues. Tasks remaining include handover of the LDDs to LEMP in a usable format and finalisation of the long-term LEMP Management Plan framework.

3.2.3 The LEMP has also used a number of local contractors for various projects including development of the Half Tree Hollow and Piccolo nurseries, and more recently for works across two compensatory sites.

3.3 Infrastructure and equipment

3.3.1 The LEMP's main office is in the Post Office building in Jamestown. There is also a nursery and field base at Half Tree Hollow which includes a site office, storage buildings and a container for further storage.

3.3.2 Placement of the field teams at HTH Nursery was leading to significant amounts of time travelling to work sites and a decision was taken to find a suitable site for a field base in the East of the island.

3.3.3 A field base at Horse Point Landfill Site has now been established with the support of EMD colleagues. This saves significant travelling time during the working day. The field office is fully equipped and two containers are located nearby for the storage of tools and materials, and for a staff welfare area.

3.4 Work programme and field operations

3.4.1 A chronology of key events in the life of the LEMP is found in Appendix 5.

3.4.2 On restarting activity in 2013 initial LEMP actions focussed on:

- Development of nursery facilities at Half Tree Hollow and Scotland Nurseries;
- Production of the baseline Landscape Detailed Designs (by AECOM);
- Establishment of a composting scheme on the island;
- Habitat and species surveys in key areas.

3.4.3 Initial works carried out by the contractor in 2015/16 included lichen translocations and planting at Dry Gut. Then in September 2015 a variation order (V037) was signed passing much of the reinstatement works that had previously been the responsibility of Basil Read to SHG and the LEMP.

3.4.4 Since the variation order was signed, delivery of reinstatement works across the LEMP zones has followed a standard process:

- A specification is drawn up by the LEMP team to outline how impacted sites should be put back in terms of bulk earthworks, application of topsoil and/or removal of invasive species where appropriate. This specification is issued to

Basil Read via the Project Management Unit (PMU) for comment and acceptance;

- Once works are completed to LEMP and PMU satisfaction the site is signed off and Basil Read's responsibilities are complete;
- LEMP staff then move in to complete the reinstatement works. Where planting is to take place, sites are fenced to exclude rabbits and other grazers and irrigation is laid. Planting can then take place.
- The LEMP Ecologist completes a baseline survey for vegetation monitoring. Once a baseline is established vegetation monitoring for each site is completed on a bi annual basis. Using this information the team draws up a plan for short and long term management which is included in the LEMP Management Plan.

3.4.5 Key challenges have included ensuring that the specifications are completed in full and that photographic records of the works are kept. In some areas, it has been difficult to determine what the best reinstatement goal might be. Particular issues that have delayed specifications have been a lack of topsoil and/or topsoil of a suitable quality exacerbated by a lack of appropriate storage and/or inappropriate use of scarce reserves.

3.4.6 Other challenges have included the greater than anticipated impact of rabbits on reinstatement planting and the need to fence all areas and a period of prolonged drought resulting and a greater requirement for manual irrigation.

3.4.7 The key stages to field operations following the planting of the sites are as follows:

- Continued irrigation for up to two years;
- Two years' quarterly monitoring of sites, regular weeding and maintenance;
- Establishment of a short term (2 years) and long term (10 year) management plan for all reinstated areas.

3.4.8 Once identified, key actions for compensatory areas are agreed with a range of stakeholders. These works are more site specific and aim to follow existing site management plans.

3.4.9 One of the key challenges for the future will be to ensure that the management of LEMP sites beyond 2021 can be integrated into the general work plans of EMD or other partners. Of particular concern are the future impact of pests, such as rabbits, and invasive species.

3.5 Contracting and procurement

3.5.1 As a St Helena Government project, initially within the Air Access office and currently within ENRD, the LEMP is required to comply with all SHG procurement and contracting policies and procedures.

3.5.2 The procurement of services under £5,000 is not subject to SHG's Procurement Regulations 2013. However to ensure that consistency is achieved across the Directorate ENRD have a set policy that LEMP use. Responsibility for procurement approval under £5,000 lies with Division Heads.

3.5.3 The procurement procedure for obtaining goods and services above £5000 should be carried out in accordance with SHG Procurement Regulations 2013.

3.5.4 Procurement of services above the EU OJEU process thresholds would be completed under OJEU procurement regulations.

3.6 Accounting and audit

3.6.1 As an independent project the LEMP budget is agreed independently from the core SHG funds from DFID, however the same accounting and audit processes are followed for the LEMP budget as for any SHG division. Monthly monitoring and reconciliation of expenditure occurs and quarterly monitoring and claims are sent to DFID for agreement.

3.7 Reporting

3.7.1 The LEMP management team issues monthly progress highlight reports for stakeholder information and for distribution as might be operationally useful.

3.7.2 The Project Manager collates more detailed quarterly project reports, internally distributed, which constitute the formal record of the progress of the project. The fourth quarterly report in each financial year (end-March) includes an overview of the successes and challenges faced during the preceding year, to inform the annual internal monitoring exercise (see also para 5.1.1).

3.7.3 Other routine operational activity reports from project partners and contractors are requested by the Project Manager as required.

4 ISSUES, CHALLENGES AND RISKS

4.1 Risk analysis – The LEMP Project Manager keeps a risk register which is reviewed and updated on a regular basis. This is a confidential project document but key risks and challenges are identified below.

4.2 Staffing – Staff resignations at all levels, timely recruitment of replacements and subsequent retention, have proved to be a significant constraint to progress, with extended vacancy periods leading to delays in implementation. At the higher levels salaries equate well to similar positions elsewhere in SHG and in partner organisations. At the Field Supervisor and Conservation Worker levels salaries are equivalent to those of similar roles within SHG; at all levels however LEMP workers do not qualify for associated benefits such as pension rights which are available to permanent SHG staff. This undoubtedly contributes to the staff retention difficulties faced by the LEMP.

4.3 Partnerships – Relationships with some NGOs and other SHG divisions have been strained in the past as a consequence of, among other things, competing priorities, poor communication and transparency of objectives. Closer working relationships are developing and partnership support remains a key factor to ensuring sustainability and long term success of the LEMP outputs.

4.4 Topsoil and earthworks – Misalignment between when earthworks have been completed and sites handed over and when LEMP anticipated they would be ready and produced plants for specific areas have led to the loss of plants and delays in the project. Particular issues that have delayed specifications have been a lack of topsoil and/or topsoil of a suitable quality exacerbated by a lack of appropriate storage and/or inappropriate use of scarce reserves.

4.5 Plant survival – This has been higher than expected. Initial planting densities were predicated on a survival rate of around 50%. In practice, planting plans created by the LEMP ecologist have used far fewer plants than originally estimated as survival rates have been higher. Overall plant survival to date has been just under 70%, but this includes a 36% survival rate for samphire, of which a large proportion of initial plantings were lost to rabbits through lack of adequate fencing. In general, survival rates for most species, with adequate protection from rabbits, are between 70 and 80%, with some exceeding 80%.

- 4.6 Pests and diseases – These have been a major problem throughout the project. The presence of rabbits is an island-wide problem, but their impact on LEMP activities was not fully appreciated at the outset. Rabbit grazing has necessitated fencing of all major planting areas, including samphire dominated areas, resulting in a higher cost for site preparation than originally anticipated. Plant diseases have also been a problem, having an impact on propagation for project nurseries and for plants provided by the private sector. Mealy bug in particular is an issue across the nurseries and planting sites, and considerable time and energy is taken up treating plants for disease.
- 4.7 Water and irrigation – Provision of irrigation systems on all planting sites is also an expense which had been underestimated. The recent drought on St Helena has had a considerable impact on irrigation costs, largely through additional fuel costs for bowsering water to the reinstatement sites and the need for additional irrigation equipment. Currently LEMP sources most of its water from Basil Read's Borehole 5 which it does not pay for, but this situation may change when the borehole is handed over to SHG for commercial use.

5 MONITORING, REVIEW AND EVALUATION

5.1 Internal monitoring

5.1.1 In addition to routine *ad hoc* physical monitoring by the Project Manager for operational purposes, the project will be subject to annual progress reviews against the Project Manager's annual reports with the work programme for the preceding year and the relevant milestones as set out in the logical framework.

5.1.2 It is envisaged that the review team would include the following: (1) the LEMP Project Manager; (2) the LEMP ecologist (3) the LEMP team leaders; (4) a representative of SHG/ENRD; (5) a representative of the Trust; and (6) the DFID resident representative (as an independent observer).

5.2 Evaluation

5.2.1 The timing and nature of any formal ex-post evaluation of the wider airport project by DFID/SHG is still to be determined, but it is reasonable to expect that it would cover environmental management matters, including the LEMP. A stand-alone ex-post evaluation of the LEMP would seem to be unlikely.

APPENDICES

- 1 LOGICAL FRAMEWORK**
- 2 ORGANISATION CHART**
- 3 STAFFING PROGRAMME**
- 4 BUDGET**
- 5 TIMELINE OF KEY EVENTS SINCE 2003**
- 6 MAP OF LEMP WORKS**

ORGANISATION NAME	ST HELENA GOVERNMENT										
PROJECT NAME	ST HELENA AIRPORT - LANDSCAPE AND ECOLOGY MITIGATION PROGRAMME (LEMP)										
IMPACT	Impact Indicator 1		Baseline	Milestone 1 (2015-16)	Milestone 2 (2016-17)	Milestone 3 (2017-18)	Milestone 4 (2018-19)	Milestone 5 (2019-20)	Target (2020-21)		
Terrestrial and marine environment safeguarded for future generations of St Helenians (National Goal 3: Effective Management of the Environment; St Helena Sustainable Development Plan 2014-17: Strategic Objective 8.1).	Level of public satisfaction with views over landscapes where airport-related works have taken place.	Planned	Landscape character assessments in Environmental Statement (Vol 4 App 10.1).	Public satisfaction baseline of Elected Members through site visit tour of Airport Development Area () and LEMP related restoration sites completed Jan/Feb 2016. Annual fixed point photography protocol and baseline established by March 2016.	≥50% Elected Members satisfaction of LEMP landscape character work to date achieved. Annual fixed point photography records show positive signs of rehabilitation of landscapes.	≥50% Elected Members satisfaction of LEMP landscape character work to date achieved. Annual fixed point photography records show positive signs of rehabilitation of landscapes.	≥60% Elected Members satisfaction of LEMP landscape character work to date achieved. Annual fixed point photography records show positive signs of rehabilitation of landscapes.	≥70% Elected Members satisfaction of LEMP landscape character work to date achieved. Annual fixed point photography records show positive signs of rehabilitation of landscapes.	≥80% Elected Members satisfaction of LEMP results achieved. Annual fixed point photography records show positive visual healing of the landscape between March 2016 to March 2021.		
		Achieved		Baseline of both milestones completed February 2016. Limited response from Elected Members (5 of 12 attended. 2 of 5 attendees responded).							
			Source								
		Photographic records from fixed points. Records of Elected Members annual site visits & feedback. Records of SHG Tourism visitor satisfaction surveys.									
	Impact Indicator 2		Baseline	Milestone 1 (2015-16)	Milestone 2 (2016-17)	Milestone 3 (2017-18)	Milestone 4 (2018-19)	Milestone 5 (2019-20)	Target (2020-21)		
	Status of plant and animal diversity in reinstated areas.	Planned	Pre-construction records.	Annual wirebird census population stable or improving on long term average.	Annual wirebird census population stable or improving on long term average. Biannual SHG State of the Environment Report notes positive LEMP impact on the landscape.	Annual wirebird census population stable or improving on long term average.	Annual wirebird census population stable or improving on long term average. Biannual SHG State of the Environment Report notes positive LEMP impact on the landscape.	Annual wirebird census population stable or improving on long term average.	Key indicator species records, such as wirebirds, show no negative impact by the airport project on populations. SHG State of the Environment Report highlights successful LEMP implementation.		
Achieved			Census completed by the Trust January 2016. 559 adult birds counted represents the highest recorded count, and a significant rise compared to the 2012 count of approximately 400.								
		Source									
	Monitoring reports by EMD and the Trust. Monitoring reports of key indicator species (e.g. Wirebird). SHG's State of the Environment Report.										

OUTCOME	Outcome Indicator 1		Baseline	Milestone 1 (2015-16)	Milestone 2 (2016-17)	Milestone 3 (2017-18)	Milestone 4 (2018-19)	Milestone 5 (2019-20)	Target (2020-21)	Assumptions	
Areas of land temporarily impacted by airport construction works sustainably restored and (where appropriate) improved, with compensatory habitat/landscape enhancements established for permanently lost land.	Status of reinstatement works within the Airport Development Area.	Planned	Landscape Detailed Designs	Restoration and rehabilitation of set zones completed. TBC through Project Programme.	Restoration and rehabilitation of set zones completed. TBC through Project Programme.	Restoration and rehabilitation of set zones completed. TBC through Project Programme.	Restoration and rehabilitation of set zones completed. TBC through Project Programme.	Restoration and rehabilitation of set zones completed. TBC through Project Programme.	Restoration and rehabilitation of all LDD zones complete and active maintenance initiated overseen by relevant SHG Directorate.	Airport construction completed and operations commence in 2016 allowing restoration of decommissioned zones to take place. Survival rates achieved. Maintenance of restoration and compensatory sites delivered.	
		Achieved		xx% of planned works completed. Delays in implementation of zone 9.1 due to Airport Contractor delays in Construction Programme.							
			Source								
			LEMP quarterly progress and annual reports. Physical monitoring.								
	Outcome Indicator 2		Baseline	Milestone 1 (2015-16)	Milestone 2 (2016-17)	Milestone 3 (2017-18)	Milestone 4 (2018-19)	Milestone 5 (2019-20)	Target (2020-21)		
	Status of compensatory works outside the Airport Development Area.	Planned	Landscape Detailed Designs	Set zones completed. TBC through Project Programme.	Set zones completed. TBC through Project Programme.	Set zones completed. TBC through Project Programme.	Set zones completed. TBC through Project Programme.	Set zones completed. TBC through Project Programme.	Compensatory habitat enhancement works of all LDD zones completed and active maintenance initiated overseen by relevant SHG Directorate.		
		Achieved		No works planned for this timeframe.							
			Source								
			LEMP quarterly and annual progress reports. Physical monitoring. Specific site management plans.								
	INPUTS (£)	DFID/SHG (£)		Govt (£)	Other (£)	Total (£)					DFID/SHG SHARE (%)
	£1,656,892 (100% DFID)		N/A	N/A	N/A				N/A		
INPUTS (HR)	DFID/SHG (FTEs)										
	Refer to Output 1 Inputs (HR)										

OUTPUT 1	Output Indicator 1.1		Baseline (2013)	Milestone 1 (2015-16)	Milestone 2 (2016-17)	Milestone 3 (2017-18)	Milestone 4 (2018-19)	Milestone 5 (2019-20)	Target (2020-21)	Assumption
Appropriate and effective management structures and delivery systems in place.	Status of management team.	Planned	LEMP management team established in Air Access Office.	Full management team in post as per organogram and positions timeframes within Project Programme.	Full management team in post as per organogram and positions timeframes within Project Programme.	Full management team in post as per organogram and positions timeframes within Project Programme.	Effective transition into SHG management and effective structure implemented.	Effective SHG management structure implemented.	Long-term LEMP requirements adopted and implemented by SHG management.	Sufficient skilled staff can be recruited and retained. Institutional home for LEMP from 2016 agreed and practicably implemented.
		Achieved		New organogram agreed with DFID in Nov 2015 with associated budget. Difficulties and delays in recruitment and retention of skilled workforce. At end of March 2016 3 of 3 planned management team posts filled, although significant upscaling of both staff numbers and skills required for year ahead, as per Project Document Staffing Plan in Appendix 4.						SHG agree long term management of LEMP requirements and have sufficient resources to implement.
		Source								
	LEMP quarterly and annual reports. Project Programme.									
	Output Indicator 1.2		Baseline (2013)	Milestone 1 (2015-16)	Milestone 2 (2016-17)	Milestone 3 (2017-18)	Milestone 4 (2018-19)	Milestone 5 (2019-20)	Target (2020-21)	
	Status of institutional partnership arrangements.	Planned	Environmental Statement and Environmental Management Plan (Feb 2011) initiated by alternative delivery option agreed by DFID and SHG.	Areas of SHG LEMP responsibility defined after periods of negotiation and agreements in place needed for implementation.	LEMP institutional home confirmed. Effective transition to new premises achieved.	Institutional partnerships and LEMP home effective and practicable.	Institutional partnerships and LEMP home effective and practicable.	Institutional partnerships and LEMP home effective and practicable.	LEMP ceases to exist as a stand-alone project from end of F/Y.	
Achieved			Spilt of Responsibilities and VO37 agreed in September 2015 between PMU, BR & SHG. Associated additional budget and timeframe agreed November 2015 between SHG and DFID.							
Source										
LEMP quarterly and annual reports. Project Programme document.										

IMPACT WEIGHTING (%)	Output Indicator 1.3		Baseline (2014-15)	Milestone 1 (2015-16)	Milestone 2 (2016-17)	Milestone 3 (2017-18)	Milestone 4 (2018-19)	Milestone 5 (2019-20)	Target (2020-21)		
10%	Status of plant production and field operations teams.	Planned	Teams under recruitment.	Full Field Teams staff complement in post as per organogram and positions timeframes within Project Programme.	Full Field Teams staff complement in post as per organogram and positions timeframes within Project Programme.	Full Field Teams staff complement in post as per organogram and positions timeframes within Project Programme.	Full Field Teams staff complement in post as per organogram and positions timeframes within Project Programme.	Full Field Teams staff complement in post as per organogram and positions timeframes within Project Programme.	Long term management of LEMP requirements absorbed into SHG annual work programme and existing structure.		
		Achieved		New organogram agreed with DFID in Nov 2015 with associated budget. Difficulties and delays in recruitment and retention of skilled workforce. At end of March 2016 10 of 10 planned field team posts filled, although significant upscaling of both staff numbers and skills required for year ahead, as per Project Document Staffing Plan in Appendix 4.							
		Source									RISK RATING
		LEMP quarterly and annual reports.									Low
INPUTS (£)	DFID/SHG (£)		Govt (£)	Other (£)	Total (£)				DFID/SHG SHARE (%)		
	£1,656,892 (covers all Outputs)		N/A	N/A	N/A				N/A		
INPUTS (HR)	SHG (FTEs)										
	1 x LEMP Project Manager 1 x LEMP Ecologist 1 x Project Support 2 x Team Leader 5 x Field Supervisor 5 x Senior Conservation Worker 10 x Conservation Worker (Covers all Outputs - refer to Project Programme document for posts' timelines)										

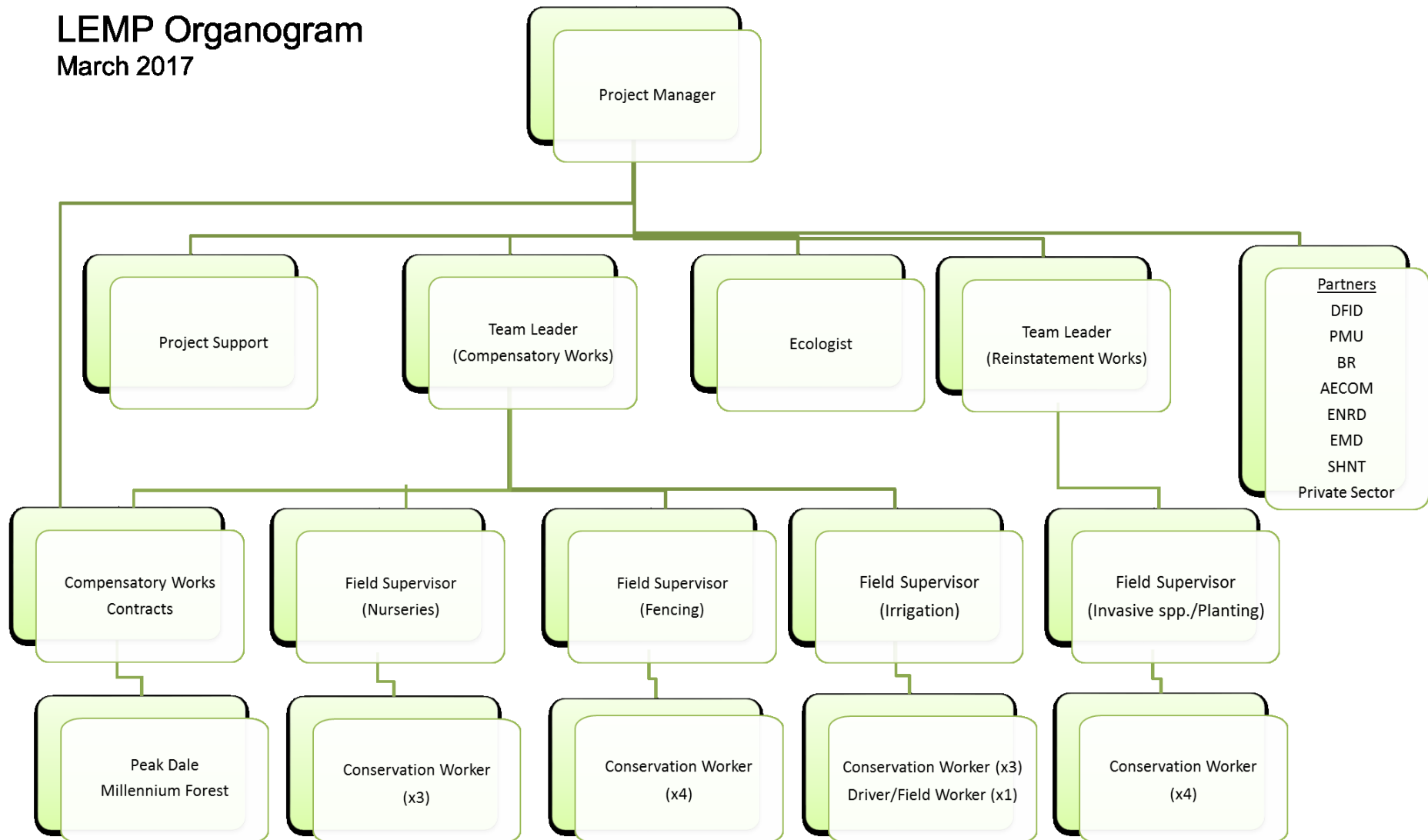
OUTPUT 2	Output Indicator 2.1		Baseline (2014-15)	Milestone 1 (2015-16)	Milestone 2 (2016-17)	Milestone 3 (2017-18)	Milestone 4 (2018-19)	Milestone 5 (2019-20)	Target (2020-21)	Assumptions	
Landscape Detailed Designs (LDD), Project Programme, and Annual Work Plans in place.	Status of LDD (to be reviewed and updated annually).	Planned	Environmental Statement; Environmental Management Plan (Feb 2011). Landscape Detailed Designs (LDD) baseline July 2015.	LDD reviewed and updated by Feb 2016.	LDD reviewed and updated by Feb 2017.	LDD reviewed and updated by Feb 2018.	LDD reviewed and updated by Feb 2019.	LDD reviewed and updated by Feb 2020.	LDD fully delivered and as-built iteration issued.	Sufficient budget allocated for implementation. LEMP project partners agree on LDD and annual priorities. Full complement of staff in post to create, review, and deliver project documents.	
		Achieved		Completed as planned FEB 2016 with AECOM.							
		Source									
		LDD iterations. Annual Work Plans. LEMP quarterly and annual reports.									
	Output Indicator 2.2		Baseline (2014-15)	Milestone 1 (2015-16)	Milestone 2 (2016-17)	Milestone 3 (2017-18)	Milestone 4 (2018-19)	Milestone 5 (2019-20)	Target (2020-21)		
	Status of Project Programme (to be reviewed and updated annually).	Planned	Environmental Statement; Environmental Management Plan (Feb 2011).	Project Programme created.	Project Programme reviewed and updated by Feb 2017.	Project Programme reviewed and updated by Feb 2018.	Project Programme reviewed and updated by Feb 2019.	Project Programme reviewed and updated by Feb 2020.	Project Programme fully delivered.		
		Achieved		Incomplete. Retrospectively completed June 2016.							
		Source									
		Project Programme document. LEMP quarterly and annual reports.									
IMPACT WEIGHTING (%)	Output Indicator 2.3		Baseline (2014-15)	Milestone 1 (2015-16)	Milestone 2 (2016-17)	Milestone 3 (2017-18)	Milestone 4 (2018-19)	Milestone 5 (2019-20)	Target (2020-21)		
20%	Status of Annual Work Plan (to be prepared annually).	Planned	Environmental Statement; Environmental Management Plan (Feb 2011).	Areas of SHG LEMP responsibility defined after periods of negotiation and agreements in place needed for implementation.	Annual work plan ≥90% completed.	Annual work plan ≥90% completed.	Annual work plan ≥90% completed.	Annual work plan ≥90% completed.	Annual work plan 100% completed. Series of annual work plans delivered resulting in full implementation of Project Programme.		
		Achieved		Spilt of Responsibilities and VO37 agreed in September 2015 between PMU, BR & SHG. Associated additional budget and timeframe agreed November 2015 between SHG and DFID.							
		Source									
		Annual Work Plan documents. LEMP quarterly and annual reports.									
										RISK RATING	
										Low	
INPUTS (£)	DFID/SHG (£)		Govt (£)	Other (£)	Total (£)				DFID/SHG SHARE (%)		
	Refer to Output 1 Inputs (£)		N/A	N/A	N/A				N/A		
INPUTS (HR)	SHG (FTEs)										
	Refer to Output 1 Inputs (HR)										

OUTPUT 3	Output Indicator 3.1		Baseline (2015-16)	Milestone 1 (2015-16)	Milestone 2 (2016-17)	Milestone 3 (2017-18)	Milestone 4 (2018-19)	Milestone 5 (2019-20)	Target (2020-21)	Assumption	
Local plant production capacity sufficiently increased so as to meet the requirements of the project and the Island's potential future needs.	Production from government/project nurseries.	Planned	Landscape Detailed Designs (LDD) plant requirements.	60,000 plants grown	80,000 plants grown	80,000 plants grown	50,000 plants grown	50,000 plants grown	20,000 plants grown Total: 340,000 plants delivered to field.	Availability of seed is sufficient for production.	
		Achieved								Delivery timetables can be met.	
		Source									Plant diseases and pests can be avoided or controlled.
		Nursery records. LEMP quarterly and annual reports.									
	Output Indicator 3.2		Baseline (2015-16)	Milestone 1 (2015-16)	Milestone 2 (2016-17)	Milestone 3 (2017-18)	Milestone 4 (2018-19)	Milestone 5 (2019-20)	Target (2020-21)	No extreme weather events affect production.	
	Production from private sector nurseries.	Planned	Landscape Detailed Designs (LDD) plant requirements.	10,000 plants grown	12,500 plants grown	15,000 plants grown	15,000 plants grown	15,000 plants grown	0 plants grown Total: 67,500 plants delivered to field.	Availability of contractors to carry out facilities upgrades.	
		Achieved								Availability and retention of staff.	
		Source									
		Nursery records. Invoices/delivery notes. LEMP quarterly and annual reports.									
	IMPACT WEIGHTING (%)	Output Indicator 3.3		Baseline (2013)	Milestone 1 (2015-16)	Milestone 2 (2016-17)	Milestone 3 (2017-18)	Milestone 4 (2018-19)	Milestone 5 (2019-20)	Target (2020-21)	Availability of recognised qualifications such as NVQs.
20%	Plant production facilities upgraded and plant worker skills developed.	Planned	SHG Scotland and St Helena National Trust Millennium Forest combined capacity approx. 20,000pa.	Nursery facilities upgraded to meet LDD requirements. Contracts in place with private sector growers.	All nursery facilities fully operational. In-house and external training of nursery staff completed.	All nursery facilities fully operational. In-house and external training of nursery staff completed.	All nursery facilities fully operational. In-house and external training of nursery staff completed.	All nursery facilities fully operational. In-house and external training of nursery staff completed.	Nursery facilities surplus to SHG requirements transferred to private sector. Recognised qualifications, such as NVQs, achieved by LEMP field staff.		
		Achieved		Half Tree Hollow Nursery & Piccolo site upgraded throughout the year to peak capacity. EMD nursery upgraded March 2016. On the job training provided to entry level Conservation Workers. NVQ in Environmental Conservation delivery delayed due to lack of Island capacity. Developing partnership with the Trust.							
		Source									RISK RATING
		LEMP quarterly and annual reports. LEMP Plants Database. Staff annual appraisals.									Low
INPUTS (£)	DFID/SHG (£)		Govt (£)	Other (£)	Total (£)				DFID/SHG SHARE (%)		
	Refer to Output 1 Inputs (£)		N/A	N/A	N/A				N/A		
INPUTS (HR)	SHG (FTEs)										
	Refer to Output 1 Inputs (HR)										

OUTPUT 4	Output Indicator 4.1		Baseline (2014-15)	Milestone 1 (2015-16)	Milestone 2 (2016-17)	Milestone 3 (2017-18)	Milestone 4 (2018-19)	Milestone 5 (2019-20)	Target (2020-21)	Assumptions	
Mitigation planting and compensatory habitat/landscape enhancements.	Area (m²) of sites reinstated by mitigation and compensatory planting.	Planned	Landscape Detailed Designs - Planting zones	Zones & m² to be confirmed through Project Programme and Annual Work Plan.	Zones & m² to be confirmed through Project Programme and Annual Work Plan.	Zones & m² to be confirmed through Project Programme and Annual Work Plan.	Zones & m² to be confirmed through Project Programme and Annual Work Plan.	Zones & m² to be confirmed through Project Programme and Annual Work Plan.	LDD completed by end of F/Y.	Rabbit-proofing of planted areas successful. Plant losses in the field do not exceed 50%.	
		Achieved									
		Source									Maintenance of planted areas continues beyond life of project until plants are established.
		LEMP quarterly and annual reports. Physical monitoring and reports.									
	Output Indicator 4.2		Baseline	Milestone 1 (2015-16)	Milestone 2 (2016-17)	Milestone 3 (2017-18)	Milestone 4 (2018-19)	Milestone 5 (2019-20)	Target (2020-21)	Availability of adequate and appropriate water for plant survival. Sites identified for enhancements other than planting, such as Peak Dale, Central Basin, Deadwood Plain, Millennium Forest, agreed with LEMP project partners.	
	Qualitative value of sites treated with compensatory habitat/landscape enhancements other than planting.	Planned	As identified in Environmental Statement.	Additional/alternative opportunities for compensatory habitat enhancement identified.	Additional/alternative opportunities for compensatory habitat enhancement progressed as per Project Programme and Annual Work Plan.	Additional/alternative opportunities for compensatory habitat enhancement progressed as per Project Programme and Annual Work Plan.	Additional/alternative opportunities for compensatory habitat enhancement progressed as per Project Programme and Annual Work Plan.	Additional/alternative opportunities for compensatory habitat enhancement progressed as per Project Programme and Annual Work Plan.	All site works completed by end of F/Y.		
		Achieved		List of compensatory habitats created. Implementation to commence 2016-17.							
		Source									
		LEMP quarterly and annual reports. Physical monitoring and reports.									
	IMPACT WEIGHTING (%)	Output Indicator 4.3		Baseline (2015)	Milestone 1 (2015-16)	Milestone 2 (2016-17)	Milestone 3 (2017-18)	Milestone 4 (2018-19)	Milestone 5 (2019-20)	Target (2020-21)	
30%	% plant survival rate collectively across all zones.	Planned	LDD based on minimum 50% survival rate.	Survival rate ≥50%.	Survival rate >50%.	Survival rate >50%.	Survival rate >50%.	Survival rate >50%.	Collective survival rate across LDD ≥50%.		
		Achieved									
		Source									RISK RATING
		LEMP quarterly and annual reports. Physical monitoring & reports.									Medium
INPUTS (£)	DFID/SHG (£)		Govt (£)	Other (£)	Total (£)				DFID/SHG SHARE (%)		
	Refer to Output 1 Inputs (£)		N/A	N/A	N/A				N/A		
INPUTS (HR)	SHG (FTEs)										
	Refer to Output 1 Inputs (HR)										

OUTPUT 5	Output Indicator 5.1		Baseline	Milestone 1 (2015-16)	Milestone 2 (2016-17)	Milestone 3 (2017-18)	Milestone 4 (2018-19)	Milestone 5 (2019-20)	Target (2020-21)	Assumption	
A long-term landscape management plan for reinstated and compensatory habitat/landscape enhancement sites.	Status of implementation of maintenance schedule for planted areas as part of LEMP Work Plan (2015-2021).	Planned		Maintenance plan developed and implemented within Annual Work Plan and Long-Term Maintenance Plan (AECOM).	Management Plan reviewed, updated and implemented within Annual Work Plan and Long-Term Maintenance Plan (AECOM).	Management Plan reviewed, updated and implemented within Annual Work Plan and Long-Term Maintenance Plan (AECOM).	Management Plan reviewed, updated and implemented within Annual Work Plan and Long-Term Maintenance Plan (AECOM).	Management Plan reviewed, updated and implemented within Annual Work Plan and Long-Term Maintenance Plan (AECOM).	Management Plan fully delivered.	Organisations responsible for sites agree long term maintenance plans. Resources for implementation allocated by responsible organisations.	
		Achieved		Initial draft Management Plan submitted by AECOM March 2016. Complete draft to be completed in first half of 2016.							
		Source									
		Annual Work Plans. Long-Term Management Plan. LEMP quarterly and annual reports.									
IMPACT WEIGHTING (%)	Output Indicator 5.2		Baseline	Milestone 1 (2015-16)	Milestone 2 (2016-17)	Milestone 3 (2017-18)	Milestone 4 (2018-19)	Milestone 5 (2019-20)	Target (2020-21)		
20%	Status of arrangements for long-term (2021-2026) maintenance of planted areas post-LEMP.	Planned		N/A	Long-Term Management Plan delivered (AECOM).	Long-Term Management Plan (AECOM) reviewed and updated.	Long-Term Management Plan (AECOM) reviewed and updated.	Long-Term Management Plan (AECOM) reviewed and updated.	Long-Term Management Plan (AECOM) agreed and implementation initiated by LEMP partners.		
		Achieved									
		Source									RISK RATING
		Long-Term Management Plan. LEMP quarterly and annual reports.									Low
INPUTS (£)	DFID/SHG (£)		Govt (£)	Other (£)	Total (£)				DFID/SHG SHARE (%)		
	Refer to Output 1 Inputs (£)		N/A	N/A	N/A				N/A		
INPUTS (HR)	SHG (FTEs)										
	Refer to Output 1 Inputs (HR)										

LEMP Organogram
March 2017



LEMP – STAFFING PROGRAMME (March 2017)**APPENDIX 3**

	Apr 15- Mar 16	Apr 16 - Mar 17	Apr 17 - Mar 18	Apr 18 - Mar 19	Apr 19 - Mar 20	Apr 20 - Mar 21
1 Project Manager						
2 Project Support						
3 Ecologist						
4 Team Leader 1						
5 Team Leader 2						
6 Field Supervisor 1						
7 Field Supervisor 2						
8 Field Supervisor 3						
9 Field Supervisor 4						
10 Conservation Worker 1						
11 Conservation Worker 2						
12 Conservation Worker 3						
13 Conservation Worker 4						
14 Conservation Worker 5						
15 Conservation Worker 6						
16 Conservation Worker 7						
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19 Conservation Worker 10						
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21 Conservation Worker 12						
22 Conservation Worker 13						
23 Conservation Worker 14						
24 Conservation Worker 15						

LEMP – CHRONOLOGY OF KEY EVENTS**APPENDIX 4**

Date	Event
Dec 2003 - Dec 2004	Ashmole & Ashmole - Survey of sample sites on PBP – Interim report, Main report, and Guide to Invertebrates.
Oct/Nov 2005	Faber Maunsell/AECOM – EIA starts. Initial field visit by EIA, institutions, waste management, landscape and terrestrial ecology specialists.
Apr 2006	Faber Maunsell/AECOM – visit by EIA and SEA specialists.
Aug 2006	Faber Maunsell/AECOM – visit by EIA specialist
May 2007	Faber Maunsell/AECOM – visit by EIA, SEA/planning, archaeological and landscape specialists.
Dec 2007	Environmental Statement submitted to SHG/DFID. Six volumes including Environmental Management Plan.
Feb 2008	ES submitted by DFID to Institute of Environmental Management and Assessment (IEMA) for 'good practice' review.
May 2008	Application to Governor in Council for development permission.
Jul 2008	Wirebird Mitigation Project started. DFID desk funded.
Aug 2008	Development permission granted.
Sep 2008	LEMP started.
Dec 2008	DFID 'pauses' tender negotiations.
Dec 2009	LEMP ended when funds for Phase 1 were exhausted.
Jul 2010	DFID reactivates airport project tender negotiations.
May 2011	AECOM – Contracted to prepare addendum to ES to take account of reduced runway (EMAS) option.
Oct 2011	Wirebird Mitigation Project ended.
Nov 2011	DBO contract awarded to Basil Read (Pty) Ltd.
Jan 2012	LEMP TOR and OJEU process initiated.
Mar 2012	Expressions of interest for LEMP sought.
May 2012	LEMP managing agent procurement process started.
Jun 2012	LEMP Pre-Qualification Questionnaires: Technical evaluations submitted to DFID. Invitations to Tender issued to three firms.
Aug 2012	LEMP single tender received.
Sep 2012	LEMP negotiations with single tenderer started and continued into Dec 2012.
Nov 2012	Possible alternative approach to the management of the LEMP developed.
Dec 2012	LEMP negotiations with single tenderer concluded without agreement.
Feb 2013	Programme Board approves implementation of alternative management approach.
Jun 2013	LEMP Project Manager recruitment process starts.
Aug 2013	LEMP Project Manager appointed.
01 Oct 2013	LEMP start date for operational/contractual purposes.
Oct-Dec 2013	LEMP Project Manager designate undertakes part-time work.
Dec 2013	LEMP Project Manager returns to St Helena from UK.
Jan 2014	LEMP Project Manager's full-time employment starts.

Jan 2014	Service Level Agreement with EMD signed.
Jun 2014	DFID signs contract with AECOM for provision of specialist landscape design services.
Nov/Dec 2014	AECOM field visit to St Helena to prepare LDDs.
Jan 2015	Works to establish HTH as a working nursery
Feb 2015	'Preliminary Use' LDDs and planting schedules issued by AECOM.
Jun 2015	Piccolo developed as a standing out area for plants leaving the nursery
Sept 2015	Second Phase of works to develop Half Tree Hollow Nursery completed, increasing capacity by 50%
Sept 2015	Variation order (V037) signed with Basil Read transferring responsibility for reinstatement works after bulk earthworks are completed to LEMP/SHG
Apr 2016	Full LEMP team in place
June 2016	Green Gifts - LEMP Plants Giveaway to residents affected by the airport construction as planting in residential areas is delayed due to sites not being ready for planting
Jul 2016	LEMP Field base established at Horse Point Landfill Site
Oct 2016	LEMP staff transfer from the Air Access Office/ Airport Directorate to ENRD
Oct 2016	LEMP Project Manager resigns from post and leaves the island
Oct 2016	Enrichment groups run with local school children involved in planting on LEMP sites
Dec 2016	New LEMP Manager start in post on island
Feb 2017	LEMP consultation workshop held with partners
Feb 2017	Cannons and cannon carriages installed on the airport site in partnership with the St Helena Heritage Society
Mar 2017	2017/18 Work plan completed

