Restoring St Helena's Internationally Important Cloud Forest for Water Security & Wildlife

Implementing the Peaks Management Plan (2021-2026)

Version 1.0	20/12/2019	Compiled by Sarah Havery based on feedback from Andrew Darlow and Sasha Bargo (EMD).
Version 1.1	08/01/2020	Incorporated feedback from Alex Hipkiss (RSPB)
Version 2.0	27/01/2020	Incorporated feedback from Sasha Bargo (EMD), Vanessa Thomas-Williams (EMD), Rebecca Cairn-Wicks (SHRI), Martina Peters (SHNT)
Version 2.1	03/02/2020	Incorporated feedback from Alex Hipkiss (RSPB)
Version 3.0	23/02/2020	Incorporated feedback from Sasha Bargo (EMD), Amy Dutton (SHNT), Rebecca Cairns-Wicks (SHRI), Melissa Fowler (Tourism), Isabel Peters (ENRPD), Steve Coates (Tourism), Timm Karisch (MNVD), Norbert Maczey (CABI), Vicky Wilkins (MAISG)
Version 3.1 (Year 1 only)	04/03/2020	Incorporated feedback from Sasha Bargo (EMD), Amy Dutton (SHNT), Rebecca Cairns-Wicks (SHRI), Isabel Peters (ENRPD), Vanessa Thomas-Williams (EMD), Andrew Darlow (EMD), Lawrence Muranganwa (Connect), Ben Sansom (Arctium), Nick Folkard (RSPB)
Version 4.0	17/03/2020	Incorporated Version 3.1 (year 1 only) in full 5 year version (Version 4.0)
Version 4.1	25/03/2020	Incorporated feedback from Rebecca Cairns-Wicks (SHRI), Lawrence Muranganwa (Connect), Ben Sansom (Arctium)
Version 4.2	06/04/2020	Addition of maps and timeline. Incorporated feedback from Ben Sansom (Arctium), Sasha Bargo (EMD), Melissa Fowler (Tourism), Vanessa Thomas-Williams (EMD)
Version 4.3	22/04/2020	Incorporated feedback from Rebecca Cairns-Wicks (SHRI) and landowner/ stakeholder consultation
Version 4.4	20/05/2020	Addition of Appendix 2.3 and Appendix 4. Incorporated feedback from Colin Clubbe and Marcella Corcoran (RBG Kew). Updated introduction.
Version 4.5	03/07/2020	Incorporated feedback from Silvia Pressel (NHM) and Rebecca Cairns-Wicks (SHRI). Updated timeline and timings.

Prepared by Sarah Havery, Royal Society for the Protection of Birds, UK

1. Introduction and purpose

The Peaks National Park provides most of the fresh water on St Helena, an ODA-eligible UK Overseas Territory in the South Atlantic, the majority via mist capture by the native cloud forest. This highly threatened cloud forest is the single most important site on British soil from a species diversity and conservation perspective, with the global population of at least 250 unique species found entirely or almost entirely within its remnant fragments.

St Helena Government has undertaken a highly collaborative process to develop the island's collective vision for the cloud forest, based firstly on an all-stakeholders' three-day workshop in December 2018, plus subsequent multiple rounds of informal consultation. The resulting 'Peaks National Park Conservation Management Plan 2019-2024' has completed a formal public consultation and been signed off by the Environment and Natural Resources Committee of the St Helena Government. It comprises three key objective areas: 1) Biodiversity, 2) Water Security & Climate Change Resilience & 3) Socio-economics.

The full list of objectives is included in Section 3 of the Peaks Management Plan. Notably, the objectives aim to:

- Protect 100% of the remaining forest fragments (0.56 ha) from further degradation in three years;
- Increase cloud forest habitat primarily for biodiversity benefits by 2.1 ha in five years;
- Improve connectivity between fragments by creating 0.5 ha of cloud forest habitat corridors in five years;
- Re-vegetate the Diana's Peak ridge (0.2 ha) with cloud forest species to increase mist interception in 5 years;
- Increase cloud forest habitat primarily for water security benefits by diversifying 4 ha of existing sites over 10 years;
- Create an additional 12 ha of new cloud forest habitat to promote mist interception and peat soil production above 690m within 10 years.

Achieving the above objectives would secure the habitat for a sixth of the UK's unique biodiversity and increase the water supply on this aid-dependent island by up to a fifth.

To implement and deliver the ambitions outlined in the management plan, a Project Development Group has been established with representation from the key partners in the management plan: St Helena Government, the island water utility company 'Connect St Helena', St Helena Research Institute, St Helena National Trust, St Helena Tourism, St Helena Education department and RSPB (see Appendix 6 for Terms of Reference). The Project Development Group has been meeting approximately every two weeks since the start of December 2019 and input from other stakeholders as technical advisors has also been sought as required.

Feedback was sought from a list of international and locally based Technical Advisors for input to specific actions and their input was also sought to the full plan (Version 4) once fully developed (see Appendix 6 for Terms of Reference). The feedback received was reviewed by the Project Development Group and incorporated as appropriate (see Appendix 3). An informal landowner consultation was held in April 2020 (see Appendix 5), although a workshop structure could not take place due to social distancing restrictions around the covid-19 global pandemic in 2020. The Project Development Group acknowledges that more effort is required to effectively engage landowners within the Peaks National Park, which has been captured within the actions of this plan.

This document, produced by the Project Development Group, provides an implementation plan with a breakdown of the specific actions that are required to deliver the Peaks Management Plan, outlining the stakeholders with overall responsibility for delivery. This

implementation plan is accompanied by a fully costed budget to enable the full delivery of the Management Plan. Funding has been successful from the UK Government's Darwin Plus Initiative for several projects on St Helena that will contribute to the delivery of the management plan and these costs are built into the budget as co-funding.

This five-year Implementation Plan and budget are subject to approval from the Environment and Natural Resources Committee in July 2020. This five-year plan is phase 1 of a longer-term restoration programme to enable the benefits of forest restoration and re-creation for biodiversity, water security and for the local community to be achieved.

2. Action Plan for PMP work plan

SHG: St Helena Government (actions which are cross-cutting across departments); EMD: Environmental Management Division; ENRPD: Environment, Natural Resources & Planning Directorate; Education: St Helena Govt Education Dept; Biosecurity: St Helena Govt Biosecurity Dept; ANRD: Agriculture and Natural Resources Division; SHRI: St Helena SHRI; Connect: Connect St Helena (Water company); SHNT: St Helena National Trust; Tourism: St Helena Tourism; RSPB: Royal Society for the protection of Birds; researchers: Any form of visiting researcher – consultant, student etc; RBG Kew: Royal Botanical Gardens – Kew; Arctium: consultancy; BGS: British Geological Society, Bottom Woods Met Station, CEH: Centre for Ecology and Hydrology; UK Met Office.

Pillar	Objective	PMP activity	Actions required	Who?	Importance
Management	**0. PMP implementation effectively managed and sustainable long-term mechanisms in place**	0.0 Management structures and legal framework in place	0.0.1 Confirm the legal status of the Peaks National Park and the National Park Management Plan	SHG	1
			0.0.2 Establish a permanent Parks Authority for oversight of the Peaks National Park	ENRPD	1
			0.0.3 Establish Parks Authority management structure and TORs	ENRPD	1
			0.0.4 Develop systems, roles and responsibilities for the management and delivery of the Peaks Management Plan and describe partnership arrangements, expectations and deliverables within contracts, MOUs etc	RSPB, ENRPD, Connect, SHNT, Tourism	1
			0.0.5 Develop systems, roles and responsibilities for, monitoring, evaluation and review of the Peaks Management Plan including a role for Technical Advisors	RSPB, ENRPD, Connect, SHNT, Tourism	1
			0.0.6 Develop and manage an overall budget for the delivery of the PMP and complete a gap analysis to determine funding gap	ENRPD, Connect, SHNT, RSPB, Tourism	1
			0.0.7 Establish a 5-year project management structure and TORs to enable full delivery of PMP	RSPB, ENRPD Connect, RSPB, Tourism, Education	1

Pillar	Objective	PMP activity	Actions required	Who?	Importance
Management			0.0.8 Produce a data management strategy, setting out data recording and reporting standards, quality control, data storage and access and establish data management capacity.	SHG, Connect, SHNT, RSPB, Tourism	1
			0.0.9 Establish a communication strategy	RSPB, Project steering group	1
			0.0.10 Deliver advocacy events and fundraising proposals to get external funding in place to enable the full delivery of the PMP (i.e. this plan)	RSPB, Project steering group	1
			0.0.11 Complete annual monitoring and evaluation assessments against the Peaks Management Plan	RSPB, Project steering group	1
			0.0.12 Complete a mid-term project review/evaluation	RSPB, Project steering group	1
			0.0.13 With ENRC, investigate and identify potential mechanisms for generating sustainable revenue to support the PMP from YR2	ENRPD	1
			0.0.14 Update Legislative Council on the implementation of the PMP, at the start of implementation and thereafter annually.	Project steering group	1
			0.0.15 Update Legislative Council at the start, mid-point and end of any major implementation projects delivered under the PMP	Project steering group	1
		0.1 Recruit and establish project team	0.1.1 Establish a project steering group with representatives from the main stakeholders in YR1 Q1	SHG, SHNT, Connect, Education, Tourism, RSPB	1
			0.1.2 Recruitment of Project Manager and deputy Project Manager (as a development role) in YR1	RSPB, Project steering group	1
			0.1.3 Hold quarterly steering group meetings to monitor and evaluate progress and to ensure the project remains a collaborative effort	RSPB, Project steering group	1
			0.1.4 Skill sharing between partner organisations and other stakeholders through cross-organisational working (such as invertebrate surveys and nursery techniques) on an annual basis.	All partners	1
			0.1.5 Incremental increased recruitment of Peaks staff to a full team of 5 sub-teams of 3-4 people/team by YR3 [in additional to existing Peaks team].	EMD, SHG, Project steering group	1

Pillar	Objective	PMP activity	Actions required	Who?	Importance
Management			0.1.6 Incremental recruitment of nursery staff per year as part of 6 month team recruitment programme (i.e. 1 person every 6 months) for Peaks Nursery and recruitment of a dedicated fern propagation specialist for Scotland nursery	EMD, SHG, Project steering group	1
			0.1.7 Increase capacity on island to monitor, measure and interpret water resource and climate data. Recruit water resource monitoring technician. YR1. Co-ordinate with training identified in 3.10.	Connect, Arctium, UK Met Office, CEH	1
			0.1.8 Establish a National Park landowner /land manger stakeholder group in YR1 and meet bi-annually	Project steering group	1
			0.1.9 Update master database to include areas of importance on private land in YR2, and target awareness raising activities to these areas/landowners.	ENRPD	1
			0.1.10 Develop a landowner biodiversity surveys programme and provide training in biodiversity survey techniques in YR2. This will include (a) for surveys to be led by landowners and (b) areas where project team members will seek permission to survey when required (i.e. landowner not wanting to complete surveys but supportive of team completing them).	EMD, SHNT	1
			0.1.11 Produce awareness materials with best practice guidance for land management in the Park, advice on restoring/recreating habitat, and documents for landowners in YR2. This will include (a) options for landowners to complete recreation/restoration efforts themselves and (b) options for Peaks team to complete recreation/restoration efforts with permission from landowners.	EMD, SHG, SHNT	1
			0.1.12 Provide bespoke training courses for landowners expressing an interest in restoring/re-creating cloud forest habitat on their land from YR 2.	EMD	1
			0.1.13 Identify means of establishing a grant scheme for conservation and complete a trial in YR4-5.	Project steering group	1
		0.2 Biosecurity measures in place and implemented	0.2.1 Develop a biosecurity plan for the Peaks National Park in Year 1, linking to island-wide biosecurity programme	ENRPD, Biosecurity, SHNT, Project steering group	1

Pillar	Objective	PMP activity	Actions required	Who?	Importance
Management		across Peaks National Park	0.2.2 Annually review biosecurity practices, modify practices as required and ensure compliance	EMD, Biosecurity, SHNT, project steering group	1
			0.2.3. Induction & training of all staff in adopted best working practises and ensure all staff implement biosecurity practices for all field work and across all activities.	EMD	1
		0.3 Appropriate cross-cutting planning across pillars	0.3.1 Development of overarching forest restoration and recreation plan in YR1 ensuring cross cutting benefits to biodiversity and water security and identifying overlapping priority areas.	RSPB, Project steering group	1
			0.3.2 Ensure that training activities are coordinated across the pillars through annual reviews and steering group meetings.	RSPB, Project steering group	1
			0.3.3 Develop a holistic invasive plant management strategy in year 2 to ensure invasive plant actions are coordinated and to provide an integrated approach to invasive plant management.	RSPB, Project steering group	
Biodiversity	**1. Remaining cloud forest is secured and cloud forest habitat is increased in area and quality, through planting of native species to increase patch sizes, reduce fragmentation and increase connectivity, and by management of non-native invasive**	1.1 Evaluate and monitor extent and quality of remaining cloud forest habitat fragments centred on keystone trees	1.1.1 In YR1 Refine quality assessment protocol from previous Darwin project for fragments of priority tree species (false gumwood, he-cabbage, dog-wood, whitewood, black cabbage) using existing team expertise. [including bryophytes]	EMD	1
			1.1.2 Map/regularly monitor significant tree fern thickets and cabbage tree woodland employing best practice protocols	EMD	1
			1.1.3 In YR1 refine invertebrate survey methods from previous Darwin project using existing team expertise. (SYW Strat 2.1.3)	SHNT	1
			1.1.4 Identify indicator/keystone invertebrates for habitat restoration monitoring in YR1, linked to priority invertebrate species in 3.1.1	SHNT, researchers	1
			1.1.5 Train restoration staff to identify key/priority/rare invertebrate species (potential for *ad hoc* recording during regular work), linked to priority invertebrate species in 3.1.1	SHNT	1
			1.1.6 Complete annual training for staff in quality assessments and invertebrate survey techniques.	EMD, SHNT	1
			1.1.7 Complete annual training of staff in QGIS from April 2021, including database management.	SHRI, SHG	1

Pillar	Objective	PMP activity	Actions required	Who?	Importance
Biodiversity	**species, to create a self-sustaining, functioning ecosystem**		1.1.8 Produce annual map of management activities/areas to share, report on and promote progress	Project steering group	1
			1.1.9 Maintain route network between forest fragments at Diana's Peak twice a year, implementing best working protocols (see action 1.1.11)	EMD	1
			1.1.10 Visit each of the 120 fragments (where possible) in Diana's Peak and High Peak annually and complete habitat quality assessment, planned effectively to minimise disturbance and implementing best working protocols	EMD	1
			1.1.11 Visit each of the 120 fragments (5600m2) (where possible) annually and map the extent of fragment using GPS, planned effectively to minimise disturbance and implementing best working protocols	EMD	1
			1.1.12 Assessment of alternative mapping methods to conduct survey work, e.g. drones and satellite imagery (could be conducted alongside 1.3.2), YR 2	EMD, SHG	2
			1.1.13 Visit each/representative subset of the 120 fragments annually, planned effectively to minimise disturbance, and complete invertebrate assessment to compare against baselines	SHNT	1
			1.1.14 Identify priority fragments for priority invertebrates (SYW Strat 1.1.1)	SHNT	1
			1.1.15 Update master database annually and assess changes in quality, extent and invertebrate assemblages against 2016 baselines from previous Darwin project	EMD, SHNT	1
		1.2 Stabilise or improve identified cloud forest habitat fragments	1.2.1 Complete annual field training for staff in restoration techniques.	EMD	1
			1.2.2 Complete biannual control/removal of invasive plants from within all 120 existing fragments following existing SHG protocols, planned effectively to minimise disturbance and based on current capacity, implementing best working protocols (link to 5.1.1 to 5.3.1)	EMD	1
			1.2.3 Clonal samples collected from any dead/dying trees following existing protocol (established from previous Darwin project), and only when required, to ensure genetic diversity can be maintained.	EMD	1
			1.2.4 Collect and secure seed genetic diversity where possible in collaboration with Millennium Seed Bank.	EMD, RBG Kew	

Pillar	Objective	PMP activity	Actions required	Who?	Importance
Biodiversity			1.2.5 Bolster plant species diversity and age structure as required biannually for each fragment through in-planting to create a whole generation pyramid of species (i.e. seedlings, saplings, healthy trees, dead/dying trees) and to build a seedbank	EMD	1
			1.2.6 Appropriately select cultivated nursery material from living gene banks, monitored by the Nursery Officer(s), for planting at each fragment to ensure genetic variation.	EMD	1
			1.2.7 Create supporting habitat alongside 120 fragments through biannual invasive clearance and dense planting of cultivated plants to prevent further deterioration of fragment edges and implementing best working protocols	EMD	1
			1.2.8 Record planting effort per fragment and for other areas across the Peaks (e.g. Diana's Peak and forest creation sites) biannually within master database.	EMD	1
			1.2.9 Complete annual review meeting to assess and evaluate progress using the results from 1.2.7 to evaluate impact of restoration efforts and to agree any changes to practices as needed with the Parks Authority/project steering group; including monitoring fragment stabilisation is monitored and assessed annually through 1.1.6, 1.1.7, 1.1.8 and 1.1.9. Prioritise fragments that are de-valuing in extent and/or quality.	EMD, SHNT, Parks Authority, project steering group	1
			1.2.10 Refine and implement on-going pheasant tail fern control in priority areas from YR1 building on previous efforts (i.e. SHNT trial & outputs under DPLUS059)	EMD, SHG	1
			1.2.11 Develop an expanded programme across the Peaks for controlling pheasant tail fern in YR2 building on previous efforts	EMD, SHG	1
		1.3 Radial restoration of additional habitat area for each cloud forest fragment.	1.3.1 In YR1 Q1 produce clear concise protocol for cloud forest creation	EMD, SHG	1
			1.3.2 Assessment of methods of moving plants out more quickly (i.e. methods to increase number of plants carried per person, e.g. drone etc.)	EMD	1

Pillar	Objective	PMP activity	Actions required	Who?	Importance
Biodiversity		1.4 Create connecting 'corridors' of native habitat between adjacent cloud forest fragments.	1.4.1 Prioritise habitat corridors during action 0.3.1 and create connecting habitat between all 120 priority fragments by end of project through phased removal of invasive plants, dense planting of natives, and regular biannual maintenance (SYW Strat Action 1.1.1) Link to 5.1-5.2.	EMD	1
			1.4.2 Devise a protocol, establish baselines and monitor invertebrate movement along corridors every two years	SHNT	1
			1.4.3 Annually monitor the success of corridor planting and evaluate progress.	EMD	
		1.5 Continue maintenance programme for 5 existing active restoration areas.	1.5.1 In Year 1 review long-term programme led by existing Peaks team and implement recommendations [link to 4.6.1, 4.18.1, 5.3.1]	EMD, project steering group, Parks Authority	1
		Maintain/expand additional areas of cloud forest vegetation	1.5.2 [Linked with 5.1.1 and 1.9] Identify important biodiversity areas for adding/expanding areas of cloud forest/encouraging native cloud forest species away from priority tree areas [links to actions 4.6.1, 4.18.1 & 5.1.1]	EMD, SHNT	2
		1.6 Rodent control	1.6.1 In YR1 complete review of effectiveness of recurrent rodent control programme (including recommendations of St Helena Rat Report [Bell & Floyd, 2009])	EMD, SHG, Environmental Health	2
			1.6.2 Extend rodent control efforts to include the nursery area in and areas that baiting is not currently practised in YR1	EMD, SHG	2
			1.6.3 Implement recommendations from 1.6.1 to improve effectiveness of rodent control in YR2	EMD, SHG	2
		1.7 Footpath margin management	1.7.1 Plan for creating buffer-zone margins along 50m of footpath/year to maintain biodiversity, connectivity of habitats and manage invasives by planting native species.	EMD, SHG	1
			1.7.2 Complete invasive plant control/removal 2-3 times/year along created buffer zones	EMD, SHG	1
			1.7.3 Active planting 2-3 times/year of native species along buffer zones	EMD, SHG	1

Pillar	Objective	PMP activity	Actions required	Who?	Importance
Biodiversity		1.8 Footpath boardwalk creation to reduce biodiversity impacts	1.8.1 Carry out an assessment of existing path network and prepare management and maintenance plan (including review Green Flag recommendations). (link to 8.1)	EMD, Tourism	1
			1.8.2 Install boardwalks across priority footpath areas to minimise impact to biodiversity in YR3 - Also linked to 8.1	EMD, SHG, contractors	1
			1.8.3 Implement regular monthly checks and maintenance of boardwalks	EMD, SHG, contractors	1
		1.9 Develop a relationship with other landowners within the National Park boundary to (a) establish presence and value of areas of cloud forest habitat or species (b) explore means and methods of improving those areas through diversity, extent and density of coverage (c) ensure the long-term security of habitat/species.	See Activity 3.1 (Management Pillar)	-	-
	2. The capacity of nurseries and living gene banks are increased to support restoration of	2.1 Expand the Peaks living gene bank.	2.1.1 Complete the living gene banks for five species initiated under DPLUS029 to ensure there are three complete gene banks in total by YR3 [include bryophytes]	EMD, RBG Kew	2
			2.1.2 Complete annual audits of the five species represented in the living gene banks to ensure the genetic diversity of the species is being maintained.	EMD, RBG Kew	2

Pillar	Objective	PMP activity	Actions required	Who?	Importance
Biodiversity	**the endemic flowering plant and fern assemblages, by securing the genetic 'pool' for endemic plant species and by providing a genetically diverse source of propagation material.**		2.1.3 Expand the living gene banks to include 7 other priority species [Peak grass, lobelia, dwarf jellico, lesser kidney fern, toothed and veined tongue ferns, large bellflower] over 5 years	EMD, RBG Kew	1
			2.1.4 Audit of priority living gene bank species (5 + 6) germplasm in the St Helena seed bank in YR1	EMD, RBG Kew	2
			2.1.5 Use findings of genetic study of peak grass to inform germplasm collection management (links to 3.2.1) in YR1	EMD, CEH, UBC, RBG Kew	1
			2.1.6 All germplasm collection management coordinated and recorded on germplasm database, updated monthly [include bryophytes]	EMD, RBG Kew	2
			2.1.7 Training on spore harvesting for storage and propagation in YR2	EMD, RBG Kew, CEH	2
			2.1.8 Follow seed collection protocols to ensure genetic representation of collections	EMD	2
			2.1.9 Representative seed from critically endangered endemic species stored within the Millennium Seed Bank and living collection grown at KEW by end YR5	EMD, RBG Kew	1
			2.1.10 Review of St Helena seed bank collections to ensure genetic representation/ adapt collecting methods annually to ensure representation of collections	EMD, RBG Kew	2
		2.2 Nursery propagation of native plants.	2.2.1 Establishment of nursery propagation protocols and production methodology, ensuring best practise management and compliance across EMD nurseries	EMD, Parks Authority, project steering group, RBG Kew	1
			2.2.2 Establish a protocol for scaling up plant production incrementally each year, aiming to double production each year from the Peaks Nursery baseline of 12,000 plants and aiming to increase plant production by 25% per year from Scotland Nursery baseline of 10,000 plants	EMD, project steering group, RBG Kew	1
			2.2.3 Complete annual review of nursery plant production and facilities	EMD, project steering group, RBG Kew	1

Pillar	Objective	PMP activity	Actions required	Who?	Importance
Biodiversity			2.2.4 Upgrade infrastructure by creation of additional shade house for propagation and hardening of areas in YR2 at Peaks Nursery	EMD, RBG Kew	1
			2.2.5 Annually purchase equipment needed to double nursery production every year	EMD	1
			2.2.6 Provide training for Nursery staff to establish best propagation methods for ferns in YR2 and trial methods in YR3-5	EMD, RBG Kew	1
		2.3 Trial ex-situ spore germination for critically endangered fern species at Scotland nursery.	2.3.1 Initiate trial germination methodology under new laboratory conditions in YR1 with less critical species to test conditions and methodology. Progress and refine techniques in YR2 to develop species specific protocols.	EMD, RBG Kew	1
			2.3.2 Complete trial of ex-situ spore germination for critically endangered fern species in YR3 at Scotland nursery.	EMD, RBG Kew	1
		2.4 Scotland nursery maintains a gene-bank of all Peaks germplasm in long-term storage.	2.4.1 Develop a plan with RGB Kew for establishing a gene-bank of all Peaks germplasm in long-term storage in YR2.	EMD, RBG Kew	1
			2.4.2 Purchase equipment needed to establish a gene-bank of all Peaks germplasm in YR2	EMD, RBG Kew	1
			2.4.3 Establish a gene-bank of all Peaks germplasm in long-term storage in YR3	EMD, RBG Kew	1
	3. Research, data gathering and training is carried out to inform and maximise effectiveness of restoration and management techniques	3.1 Identification, distribution and ecology of invertebrate assemblage, particularly phytophagous invertebrates, arachnids and 'flagship' species	3.1.1 Complete prioritisation exercise of cloud forest invertebrates, including endemic flagships by Q3 YR1 [Invert strategy Objective 1.2] links to 1.1.5, & aiming to identify indicator species that can be monitored with limited disturbance to their habitat	SHNT	1
			3.1.2 Establish baseline presence/distribution of all priority inverts identified in 3.1.1 in YR2	SHNT	1
			3.1.3 Identify areas of cloud forest vegetation across Central Peaks sites with similar characteristics to sites at which SYW or other priority invertebrates already found [SYW Strat 1.1.1] link to 3.1.5, 3.1.6 & 3.1.7	SHNT, EMD	2
			3.1.4 Complete annual assessments of priority cloud forest invertebrate species as an indicator of impact	SHNT	1

Pillar	Objective	PMP activity	Actions required	Who?	Importance
Biodiversity			3.1.5 Produce habitat specifications for priority invertebrates and wider invertebrate needs based on habitat niche to guide restoration / recreation efforts in YR4	SHNT	1
			3.1.6 Targeted research into priority invertebrates, including presence/distribution, mobility and habitat usage, life-history, wild behaviour and feeding/breeding ecology to continue to inform restoration practices and conservation actions [SYW Strat 2.2.1]	SHNT, researchers (PhD student(s))	2
			3.1.7 Investigate other habitats within the Peaks for specialist invertebrates i.e. water dwelling invertebrates/life-stages, or species not recorded and thought possibly extinct	SHNT, researchers,	2
			3.1.8 Genetic analysis on selected species, including to determine if morphologically distinct populations represent unique species and to understand the relationships to other species of the genus [SYW Strat 2.2.2]	SHNT, researchers (PhD student(s))	2
			3.1.9 Identify and assess specific threats to priority invertebrates, including invasive invertebrates, invasive vertebrates, fungi etc (linked to 3.7) [Invert Cons Strat 2.1]	EMD, SHNT, contractor, SHRI	1
			3.1.10 Undertake Red List assessments, or update assessments of priority invertebrates	EMD, SHNT, contractor, SHRI	1
			3.1.11 Identify species indicators for habitat health and climate change and develop long term monitoring and assessment programme that could be supported by citizen science and academia [Invert Cons Strat 5.2.; SYW Strat 1.2.3] and link to water monitoring sites [include bryophytes]	EMD, SHRI, Education, SHNT	1
		3.2 Thorough genetic assessment endemic flowering plant species of bellflower (Wahlenbergia spp.) complex, jellico (Berula	3.2.1 Agree timetable for genetic assessment with CEH and UBC in YR1. Collect genetic material for analysis in line with timetable currently underway	EMD, CEH, UBC, SHRI	2
			3.2.2 complete analysis of genetic assays in YR3-4 for priority species (false gumwood, Jellico species)	EMD, CEH, UBC, SHRI	2
			3.2.3 Complete update of Red List assessments of priority plant, invertebrate and bryophyte species in YR4.	EMD, SHNT, contractor, SHRI	2

Pillar	Objective	PMP activity	Actions required	Who?	Importance
Biodiversity		spp), Peak Grass (Carex sp.) False Gumwood, Sphagnum populations and other un-assessed;	3.2.4 Implement research recommendations (i.e. life history and ecology to support management planning and development of species recovery action plans) for priority ferns species (lesser kidney fern, toothed and veined tongue fern) as set out in Red List Assessments and conduct Red List Assessment for Sphagnum helenium	EMD, SHNT, contractor, SHRI	2
		3.3. Identification and ecological function of fungal assemblage, including ecto and arbuscular mycorrhizal associations. [links to 3.5]	3.3.1 complete a scoping assessment of the fungal assemblage (and the endophytes of endemic plants if possible) and to provide restoration recommendations by the end of YR4	EMD, contractor/ researcher, SHRI	2
			3.3.2 Implement the priority recommendations from 3.3.1 in YR5	EMD	2
		3.4 Understanding the composition and ecology of epiphytic communities.	3.4.1 complete a scoping assessment of the epiphytic communities and to provide restoration recommendations by the end of YR4	EMD, contractor/ researcher, SHRI	2
			3.4.2 Implement the priority recommendations from 3.4.1 in YR5	EMD	2
		3.5 Identification and ecological function of soil biodiversity.	3.5.1 conduct preliminary scoping work and analyse soil biodiversity in YR1	SHRI	2
			3.5.2 conduct survey work and analyse soil biodiversity, assess ecological function and to provide restoration recommendations by the end of YR4	EMD, contractor/ researcher, SHRI	2
			3.5.3 Implement the priority recommendations from 3.5.1 in YR5	EMD	2

Pillar	Objective	PMP activity	Actions required	Who?	Importance
Biodiversity		3.6 Research relationships between specific ecological surfaces and the invertebrate community;	3.6.1 Identification and assessment of ecology and ecological impact of pathogens associated with all cloud forest trees (links to 3.3 & 3.5); through (a) Conduct survey and analyse plant-based pathogens; (b) Complete a risk assessment of impact; (c) Identify possible mitigation and management measures and (d) Implement priority recommendations	EMD, SHRI, researcher	1
			3.6.2 Research relationships between specific ecological surfaces and the invertebrate community and to provide restoration recommendations by the end of YR4 including; Impacts of endemic invertebrates on plant health Plant dynamics and impacts on invertebrates (e.g. fern frond turnover and mobility of invertebrates – this relationship will impact effectiveness of restoration techniques) linked to 1.4.3 Requirements/obstacles/interactions between plants and invertebrate communities Niche availability and use	SHNT, researchers, SHRI	2
			3.6.3 Implement the priority recommendations from 3.6.1 in YR5	SHNT, EMD	2
			3.6.4 Research relationships between honeybees and impacts on pollination of native plants in YR3 to support action 7.5.2	SHNT, contractor/ researcher, SHRI	2
		3.7 Investigate impacts of invasive invertebrates (and vertebrates) on endemic flora and fauna and assess mitigation measures	3.7.1 Complete a risk assessment on impact of priority invasive invertebrates (e.g. European wasps) in YR1	SHNT	1
			3.7.2 Complete field surveys to ground truth 3.7.1 and evaluate potential management measures in YR2-3	SHNT	1
			3.7.3 Trial actions or treatments to manage two priority invasive invertebrates in areas of lower invertebrate value to assess appropriateness for St Helena Trial measures in more specialist areas if initial trials successful (following agreement with project steering group, regular monitoring and consultation) (more specific breakdown of actions in DPR8S2-1032)	SHNT, EMD, partners and stakeholders	1

Pillar	Objective	PMP activity	Actions required	Who?	Importance
Biodiversity			3.7.4 Implement mitigation measures to reduce impact of priority invasive inverts in YR4	SHNT	1
			3.7.5 Monitor and evaluate effectiveness of 3.7.3 in YR5	SHNT	1
		3.8 Monitoring value of restored cloud forest vegetation to endemic invertebrate communities.	See 3.1	-	-
		3.9 Investigate the impact of hybridisation on species conservation and habitat restoration	3.9.1 Evaluate and provide recommendations on the use of hybridisation in species conservation on St Helena in YR2	SHG, consultant	1
			3.9.2 Symposium to discuss findings, debate and produce guidelines on hybridisation specific to St Helena by end YR3	SHG, international stakeholders	1
		3.10 Staff training alongside local and visiting specialists	3.10.1 Ongoing requirement that all visiting researchers and other experts working within the Peaks National Park provide training and skill-sharing to the local team through either contract or conditions of research licence.	EMD, SHRI, SHNT	
			3.10.2 Identify training priorities for requesting external support [Invert Cons Strat 6.2]	Project steering group	
		3.11 Organise exchange visits with other conservation organisations	3.11.1 At least one exchange visit a year is facilitated between St Helena and different cloud forest and other restoration projects worldwide	Project steering group	
		3.12 Attend overseas training	3.12.1 Annually identify skills gaps within team and integrate into personal development plans for team members	Project steering group	

Pillar	Objective	PMP activity	Actions required	Who?	Importance
		for specialised needs	3.12.2 All team leaders attend at least one exposure / training visit(s) over the course of the project to address skill gaps	Project steering group	
Water Security	**4. Research and data gathering carried out to inform and maximise effectiveness of cloud forest restoration on improvements in water capture and peat soil production.**	4.1 Funding secured to understand the relationships between cloud forest composition, topography, geology hydrogeology, hydrology, precipitation, soil moisture retention and base flow	4.1.1 Produce a fully costed plan for long-term monitoring and evaluation of the Peaks water resources in support of 0.0.6. Refined Supported by initial investigations in 4.2.1, 4.2.3, 4.2.4 and 4.3. YR1.	SHG, Connect, SHRI, Arctium, RSPB, CEH, BGS, ANRD, UK Met Office, Bottom Woods Met Station	1
		4.2 Identify key water resource catchments	4.2.1 Collate climate and water resource background data from SHG, Connect Saint Helena, and mainland literature to produce 2 datasets spanning at least 150 years of data by YR1. Supports 3.1.11	Arctium, CEH	1
			4.2.2 Desk based assessment and analysis of SHG and Connect archive water resource reports and climate data by YR1	Arctium, Connect, CEH, ANRD	1
			4.2.3 Desk Study Report. YR1	Connect, Arctium	1
			4.2.4 Confirm key island water supply catchments that need water resource monitoring, based on 4.2.3 and consultation with key project partners. YR1	Connect, Arctium	1
			4.2.5 Agree priority catchments for water supply and habitat restoration with biodiversity team. Link to section 1.5.3. YR1	Connect, Arctium, CEH, SHRI, EMD, SHNT	1
		4.3 Water features survey	4.3.1 Identify water control structures, spring, streams, wells, boreholes within key water supply catchments identified in 4.2.5.	Connect, Arctium	1

Pillar	Objective	PMP activity	Actions required	Who?	Importance
			Complete field assessment to find features and evaluate health and safety, topography, land ownership, access rights, suitability for water resource monitoring. YR1		
Water Security		4.4 Design water monitoring network and install equipment	4.4.1 Design water monitoring network and select locations for installation of surface and groundwater monitoring equipment. YR1	Connect, Arctium, CEH	1
			4.4.2 Procurement of surface water level, flow and groundwater level monitoring equipment. YR1	Connect, Arctium, CEH	1
			4.4.3 Install water monitoring equipment. YR1	Connect, Arctium	1
		4.5 Develop Water Resource Management Plan	4.5.1 Draft island water resource management plan (also known as a water security plan) and complete public consultation process for adoption by SHG Natural Resources Committee as a national plan. YR2 – YR3. Complete by end of YR3.	Connect, EMD, SHRI, ANRD, Bottom Woods Met Station, UK Met Office, Arctium	1
			4.5.2 Develop a national water resource management plan for the Peaks National Park. Draft in YR2 and final version in YR3.	Connect, EMD, ANRD, SHRI, CEH, Arctium	1
		4.6 Cloud Forest Restoration for Water Supply	4.6.1 Select restoration areas locations above 690m contour as part of the cloud forest restoration programme to improve mist capture. YR1 Supported by 1.2.4, 3.1.11 and 4.2.5	EMD, SHNT, SHRI, Connect, RSPB	1
		4.7 Stream flow and level monitoring	4.7.1 Weekly, monthly and quarterly stream flow and water level data collection at stream monitoring locations identified in 4.3.1. YR1-YR5 Data used to develop baseline interpretation of key catchment water resources and to measure changes in the NCA water resources over time, associated with cloud forest restoration.	Connect, Arctium	1
		4.8 Spring flow monitoring	4.8.1 Weekly, monthly and quarterly spring flow and water level data collection at spring monitoring locations identified in 4.3.1. YR1-YR5	Connect, Arctium	1

Pillar	Objective	PMP activity	Actions required	Who?	Importance
			Data used to develop baseline interpretation of key catchment water resources and to measure changes in the NCA water resources over time, associated with cloud forest restoration.		
Water Security		4.9 Groundwater level monitoring	4.9.1 Weekly, monthly and quarterly water level data collection at groundwater monitoring locations identified in 4.3.1. YR1-YR5 Data used to develop baseline interpretation of key catchment water resources and to measure changes in the NCA water resources over time, associated with cloud forest restoration.	Connect, Arctium	1
		4.10 Water quality assessment	4.10.1 Water quality assessment. Monthly sampling and analysis of surface water and groundwater chemistry. Data used to determine catchment water quality and origin of the water through geochemical assessment. YR1-YR5	Connect, Arctium, BGS	2
		4.11 Climate monitoring	4.11.1 Identify climate monitoring locations around the island and within key water supply catchments identified in 4.3.1 and to support 3.1.11. Climate data required to assess water resources within key catchments identified in 4.2. YR1	Connect, ANRD, CEH, UK Met Office, Bottom Woods Met Station, Arctium	1
			4.11.2 Field survey to evaluate suitability of climate monitoring locations e.g. health and safety, topography, land ownership and access rights. YR1	ANRD, Bottom Woods Met Station, Arctium	1
			4.11.3 Procurement of climate monitoring equipment. YR1	ANRD, CEH, UK Met Office, Bottom Woods Met Station, Arctium	1
			4.11.4 Install climate monitoring equipment. YR1	Bottom Woods Met Station,	1

Pillar	Objective	PMP activity	Actions required	Who?	Importance
				ANRD, Arctium	
Water Security			4.11.5 Weekly, monthly and quarterly collection of climate data at monitoring locations identified in 4.17.1. YR1-YR5 Data used to develop baseline interpretation of key catchment water resources and to measure changes in the NCA water resources over time.	ANRD, Bottom Woods Met Station, UK Met Office	1
			4.11.6 Develop protocols for climate data reports, interpretation and data distribution. Annual reporting of island climate data to key stakeholders. YR1-YR5 and ongoing.	UK Met Office, Bottom Woods Met Station, SHRI	1
		4.12 Geophysics Survey	4.12.1 Geological survey of the study area to collect baseline data needed to interpret the relationship between geology, hydrogeology and surface water features. YR1 and YR2	Connect, Arctium, BGS	1
			4.12.2 Identify 4 geophysics survey lines within key water supply catchments. Supported by 4.2.4, 4.2.5 and 4.3. YR1	Connect, Arctium, BGS	1
			4.12.3 Map geology sub-surface to min 10m depth, using aerial or ground survey methods after completing 4.15.2. YR1 and YR2	Connect, Arctium, BGS	1
			4.12.4 Identify existing boreholes for groundwater level monitoring. Supported by 4.2.4, 4.2.5 and 4.3. Determine with project steering group if further bore holes are required, and locations for new boreholes limited to those outside of protected areas and with vehicle access. YR1	Connect, Arctium, BGS, project steering group	1
			4.12.5 **[if required from 4.12.4]** Drilling contract for installation of new groundwater monitoring boreholes. Supported 4.2.4, 4.2.5. Costs aligned with those identified in 4.1.1. YR1	Connect, Arctium, BGS	2
			4.12.6 **[if required from 4.12.4]** Borehole drilling programme to deliver 4.12.4. YR1 and YR2	Connect, Arctium, BGS	2

Pillar	Objective	PMP activity	Actions required	Who?	Importance
Water Security		4.13 Canopy Climate Monitoring	4.13.1 Canopy climate monitoring within pilot study areas (Peaks National Park) to determine canopy drip, trunk flow within areas of endemic and invasive species within the cloud forest. Refine study area water balances and evidence of success of the project. In support of 1.5.3, 4.3.1 and 4.14.1. YR2-YR5. Data used to develop baseline climate record and to interpret changes in island water resources associated with climate change and cloud forest restoration.	ANRD, Bottom Woods Met Station, CEH, Arctium	2
		4.14 Soil Survey	4.14.1 Sample and map physical properties of soils within the Peaks National Park and in cloud forest restoration areas. Assess benefits to soil structure from cloud forest restoration. Co-ordinate with soil biodiversity work in 3.5 to avoid duplication of sample locations. In support of 3.5, 4.3.1 and 4.15. YR1 and YR2.	Arctium, CEH, EMD, ANRD	2
			4.14.2 Soil sample laboratory testing for moisture content, bulk density and particle size distribution. Data used to support water resource assessments. YR2 and YR3.	Arctium, ANRD, CEH	2
			4.14.3 Soil infiltration tests within the Peaks National Park and cloud forest restoration areas. YR2 and YR3	Arctium, CEH,	2
		4.15 Geology and Hydrogeology Interpretation	4.15.1 Soils, geology and hydrogeology data interpretation to understand the relationships between cloud forest composition, topography, geology, hydrogeology, hydrology, soil moisture retention and base flow in key catchments on St Helena. Initial interpretation at the end of YR2 and interpretation using longer data set in YR5.	Arctium, BGS, Bottom Woods Met Station, CEH, Connect, UK Met Office	1
			4.15.2 Interpretation of climate data to confirm the relationship between mist interception and rainfall. Assess micro-climates within key catchments and across the island. Annual reporting of data sets. Initial interpretation at the end of YR2 and interpretation using longer data set in YR5.	Bottom Woods Met Station, UK Met Office, Arctium	1
			4.15.3 Update DPLUS051 water balances based on new data record and develop and island water balance based on project surface water and groundwater data. YR5	Arctium, BGS, Bottom Woods Met Station, CEH,	1

Pillar	Objective	PMP activity	Actions required	Who?	Importance
				Connect, UK Met Office	
Water Security			4.15.4 Interpret water balance in pilot areas and catchments which have undergone restoration during the 5 year project. Evidence changes in the water balances based upon change in proportion of endemic vegetation. Annual updates and final report in YR5. YR1-YR5	Arctium, BGS, Bottom Woods Met Station, CEH, Connect, UK Met Office	1
		4.16 Understand existing flow rates to establish baseline data.	See 4.12, 4.14, 4.7, 4.8, 4.9 and 4.17 YR1-YR5	Arctium, BGS, Bottom Woods Met Station, CEH, Connect, UK Met Office	1
		4.17 Training – staff development	4.17.1 Ongoing requirement that all external partners provide training and skill-sharing to the local water resource and climate team through the project. YR1-YR5. Co-ordinate with training identified in 3.10	Arctium, UK Met Office, CEH	1
			4.17.2 Annually identify skills gaps within water resource and climate team and integrate into personal development plans for team members. YR1-YR5. Co-ordinate with training identified in 3.10	Project Steering Group	1
			4.17.3 All water resource and climate team leaders attend at least one exposure / training visit(s) over the course of the project to address skill gaps. YR1-YR5. Co-ordinate with training identified in 3.10	Project Steering Group	1
		4.18 Assess mist capture potential and peat soil production of cloud forest vegetation within 2 years.	4.18.1 Select trial restoration areas for increased water supply above 690m contour, include within 5.2.1 in YR1.	SHRI, EMD, SHNT, Connect, CEH, Arctium, ARND, Bottom Woods Met Station	1

Pillar	Objective	PMP activity	Actions required	Who?	Importance
Water Security			4.18.2 Trial plantings of endemic tree/fern components in the principal water sub-catchments. Support 1.5.3. YR1-YR2	SHRI, EMD, SHNT, Connect, CEH, Arctium, ARND, Bottom Woods Met Station	1
		4.19 Collect climate and water resource data to measure changes in mist interception and recharge to aquifers, springs and streams within restored catchments. Quantify success of cloud forest restoration for water resources and climate change mitigation.	4.19.1 Collection and interpretation of monitoring data. YR1-YR5	Connect, Arctium, ANRD, CEH, Bottom Woods Met Station	1
			4.19.2 Confirmation of net gain in mist and stream flow/spring flow corresponding to restoration. YR3-YR5	Arctium, CEH	1
	5. Water capture is increased by expanding cloud forest area. Water retention	5.1 Re-vegetate the Diana's Peak ridge with cloud forest species to increase the	5.1.1 Develop a planting regime to re-vegetate Diana's Peak ridge with cloud forest species over 5 years. YR1-YR5 Supported by 1.2.4, 1.1.11 and 4.2.4.	EMD, Project steering group	1

Pillar	Objective	PMP activity	Actions required	Who?	Importance
Water Security	**and stream flow control are improved by creating conditions conducive to the production of peat soils; the resilience of St Helena to the negative impacts of climate change is improved**	height and density of interception and reduce the evaporative effect of the bare central ridge within 5 years.	5.1.2 Measure change in mist interception annually along length of the prominent ridge of the Peaks.	Connect, Project steering group	1
		5.2 Select restoration areas locations above 690m contour.	5.2.1 Produce a plan for cloud forest creation and restoration based on water catchment areas in YR1 – Action 0.3.1 likely to include intensifying restoration efforts in Grape Vine Gut (which is Taylors), Wells and Byrons catchments as priority sites	RSPB, EMD, Connect, Project steering group	1
			5.2.2 Annually review progress against implementation of water catchment cloud forest creation and restoration plan	RSPB, EMD, Connect, Project steering group	1
		5.3 Clear non-native vegetation and establish cloud forest habitat to promote mist interception and peat soil production. Expand continuous area of cloud forest to mitigate negative impacts of habitat loss through climate change.	5.3.1 Follow clear concise protocols for cloud forest restoration and creation, as per 1.3.1	EMD	1
			5.3.2 New and existing staff form two teams of 3 /4 (1 nursery based) to implement existing and new working practise protocols intensifying restoration efforts in Grape Vine Gut (which is Taylors), Wells and Byrons catchments as priority sites for increasing water security	EMD	1
			5.3.3 As per 1.2.2, complete biannual control/removal of invasive plants from priority water restoration sites following existing SHG protocols, planned effectively to minimise disturbance and implementing best working protocols	EMD	1
			5.3.4 As per 1.2.4, bolster plant species diversity and age structure as required biannually for priority water restoration sites through in-planting to create a whole generation pyramid of species (i.e. seedlings, saplings, healthy trees, dead/dying trees) and to build a seedbank	EMD	1

Pillar	Objective	PMP activity	Actions required	Who?	Importance
Water Security			5.3.5 As per 1.2.5, Appropriately select cultivated nursery material from living gene banks, monitored by the Nursery Officer(s), for planting at each priority water restoration site to ensure genetic variation.	EMD	1
			5.3.6 Annually measure change in mist interception and soil content in each priority water restoration site.	Connect, Project steering group	1
	6. Development of cross sector understanding of the value of the islands water resources and cloud forest for climate change mitigation and sustainable development of an ecotourism economy.	6.1 Develop tools to communicate the value of water to the island, its population and economy.	See Section 7.	-	-
		6.2 Communicating the benefits of managing the island cloud forest to secure a sustainable national water supply and mitigate climate change.	See Section 7.	-	-
		6.3. Communicate promotional benefits to the island from a large cloud forest restoration project.	6.3.1 Produce promotional materials annually, such as newsletter articles, brochures etc. YR1-YR5 to input to action 9.1	EMD, Connect and Tourism	1
			6.3.2 Promotion of benefits of the project, link in Ramsar designation [link to 7.3.1], through local and international newsletters, PR companies where possible and social media platforms. YR1-YR5 to input to action 9.1	EMD, Connect and Tourism	1
	7. Development of cross sector understanding of and support for the importance of	7.1 Develop a partnership-based collaborative effort building skills and experience.	See Management Pillar.	-	-

Pillar	Objective	PMP activity	Actions required	Who?	Importance
Socio-economic	**the Peaks Natural and Cultural capital**	7.2 Collaboratively promote value of Peaks including biodiversity, natural capital for climate change resilience and water security. [Links to Objective 6]	7.2.1 Promote the value of the Peaks National Park internationally at key international events throughout the project, e.g. international conferences, travel shows etc.	All partners	2
		7.3 Improve the status of the Peaks through exploring appropriate designation	7.3.1 Complete a desk study in YR 1 to report on the costs and benefits of Ramsar designation, including reporting requirements and confirm the timetable and process for submission & designation	SHG, consultant	2
			7.3.2 Submit report to ENRC and follow due process to progress designation if supported in YR2	SHG	2
			7.3.3 Complete a desk study in YR2 to determine if the Peaks National Park qualifies for any further international designations	SHG	2
			7.3.4 Dependant on 7.3.3, initiate process for further international designations by end YR3	SHG	2
		7.4 Assess and regulate the Peaks as a visitor product.	7.4.1 Design and implement a formal method of assessing visitor numbers and experiences to the Peaks National Park in YR1, building on current baseline	Tourism	2
			7.4.2 Annual review/report of number of visitors and recommendations for improving visitor experiences made to steering group annually.	Tourism	2
		7.5 Collaborate with Beekeeper's Association to improve foraging	7.5.1 Engage with Beekeeper's Association and local bee keepers in YR1	Bee Keeper's Association (BKA) and local bee keepers,	2

Pillar	Objective	PMP activity	Actions required	Who?	Importance
		capacity for honey bees		Project steering group	
Socio-economic			7.5.2 Implement agreed joint actions to improve foraging for honeybees within the National Park, in line with results of action 3.6.4	Bee Keeper's Association (BKA) and local bee keepers, Project steering group	2
		7.6 Develop outdoor educational learning opportunities and resource materials for students and lifelong learners	7.6.1 Adapt existing education packs to include water security and climate change resilience by end YR2	SHNT, EMD, education	2
			7.6.2 Water efficiency and water reduction outreach to public. Year 1 to Year 3.	SHNT, EMD, education	2
			7.6.3 Building on existing schemes, develop a school outreach programme by mid YR2, to be implemented for the rest of the project	SHNT, EMD, education	2
			7.6.4 Development of an Education Pack for Primary Schools, with the aim of completing the Pack and sharing with Teachers in YR1. The Pack incorporates information about the Island, its habitats and species. Update annually.	SHNT, EMD, education	2
			7.6.5 Development of an Education Pack for secondary Schools, with the aim of completing the Pack and sharing with Teachers in YR2. The Pack incorporates information about the Island, its habitats and species. Update annually.	SHNT, EMD, education	2
			7.6.6 Resources sourced and purchased to support education packs, i.e. printing, models, loan boxes, etc in 2021 for primary schools and 2022 for secondary schools	SHNT, EMD, education	2
			7.6.7 Establish an enrichment group 'Eco-schools' including utilising the Peaks to enhance learning across secondary and primary schools. Install notice boards at participatory schools for students to utilise as required for public display of works.	SHNT, EMD, education	2

Pillar	Objective	PMP activity	Actions required	Who?	Importance
Socio-economic		7.7 Develop, promote and facilitate an applied research programme leading to a robust evidence base about the Peaks National Park and the issues affecting it.	7.7.1 Develop an applied research programme plan based on identified research needs [outlined across all pillars] in Yr 1	SHRI, all stakeholders	2
			7.7.2 Promote through communication channels (meetings, emails, newsletters etc) relevant aspects of the research programme to the appropriate audiences, e.g. landowners, school groups, international scientists etc.	Project steering group, SHRI	2
			7.7.3 Facilitate applied research through appropriate training, equipment and data recording annually	Project steering group, SHRI	2
			7.7.4 Facilitate introduction and development of citizen science programmes as a part of the research programme e.g. soil temperature citizen science project (link to the outreach programmes 7.6.7	SHRI, Education, SHNT, EMD	2
			7.7.5 Annually monitor and evaluate progress against the applied research programme plan from YR2	Project steering group, SHRI	2
			7.7.6 Host annual online event with a local hub to promote scientific studies and advancement of knowledge about all aspects of management of the Peaks cloud forest (link to 9.1)	SHRI	2
			7.7.7 Bursary scheme to attract high quality international students to work with local experts (supervisors) to conduct post graduate research on the Peaks in support of the research programme	SHRI	2
	8. Provide appropriate infrastructure to enhance visitor experience and safeguard the Peaks environment	8.1 Install structures to improve access and enhance physical exploration of the Peaks.	8.1.1 Determine how the Peaks National Park fits into Tourism's current maintenance programme and define roles between project partners in YR1.	Tourism, EMD, Project steering group	2
			8.1.2 Implement recommendations from the Green Flag assessment (March 2020) by YR3, from which Diana's Peak has been accredited green flag status.	Tourism, EMD, Project steering group	2
			8.1.3 Produce a stakeholder approved path management plan by end YR1	EMD, Tourism, Project steering group	1
			8.1.4 Quarterly maintenance strimming/manual clearance of grass footpaths	EMD, Tourism	1

Pillar	Objective	PMP activity	Actions required	Who?	Importance
Socio-economic			8.1.5 Appropriate and agreed Boardwalk, or other way of creating paths, loop trail installed at Diana's Peak by YR4 to secure year-round safe access, minimise visitor impact and reduce invasive species management costs; include defining 'no go' areas [Invert Cons Strategy 1.5] and including trials/research into the most appropriate materials for boardwalks e.g. grating/non-slip tape etc.	Tourism, EMD, Project steering group, consultant	2
			8.1.6 Assessment and plan produced in YR4 for a network of unobtrusive viewpoints, ensuring minimal impact to the environment, looking outwards to landscape or looking inwards to particular habitat feature; and investigate including additional information e.g. distances to Jamestown etc displayed on engraved stone/wooden signage and additional information at the start of the post-box walks.	Tourism, EMD, Project steering group	2
			8.1.7 Annual monitoring of visitor numbers and assessments of usage of footpaths to feedback into annual review of path mgmt. plan	Tourism	1
			8.1.8 Design appropriate communication materials to inform visitors of networks available (e.g. booklets, new stamp for post box walks) by end YR2 to showcase on tourism website and review annually	Tourism, EMD, Project steering group	2
			8.1.9 review of accessibility (wheelchair) within the Arboretum and Secure steps or ramp to improve accessibility and gate/signage at George Benjamin's Arboretum through fixing them and bi-annual maintenance.	EMD, Tourism, contractor	2
			8.1.10 Secure steps and signage at entrance to High Peak, below the red rock.	EMD, Tourism, contractor	2
			8.1.11 Design a Peaks National Park Logo by end YR1	Project steering group	2
		8.2 Create focal points to promote and provide interpretation of the Peaks	8.2.1 Unobtrusive interpretation (audio-guides, phone apps e.g. ISpot etc) and information points for visitors at key points within the Peaks developed in YR1 and installed/in use by YR3. [Invert Cons Strat 4.2]	Tourism, EMD, Project steering group	2
			8.2.2 Standardised entry point with signage to identify entrance, directions and safety information and secure gates or stiles to exclude stray grazing animals.	EMD, Tourism, Project steering group	1

Pillar	Objective	PMP activity	Actions required	Who?	Importance
Socio-economic			8.2.3 Options for (including the need for) an environmental visitor centre assessed in YR2, including site options, with the aim to showcase the Peaks and their unique species accessible to those less able to visit the Park in person.	Tourism, EMD, Project steering group	2
			8.2.4 Design and manage Peaks National Park website by end of Yr 1	EMD, Tourism,	2
		8.3 Pro-actively monitor and maintain infrastructure	8.3.1 Complete assessment of the need for additional car parking in line with increasing visitor numbers.	EMD, Project steering group, highways authority	2
			8.3.2 Annual safety inspection and maintenance programme for built infrastructure.	EMD, project steering group	1
	9. Recognition and awareness of, and public engagement with the Peaks National Park	9.1 Raise profile of Peaks conservation achievements locally and internationally.	9.1.1 Regular International media by project stakeholders and partners (Social media, Journal articles, partner organisation articles, travel trade shows, PR companies)	EMD, Tourism, Project steering group	2
			9.1.2 Regular local media (Press releases, radio slots, local newsletters).	Project steering group	2
			9.1.3 Peaks based international master class workshop on habitat restoration in YR4.	EMD	2
		9.2 Enhance engagement of local community and visitors with the Peaks	9.2.1 Complete assessment of the facilities needed in YR1 and where they are required.	Tourism, Education, Project steering group	2
			9.2.2 Install appropriate facilitates (i.e. toilets, lunch area, outdoor classroom, appropriate equipment/resources including maps, ecological kits, identification keys, etc) to enable community engagement in YR2-3	Project steering group, consultant	2
			9.2.3 Whole community planting event at the in YR1 highlighting the importance of the Peaks for water security.	EMD, Tourism, Education	2
			9.2.4 Bi-annual Peaks open day alternating with Scotland nursery.	EMD, Tourism, Education	2

Pillar	Objective	PMP activity	Actions required	Who?	Importance
Socio-economic			9.2.5 At least one group visit from each school every year.	EMD, Education	2
			9.2.6 Bi-annual schools outreach events	EMD, SHNT, Education	2
			9.2.7 In YR2, establish a conservation volunteer programme utilising existing systems from stakeholders.	EMD, SHNT, Education	2
			9.2.8 Monthly nursery tours as needed of the two nurseries, planned to minimise disruption	EMD, Tourism, Education	2
			9.2.9 In YR5 install viewpoint platforms, if required, in agreed accessible places in the National Park	Project steering group, consultant	2
			9.2.10 Background information including bio-security guidelines, conservation aims, value of ecosystem services and guidance developed and provided for tourism, visitors and tour operators	Project steering group, consultant	2
			9.2.11 Annual Peaks themed photographic competition	EMD, SHNT, Education, Tourism	2
			9.2.12 Design and implement annual competitions to engage community with the Peaks management (e.g. logo design etc)	EMD, SHNT, Education, Tourism	2
			9.2.13 Peaks inspired school activities delivered annually including activities such as music composition, landscape painting, science studies, mapping using ICT and mathematical problem solving using the various peaks related contexts or data	EMD, SHNT, Education, Tourism	2
			9.2.14 Develop and deliver school placement opportunities, such as a 'young ranger' or stewardship scheme.	EMD, SHNT, Education, Tourism	2
		9.3 Recognise the historic values	9.3.1 Historic features mapped in YR2	SHG	2
			9.3.2 Heritage Environment Register updated in YR2	SHG	2

Pillar	Objective	PMP activity	Actions required	Who?	Importance
Socio-economic		within the Peaks National Park	9.3.3 Assessment of feature restoration possibilities in YR3	SHG	2
			9.3.4 Interpretation information (leaflets, signage etc) for historical timeline and features produced in YR3	SHG	2
		9.4 Collaborate with agriculture and forestry land managers	9.4.1 Map land uses within the peaks during YR2 (land cover, management, responsible entities etc.) and identify agriculture and forestry parcels with high biodiversity and/or economic value or potential.	SHG	1
			9.4.2 Identify and explore areas for collaboration to deliver on the vision of this plan during YR1	Project steering group	1
			9.4.3 Over the project, explore formal agreements (MoUs etc) with land managers, to deliver collaborative projects to improve the Peaks National Park.	Project steering group	2

3. Overall timeline for delivery

				YR1 (21/22)				YR2 (22/23)				YR3 (23/24)				YR4 (24/25)				YR5 (25/26)			
Pillar	**Action**		**Lead partner**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**
Management	0.0.1	legal status PNP and PMP	ENRPD																				
Management	0.0.2	Establish Parks Authority	ENRPD																				
Management	0.0.3	Parks Authority mgmt structure and TORs	ENRPD																				
Management	0.0.4	PMP R&Rs, partnership agreements, contracts etc	RSPB																				
Management	0.0.5	PMP M&E plan	RSPB																				
Management	0.0.6	Budget mgmt	RSPB																				
Management	0.0.7	5-year project management structure	RSPB																				
Management	0.0.8	Data mgmt	ENRPD																				
Management	0.0.9	communication strategy	RSPB																				
Management	0.0.10	advocacy events and fundraising proposals	RSPB																				
Management	0.0.11	annual M&E	RSPB																				
Management	0.0.12	mid term review	RSPB																				
Management	0.0.13	Sustainable finance mechanisms	ENRPD																				
Management	0.0.14	Update LegCo on implementation of PMP	ENRPD																				
Management	0.0.15	Update LegCo of any major implementation work	ENRPD																				
Management	0.1.1	project steering group	RSPB																				
Management	0.1.2	Recruitment of Project Managers & deputy PM	RSPB																				
Management	0.1.3	Hold quarterly steering group meetings	RSPB																				
Management	0.1.4	Skill sharing between partners	RSPB																				

Management	0.1.5	recruitment of Peaks staff to a full team of 5 sub-teams of 3-4 people/team	EMD																					
Management	0.1.6	incremental recruitment of nursery staff	EMD																					
Management	0.1.7	Recruit water resource monitoring technician.	Connect																					
Management	0.1.8	National Park landowner /land manger stakeholder group	RSPB																					
Management	0.1.9	master database areas of importance on private land	RSPB																					
Management	0.1.10	landowner biodiversity surveys programme	EMD																					
Management	0.1.11	awareness materials for land management in the Park	EMD																					
Management	0.1.12	bespoke training courses for landowners	EMD																					
Management	0.1.13	grant scheme for conservation and trial	RSPB																					
Management	0.2.1	biosecurity plan	EMD																					
Management	0.2.2	review biosecurity practices	EMD																					
Management	0.2.3	Biosecurity induction & training for all staff	EMD																					
Management	0.3.1	forest restoration plan	RSPB																					
Management	0.3.2	training coordination	RSPB																					
Biodiversity	1.1.1	Refine quality assessment protocol	EMD																					
Biodiversity	1.1.2	Map/regularly monitor tree fern thickets and cabbage tree woodland	EMD																					
Biodiversity	1.1.3	refine invertebrate survey methods	SHNT																					
Biodiversity	1.1.4	Identify indicator/keystone invertebrates	SHNT																					
Biodiversity	1.1.5	Train restoration staff to identify key invertebrates	SHNT																					

Biodiversity	1.1.6	training quality assessments/ inverts	EMD / SHNT				■				■				■				■					■
Biodiversity	1.1.7	QGIS training	ENRPD				■				■				■				■					■
Biodiversity	1.1.8	map of management activities/areas to report	EMD					■				■				■				■				
Biodiversity	1.1.9	Maintain route network	EMD		■		■		■		■		■		■		■		■		■			■
Biodiversity	1.1.10	habitat quality assessment of all 120 fragments	EMD		■	■	■		■	■	■		■	■	■		■	■	■		■	■		■
Biodiversity	1.1.11	map the extent of all 120 fragment using GPS	EMD		■	■	■		■	■	■		■	■	■		■	■	■		■	■		■
Biodiversity	1.1.12	Assessment of alternative mapping methods	EMD						■	■	■													
Biodiversity	1.1.13	invertebrate assessment of all 120 fragments	SHNT			■	■			■	■			■	■			■	■			■		■
Biodiversity	1.1.14	Identify priority fragments for priority invertebrates	SHNT			■	■																	
Biodiversity	1.1.15	Update database assess changes in quality, extent and invertebrates	EMD / SHNT					■				■				■				■				
Biodiversity	1.2.1	field training in restoration techniques.	EMD				■	■			■	■			■	■			■	■				
Biodiversity	1.2.2	control of invasive plants from all 120 fragments	EMD		■		■		■		■		■		■		■		■		■			■
Biodiversity	1.2.3	Clonal samples collected from any dead/dying trees	EMD		■	■	■		■	■	■		■	■	■		■	■	■		■	■		■
Biodiversity	1.2.4	In-planting at all 120 fragments as needed	EMD		■		■		■		■		■		■		■		■		■			■
Biodiversity	1.2.5	use living gene banks to ensure genetic variation.	EMD		■		■		■		■		■		■		■		■		■			■
Biodiversity	1.2.6	Create supporting habitat alongside 120 fragments	EMD			■		■		■		■		■		■		■		■		■		
Biodiversity	1.2.7	Record planting effort within master database.	EMD			■		■		■		■		■		■		■		■		■		
Biodiversity	1.2.8	review meeting to assess and evaluate progress	EMD					■				■				■				■				
Biodiversity	1.2.9	on-going pheasant tail fern control in priority areas	EMD		■				■				■				■				■			

Biodiversity	1.2.10	expand control for pheasant tail fern	EMD																					
Biodiversity	1.3.1	protocol for cloud forest creation	EMD																					
Biodiversity	1.3.2	Assessment of methods of moving plants	EMD																					
Biodiversity	1.4.1	Create connecting habitat between all 120 fragments	EMD																					
Biodiversity	1.4.2	monitor invertebrate movement along corridors	SHNT																					
Biodiversity	1.5.1	review long-term programme (peaks team)	EMD																					
Biodiversity	1.5.2	Identify additional areas for expanding cloud forest	EMD																					
Biodiversity	1.6.1	review rodent control programme	EMD																					
Biodiversity	1.6.2	Extend rodent control to nursery area	EMD																					
Biodiversity	1.6.3	Implement rodent control recommendations	EMD																					
Biodiversity	1.7.1	plan for buffer-zone margins along footpaths	EMD																					
Biodiversity	1.7.2	Complete invasive plant control along buffer zones	EMD																					
Biodiversity	1.7.3	Active planting native species along buffer zones	EMD																					
Biodiversity	1.8.1	assessment of existing path network	EMD																					
Biodiversity	1.8.2	Install boardwalks across priority footpath areas	EMD																					
Biodiversity	1.8.3	monthly checks maintenance boardwalks	EMD																					
Biodiversity	2.1.1	Complete the living gene banks for five species	EMD																					
Biodiversity	2.1.2	Complete annual audits of the living gene banks	EMD																					
Biodiversity	2.1.3	Expand living gene banks with 7 more species	EMD																					

Biodiversity	2.1.4	Audit of priority germplasm in seed bank	EMD																					
Biodiversity	2.1.5	collect germplasm from peaks grass	EMD																					
Biodiversity	2.1.6	germplasm collection recorded on database	EMD																					
Biodiversity	2.1.7	training on spore harvesting	EMD																					
Biodiversity	2.1.8	Follow seed collection protocols	EMD																					
Biodiversity	2.1.9	Representative seed within Millennium Seed Bank	EMD																					
Biodiversity	2.1.10	Review of St Helena seed bank collections	EMD																					
Biodiversity	2.2.1	Establishment of nursery propagation protocols and production methodology	EMD																					
Biodiversity	2.2.2	Establish a protocol for scaling up plant production	EMD																					
Biodiversity	2.2.3	Complete annual review of nursery plant production and facilities	EMD																					
Biodiversity	2.2.4	creation of additional shade house	EMD																					
Biodiversity	2.2.5	purchase equipment needed for nursery production	EMD																					
Biodiversity	2.2.6	training fern propagation and trial methods	EMD																					
Biodiversity	2.3.1	Initiate trial germination methodology	EMD																					
Biodiversity	2.3.2	Complete trial of ex-situ spore germination for ferns	EMD																					
Biodiversity	2.4.1	plan for gene-bank of all Peaks germplasm	EMD																					
Biodiversity	2.4.2	Purchase equipment for germplasm gene-bank	EMD																					
Biodiversity	2.4.3	Establish a gene-bank of all Peaks germplasm	EMD																					

Biodiversity	3.1.1	prioritisation of cloud forest invertebrates	SHNT																					
Biodiversity	3.1.2	baseline of all priority inverts	SHNT																					
Biodiversity	3.1.3	Identify priority invert areas of cloud forest vegetation	SHNT																					
Biodiversity	3.1.4	assessments of priority cloud forest invertebrates	SHNT																					
Biodiversity	3.1.5	habitat specifications for priority invertebrates	SHNT																					
Biodiversity	3.1.6	Targeted research into priority invertebrates	SHNT																					
Biodiversity	3.1.7	Investigate other habitats for specialist invertebrates	SHNT																					
Biodiversity	3.1.8	Genetic analysis on selected species	SHNT																					
Biodiversity	3.1.9	Identify and assess threats to priority invertebrates	SHNT																					
Biodiversity	3.1.10	Undertake Red List assessments/ updates	SHNT																					
Biodiversity	3.1.11	Identify species indicators & monitoring programme	SHNT																					
Biodiversity	3.2.1	timetable genetic assessment CEH UBC	SHRI																					
Biodiversity	3.2.2	complete analysis of genetic assays	EMD																					
Biodiversity	3.2.3	update of Red List assessments.	EMD																					
Biodiversity	3.2.4	Implement research for priority ferns species	EMD																					
Biodiversity	3.3.1	assessment of the fungal assemblage	SHRI																					
Biodiversity	3.3.2	Implement the priority recommendations	EMD																					
Biodiversity	3.4.1	assessment of the epiphytic communities	SHRI																					
Biodiversity	3.4.2	Implement the priority recommendations	EMD																					

Biodiversity	3.5.1	scoping work and analyse soil biodiversity	SHRI																					
Biodiversity	3.5.2	conduct survey work and analyse soil biodiversity,	SHRI																					
Biodiversity	3.5.3	Implement the priority recommendations	EMD																					
Biodiversity	3.6.1	assessment and mitigation of tree pathogens	SHRI																					
Biodiversity	3.6.2	Research ecological surfaces and invertebrates	SHRI																					
Biodiversity	3.6.3	Implement recommendations 3.6.2 3.6.3	EMD																					
Biodiversity	3.6.4	relationships between honeybees & pollination	SHRI																					
Biodiversity	3.7.1	RA impact of invasive invertebrates	SHNT																					
Biodiversity	3.7.2	Invasive invert field surveys & management measures	SHNT																					
Biodiversity	3.7.3	Trial mgmt two invasive invertebrates	SHNT																					
Biodiversity	3.7.4	invasive invert mitigation measures	SHNT																					
Biodiversity	3.7.5	Monitor and evaluate invasive invert mgmt	SHNT																					
Biodiversity	3.9.1	recommendations on use of hybridisation	EMD																					
Biodiversity	3.9.2	Symposium & produce guidelines on hybridisation	EMD																					
Biodiversity	3.10.1	Skill sharing from all visiting researchers etc	SHRI																					
Biodiversity	3.10.2	Identify training priorities	RSPB																					
Biodiversity	3.11.1	exchange visits	RSPB																					
Biodiversity	3.12.1	skills gaps within team e into personal development	RSPB																					
Biodiversity	3.12.2	All team leaders attend training visit(s)	RSPB																					

Water Security	4.1.1	fully costed plan for monitoring water resources	Connect																						
Water Security	4.2.1	Collate climate and water resource background data	Connect																						
Water Security	4.2.2	Desk based assessment of archive water reports	Connect																						
Water Security	4.2.3	Desk Study Report. YR1	Connect																						
Water Security	4.2.4	Confirm keywater supply catchments for monitoring.	Connect																						
Water Security	4.2.5	Agree priority catchments for water supply/restoration	Connect																						
Water Security	4.3.1	Identify water control structures in catchments	Connect																						
Water Security	4.4.1	water monitoring network and install equipment	Connect																						
Water Security	4.4.2	Purchase groundwater monitoring equipment.	Connect																						
Water Security	4.4.3	Install water monitoring equipment.	Connect																						
Water Security	4.5.1	Draft island water resource management plan	Connect																						
Water Security	4.5.2	Develop a water resource management plan	Connect																						
Water Security	4.6.1	Select restoration areas locations	EMD																						
Water Security	4.7.1	stream flow and water level data collection	Connect																						
Water Security	4.8.1	spring flow and water level data collection	Connect																						
Water Security	4.9.1	water level data collection for groundwater monitoring	Connect																						
Water Security	4.10.1	Water quality assessment. Monthly sampling	Connect																						
Water Security	4.11.1	Identify climate monitoring locations	Connect																						

Water Security	4.11.2	Field survey of climate monitoring locations	ANRD																					
Water Security	4.11.3	Procurement of climate monitoring equipment. YR1	ANRD																					
Water Security	4.11.4	Install climate monitoring equipment.	ANRD																					
Water Security	4.11.5	collection of climate data at monitoring locations	ANRD																					
Water Security	4.11.6	Develop protocols & reporting of climate data	SHRI																					
Water Security	4.12.1	Geological survey to collect baseline data	Connect																					
Water Security	4.12.2	Identify geophysics survey lines within catchments.	Connect																					
Water Security	4.12.3	Map geology sub-surface	Connect																					
Water Security	4.12.4	Identify existing/new boreholes for groundwater level monitoring.	Connect																					
Water Security	4.12.5	Drilling contract new boreholes.	Connect																					
Water Security	4.12.6	Borehole drilling programme	Connect																					
Water Security	4.13.1	Canopy climate monitoring within pilot study areas	ANRD																					
Water Security	4.14.1	Sample and map soils	Connect																					
Water Security	4.14.2	Soil sample laboratory testing	Connect																					
Water Security	4.14.3	Soil infiltration tests	Connect																					
Water Security	4.15.1	Soils, geology and hydrogeology data interpretation	Connect																					
Water Security	4.15.2	Interpretation of climate data	ANRD																					
Water Security	4.15.3	Update island water balance records	Connect																					
Water Security	4.15.4	Interpret water balance in pilot areas and catchments	Connect																					

Water Security	4.17.1	Skill sharing to the local team by all visitoring partners/stakeholders	Connect																						
Water Security	4.17.2	Annually identify skills gaps within team	Connect																						
Water Security	4.17.3	All team leaders attend training visit(s)	Connect																						
Water Security	4.18.1	select trial areas	EMD																						
Water Security	4.18.2	trial restoration planting	EMD																						
Water Security	4.19.1	Collection interpretation of monitoring data.	Connect																						
Water Security	4.19.2	Confirmation of net gain in mist and stream flow/spring flow	Connect																						
Water Security	5.1.1	planting regime for Daina's Peak ridge	EMD																						
Water Security	5.1.2	monitor mist	Connect																						
Water Security	5.2.1	Select restoration areas locations	RSPB																						
Water Security	5.2.2	Monitor progress of restoration against plan]	RSPB																						
Water Security	5.3.1	As per 1.3.1, protocols for forest restoration	EMD																						
Water Security	5.3.2	team focus on water security areas	EMD																						
Water Security	5.3.3	control of invasive plants from water security areas	EMD																						
Water Security	5.3.4	bolster plant structure in water security areas	EMD																						
Water Security	5.3.5	genetic diversity at water security areas	EMD																						
Water Security	6.3.1	Produce promotional materials	Connect																						
Water Security	6.3.2	Promotion of benefits of the project	Connect																						
Socio-economic	7.2.1	Promote the value of the Peaks internationally	RSPB																						

Socio-economic	7.3.1	desk study on the costs and benefits of Ramsar	ENRPD																					
Socio-economic	7.3.2	Submit report to ENRC and follow due process to progress designation if supported in YR2	ENRPD																					
Socio-economic	7.3.3	Complete a desk study for international designations	ENRPD																					
Socio-economic	7.3.4	initiate process for further international designations	ENRPD																					
Socio-economic	7.4.1	method of assessing visitor numbers	Tourism																					
Socio-economic	7.4.2	Annual review/report of number of visitors.	Tourism																					
Socio-economic	7.5.1	Engage with Beekeeper's Association	SHNT																					
Socio-economic	7.5.2	Implement agreed joint actions to improve foraging	SHNT																					
Socio-economic	7.6.1	Adapt existing education packs water security	SHNT																					
Socio-economic	7.6.2	Water efficiency and water reduction outreach	RSPB																					
Socio-economic	7.6.3	develop a school outreach programme	Education																					
Socio-economic	7.6.4	Education Pack for Primary Schools	Education																					
Socio-economic	7.6.5	Education Pack for secondary Schools	Education																					
Socio-economic	7.6.6	Resources sourced for education packs	Education																					
Socio-economic	7.6.7	Establish an enrichment group 'Eco-schools'	Education																					
Socio-economic	7.7.1	applied research programme plan	SHRI																					
Socio-economic	7.7.2	Promote relevant aspects of research programme.	SHRI																					
Socio-economic	7.7.3	Facilitate applied research	SHRI																					
Socio-economic	7.7.4	development of citizen science programmes	SHRI																					

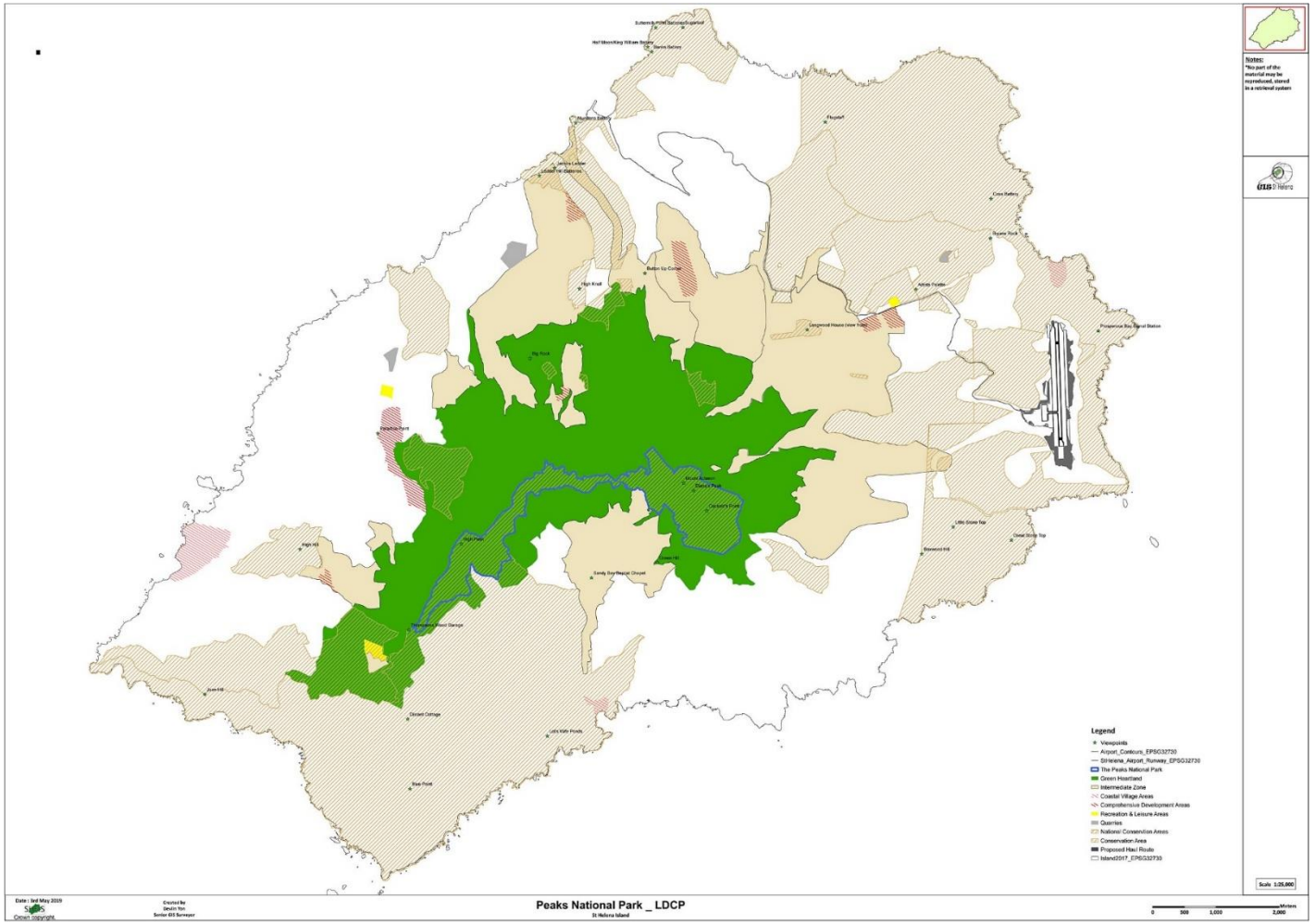
Socio-economic	7.7.5	Annual M&E for research programme	SHRI																						
Socio-economic	8.1.1	Review tourisms maintenance programme	Tourism																						
Socio-economic	8.1.2	recommendations from the Green Flag assessment	Tourism																						
Socio-economic	8.1.3	stakeholder approved path management plan	EMD																						
Socio-economic	8.1.4	Quarterly maintenance of grass footpaths	EMD																						
Socio-economic	8.1.5	Appropriate and agreed Boardwalk/ paths	Tourism																						
Socio-economic	8.1.6	Assessment and plan for a network of viewpoints	Tourism																						
Socio-economic	8.1.7	Annual monitoring of visitor usage of footpaths	Tourism																						
Socio-economic	8.1.8	communication materials to inform visitors	Tourism																						
Socio-economic	8.1.9	review of accessibility at Arboretum	EMD																						
Socio-economic	8.1.10	Secure steps and signage at entrance to High Peak	EMD																						
Socio-economic	8.1.11	Design a Peaks National Park Logo	RSPB																						
Socio-economic	8.2.1	Unobtrusive interpretation and information points	Tourism																						
Socio-economic	8.2.2	Standardised entry point with signage	EMD																						
Socio-economic	8.2.3	Options for environmental visitor centre assessed	EMD																						
Socio-economic	8.3.1	assessment of the need for additional car parking	Tourism																						
Socio-economic	8.3.2	Annual safety inspection for built infrastructure.	EMD																						
Socio-economic	9.1.1	Regular International media by project stakeholders	RSPB																						
Socio-economic	9.1.2	Regular local media	RSPB																						

Socio-economic	9.1.3	Peaks based international master class workshop .	EMD																						
Socio-economic	9.2.1	Complete assessment of the facilities needed	RSPB																						
Socio-economic	9.2.2	appropriate facilitates for community engagement	RSPB																						
Socio-economic	9.2.3	Whole community planting event	EMD																						
Socio-economic	9.2.4	Bi-annual Peaks open day	EMD																						
Socio-economic	9.2.5	At least one group visit from each school	EMD																						
Socio-economic	9.2.6	Bi-annual schools outreach events	EMD																						
Socio-economic	9.2.7	conservation volunteer programme	EMD																						
Socio-economic	9.2.8	Monthly nursery tours	EMD																						
Socio-economic	9.2.9	install viewpoint platforms	EMD																						
Socio-economic	9.2.10	Background information for visitors and tour operators	Tourism																						
Socio-economic	9.2.11	Annual Peaks themed photographic competition	RSPB																						
Socio-economic	9.2.12	annual competitions to engage community	RSPB																						
Socio-economic	9.2.13	Peaks inspired school activities delivered annually	Education																						
Socio-economic	9.2.14	Develop and deliver school placement opportunities	Education																						
Socio-economic	9.3.1	Historic features mapped	ENRPD																						
Socio-economic	9.3.2	Heritage Environment Register updated	ENRPD																						
Socio-economic	9.3.3	Assessment of feature restoration possibilities	ENRPD																						
Socio-economic	9.3.4	Interpretation information) for historical timeline	ENRPD																						
Socio-economic	9.4.1	Map land uses within the peaks	ENRPD																						

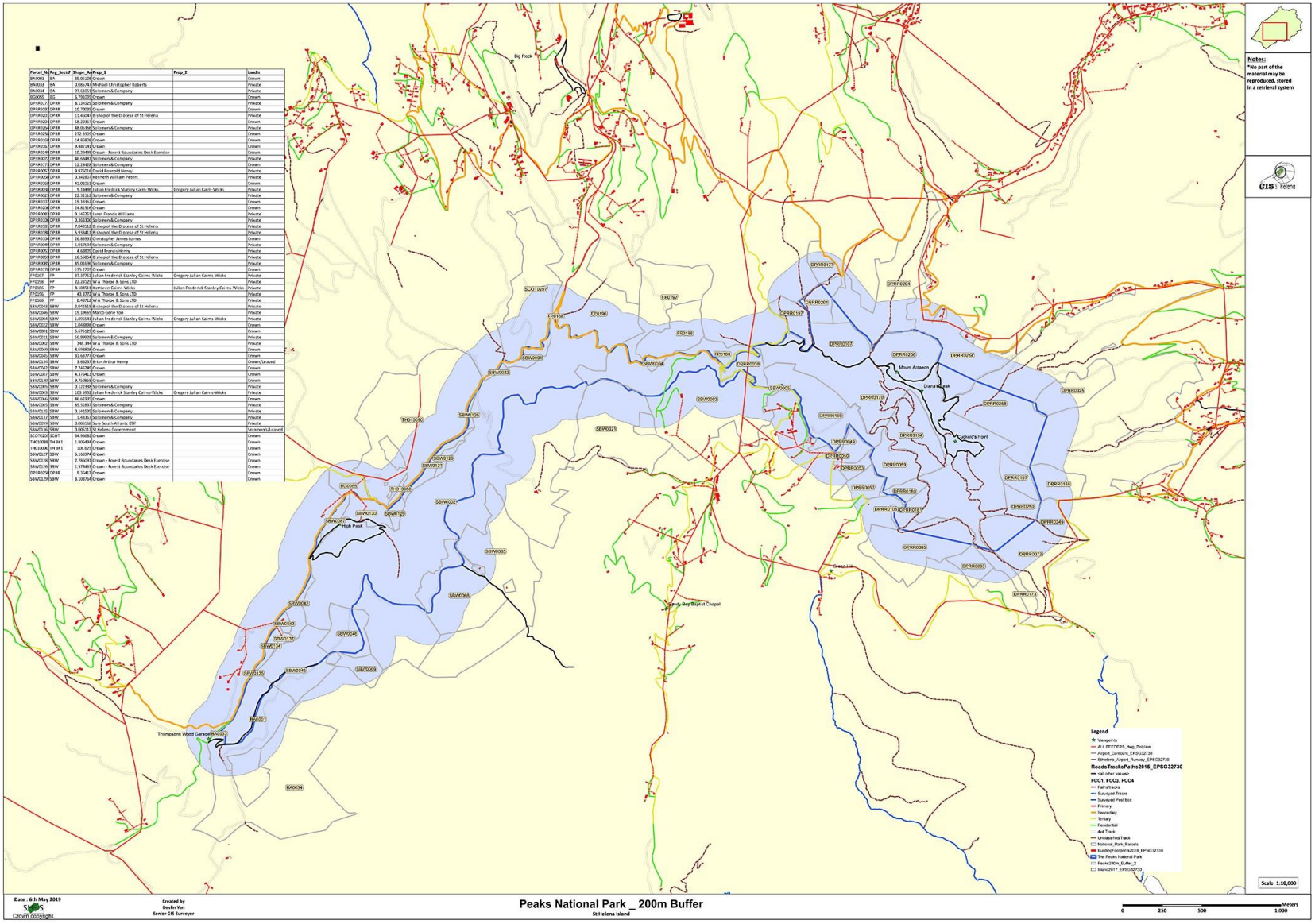
Socio-economic	9.4.2	Identify and explore areas for collaboration	RSPB																						
Socio-economic	9.4.3	explore formal agreements with land managers	RSPB																						

Appendix 1: Maps from the Peaks Management Plan

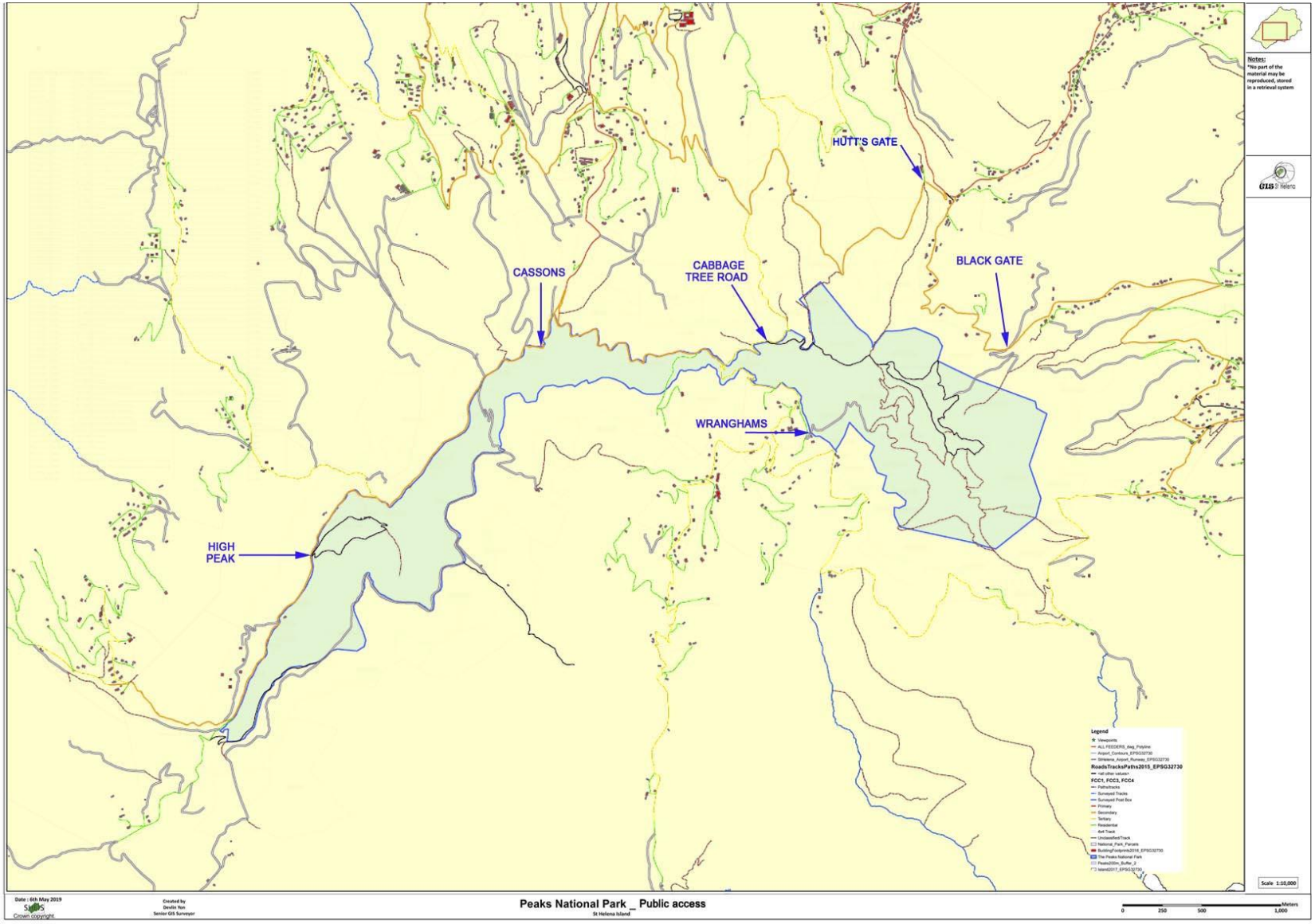
Appendix 1.1 Map of statutory, land development control planning and other designations



Appendix 1.2 Land ownership within Peaks National Park and outlying 200m buffer zone

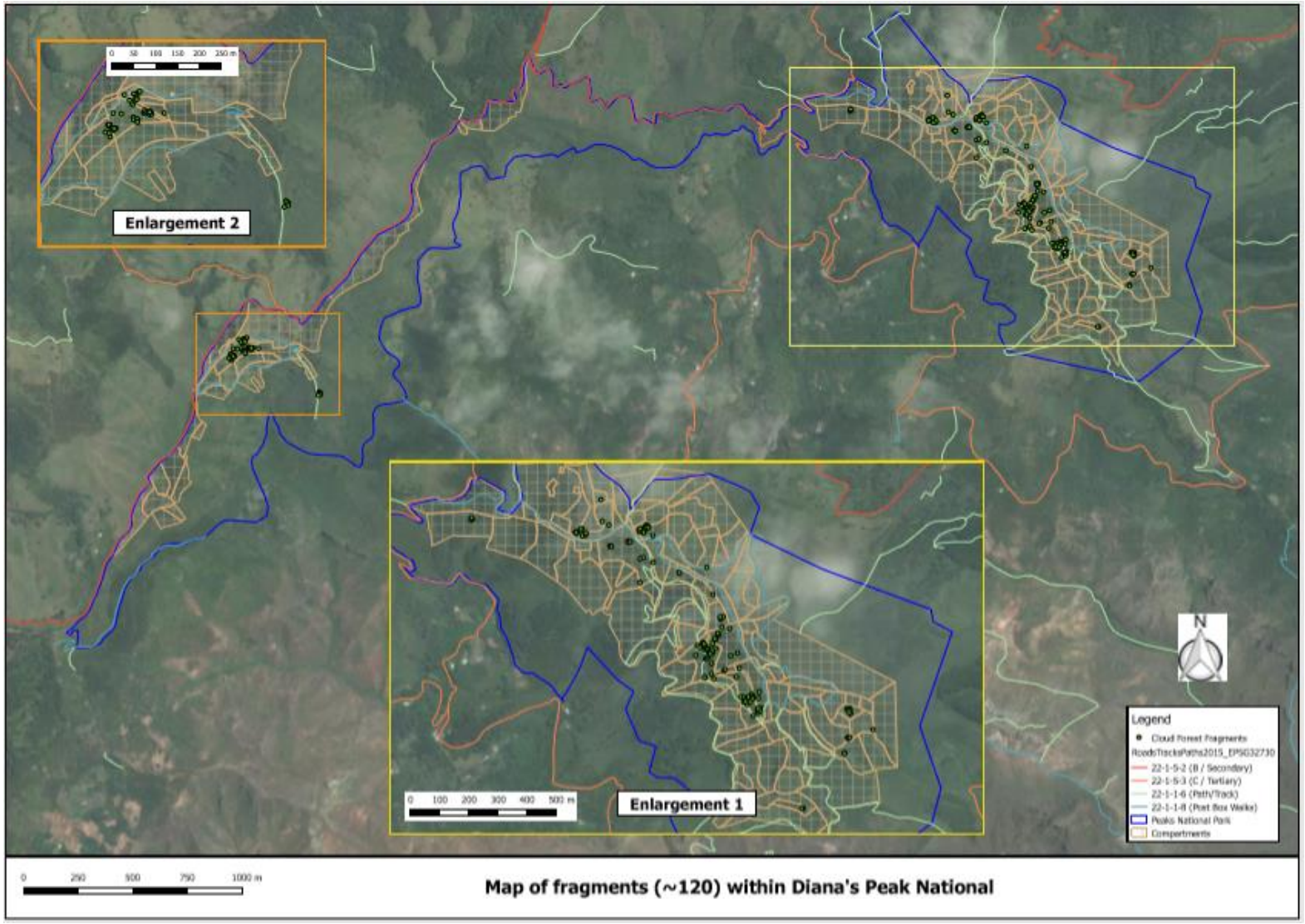


Appendix 1.3 Map of public access points and rights of way



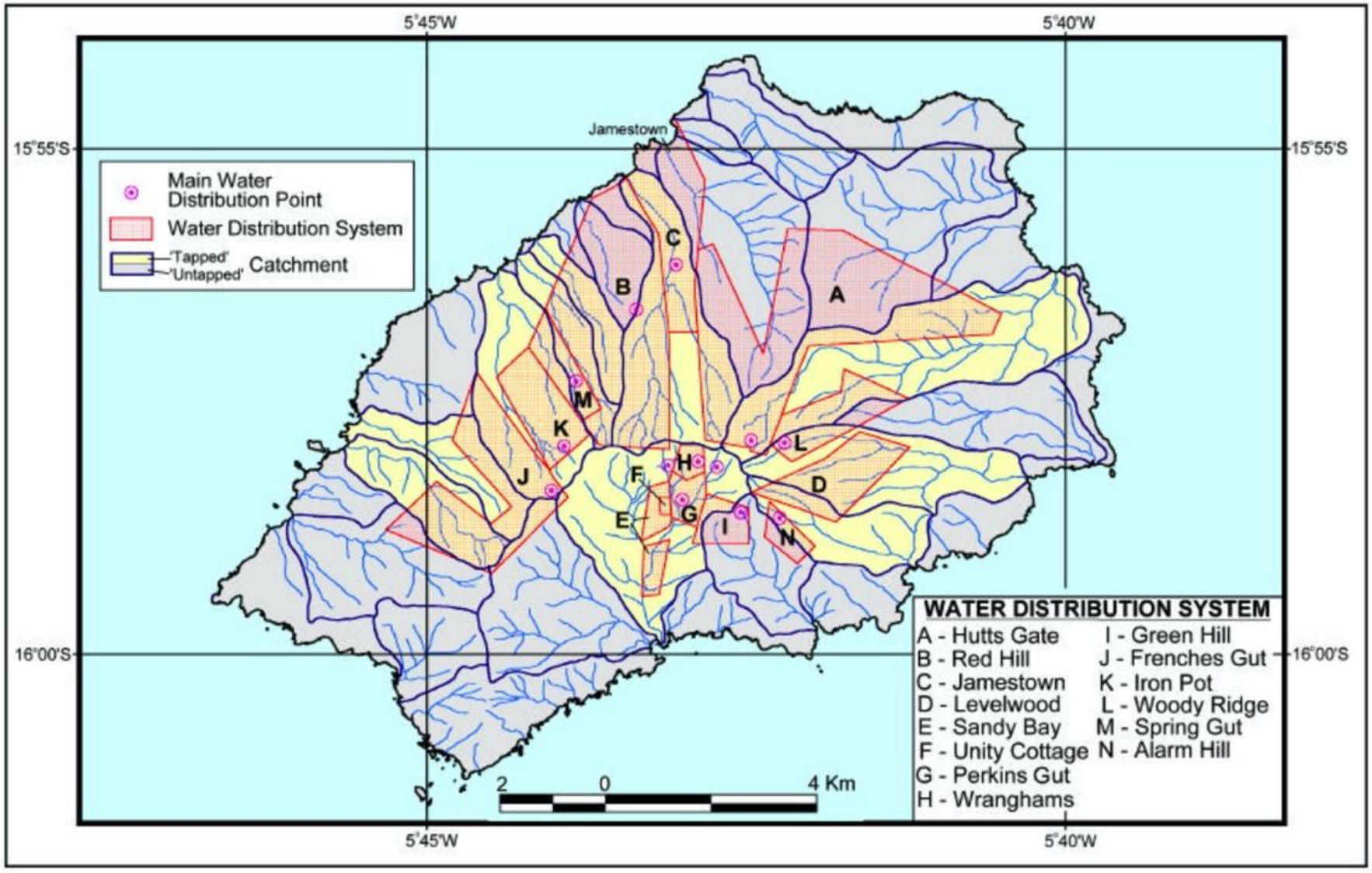
Appendix 2 Additional maps of priority areas for biodiversity and water security

Appendix 2.1 Map of the priority 120 forest fragments for biodiversity

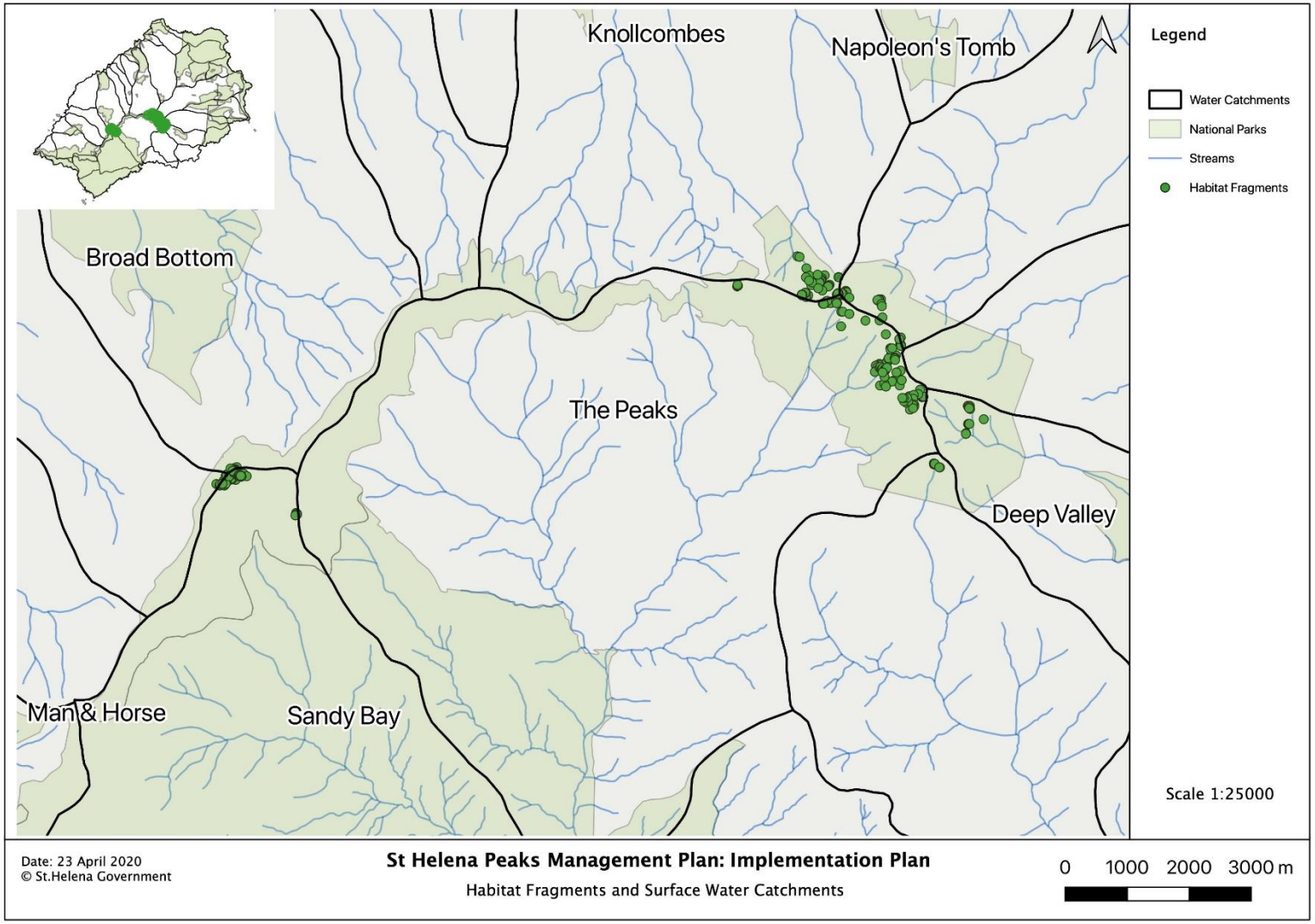


Appendix 2.2 Main water distribution systems of St Helena, showing catchment areas

T&P Report No. 2000241



Appendix 2.3 Map showing the water catchment areas of St Helena and the priority 120 forest fragments for biodiversity



Appendix 3 Technical Advisor input received during development of the implementation plan

Number	Name	Organisation	Date of edit	Plan Version	Action	Comment / suggested change	Incorporated into plan (Y/N)	Notes
1	Norbert Maczey	CABI	26/02/2020	2.1	1.1.4	Maybe formally restrict this (as well as 3a1.12c) to species which can be monitored without disturbing their habitat (e.g. no destruction of deadwood to find deadwood beetles, for which perhaps other indicator species can stand in)? Perhaps also include a range of key invasive species into monitoring protocol?	N	Important point, but needs to be considered during the delivery of the action
2	Norbert Maczey	CABI	26/02/2020	2.1	1.1.11	Can you make things easier by using drone photography to monitor changes?	N	Important point, but needs to be considered during the delivery of the action
3	Norbert Maczey	CABI	26/02/2020	2.1	1.1.13	Maybe worth noting down that a fairly strict protocol needs to be followed to statistically allow to detect changes.	N	Important point, but needs to be considered during the delivery of the action
4	Norbert Maczey	CABI	26/02/2020	2.1	1.4.2	Connecting all 120 fragments will require a minimum of 119 corridors; doing regular invertebrate monitoring in al of them can potentially be very time consuming. You may want to restrict this to a bare minimum of checking on a few easily detectable species. Perhaps worth considering whether the success of corridors can simply be assessed through changes in the fragments themselves?	N	Important point, but needs to be considered during the delivery of the action
5	Norbert Maczey	CABI	26/02/2020	2.1	1.8.1	Are there any native/endemic species to consider, which may benefit from a certain amount of trampling/bare ground?	N	Important point, but needs to be considered during the delivery of the action
6	Norbert Maczey	CABI	26/02/2020	2.1	3.1.6	In the light of recent discussions you could add (or link into) future surveys and identification of endemic entomopathogenic fungi under 3a3.1.5; 3a3.1.6 and 3a3.1.7 [Note: in reference to fungal impacts to invertebrates. Numbering in final version of plan has changed]	N	Important point, but needs to be considered during the delivery of the action
7	Norbert Maczey	CABI	26/02/2020	2.1	3.3.1	It would be very interesting to include the endophytes of endemic plants into this. It is likely that this will be a mixture of common and endemic fungi and bacteria for most species and variations on the level of individuals. Endophytes play a significant role in the resistance to pathogens and herbivores.	N	Important point, but needs to be considered during the delivery of the action
8	Norbert Maczey	CABI	26/02/2020	2.1	3.6.2	This sounds very exciting but also very ambitious to me.	N	Important point, but needs to be considered during the delivery of the action
9	Norbert Maczey	CABI	26/02/2020	2.1	3.7.2	This could include assessing the benefits or risks of using the host specific fungi already present on wasps on St Helena in combination with baits to increase infection and control.	N	Important point, but needs to be considered during the delivery of the action
10	Timm Karisch	Museum für Naturkunde und Vorgeschichte Dessau	25/02/2020	2.1	1.1.13	Selection of representative fragments for investigations on different invertebrates assemblages (soil, litter, dead wood, phytophagous, lichenophagous species …) to avoid too much disturbance?	Y	Additon of 'representative subset' and 'planned effectively to minimise disturbance' to action
11	Timm Karisch	Museum für Naturkunde und Vorgeschichte Dessau	25/02/2020	2.1	1.1.14	Priority invertebrates may also belong to species of gaps in cloud forest vegetation, e. g. Elachista trifasciata for Carex dianae patches; that means such habitats are typical for cloud forest zone but perhaps not concordant with "cloud forest fragments"?	N	Important point, but needs to be considered during the delivery of the action
12	Timm Karisch	Museum für Naturkunde und Vorgeschichte Dessau	25/02/2020	2.1	1.1.15	What about the public database for all insects in internet (BRC, lepiforum-platform)?	N	Would be the decision of SHNT if they have capacity to deliver this, and would depend on the over-arching data management which is a separate action
13	Timm Karisch	Museum für Naturkunde und Vorgeschichte Dessau	25/02/2020	2.1	1.4.1	Careful investigation necessary, if populations of target/priority species from High Peak are different from those at the peaks around Diana's peak.	N	Important point, but needs to be considered during the delivery of the action
14	Timm Karisch	Museum für Naturkunde und Vorgeschichte Dessau	25/02/2020	2.1	NA	Which species?	N	Deletion of action:'Annual monitoring of gene flow to compare against 2019 baseline from current Darwin project'

15	Timm Karisch	Museum für Naturkunde und Vorgeschichte Dessau	25/02/2020	2.1	1.4.2	Movement capability is very different between the invertebrate species and I don't know baselines for that at least for Lepidoptera of St Helena; better to observe the establishment of the typical cloud forest invertebrate assemblages in the corridors; agree with AD, that it will take time for some species, but can also be very quickly for others.	Y	Changed timeline to 'every 2 years'
16	Timm Karisch	Museum für Naturkunde und Vorgeschichte Dessau	25/02/2020	2.1	8.1.4	Beware of Carex dianae!	N	Important point, but needs to be considered during the delivery of the action
17	Timm Karisch	Museum für Naturkunde und Vorgeschichte Dessau	25/02/2020	2.1	1.7.1	Or create wooden lookouts for tourists?	N	Important point, but needs to be considered during the delivery of the action
18	Timm Karisch	Museum für Naturkunde und Vorgeschichte Dessau	25/02/2020	2.1	Activity 1.8	and impacts on soil (peat)	N	Important point, but needs to be considered during the delivery of the action
19	Timm Karisch	Museum für Naturkunde und Vorgeschichte Dessau	25/02/2020	2.1	3.1.1	Moth species (only the already described ones) see Lepidoptera report, p. 12 (2018).	N	Important point, but needs to be considered during the delivery of the action
20	Timm Karisch	Museum für Naturkunde und Vorgeschichte Dessau	25/02/2020	2.1	3.1.11	Basic long term measurements of weather factors on various sites in the cloud forests and modelling of possible effects of climate change are necessary to discuss impacts of climate change on plant or invertebrate species.	N	Important point, but needs to be considered during the delivery of the action
21	Timm Karisch	Museum für Naturkunde und Vorgeschichte Dessau	25/02/2020	2.1	3.3.1	& PhD students?	Y	Incorporated into budget by SHNT
22	Timm Karisch	Museum für Naturkunde und Vorgeschichte Dessau	25/02/2020	2.1	3.6.2	investigation together with 3a3.4.1 [Note, numbering has changed - now 3.4.1]	N	Important point, but needs to be considered during the delivery of the action
23	Timm Karisch	Museum für Naturkunde und Vorgeschichte Dessau	25/02/2020	2.1	3.6.4	Other pollinators of endemic plants?	N	Action remains specific to honeybees
24	Timm Karisch	Museum für Naturkunde und Vorgeschichte Dessau	25/02/2020	2.1	Activity 3.10	Further development of a "National" collection of organisms; staff and means to enable basic taxonomic and identification work on the island.	N	Although important, the PMP might not be the best place to capture this. If a priority, would fall out of delivery of 3.10.2
25	Vicky Wilkins	IUCN Mid-Atlantic Invertebrate Specialist Group	02/03/2020	2.1	1.1.1	Did this already include invertebrate requirements if not they should be integrated in	N	Invertebrate assessments included in other actions
26	Vicky Wilkins	IUCN Mid-Atlantic Invertebrate Specialist Group	02/03/2020	2.1	1.1.3	May be think about integrating into – as I did, is there the possibility if they are separate it will more likely not get done?	N	Important point, but needs to be considered during the delivery of the action
27	Vicky Wilkins	IUCN Mid-Atlantic Invertebrate Specialist Group	02/03/2020	2.1	1.1.4	It would be good to have some indicator endemic species that are monitored – in relation to key habitat types. Ideally CR or EN and this would help track their recovery as w ell	N	Important point, but needs to be considered during the delivery of the action
28	Vicky Wilkins	IUCN Mid-Atlantic Invertebrate Specialist Group	02/03/2020	2.1	1.1.13	Is it effective for everything to be done separately? Surely it should be integrated	N	Currently kept separate to allow for the different roles/aspects of delivery to be clear for the different partners. Can be integrated in delivery
29	Vicky Wilkins	IUCN Mid-Atlantic Invertebrate Specialist Group	02/03/2020	2.1	1.1.14	Or integrate into a wider criteria assessment to strategically, restore, expand and connect fragments	N	Important point, but needs to be considered during the delivery of the action

30	Vicky Wilkins	IUCN Mid-Atlantic Invertebrate Specialist Group	02/03/2020	2.1	1.1.15	All assessment data needs to be analysed and reported on, with results feeding	N	Unclear on what this point was
31	Vicky Wilkins	IUCN Mid-Atlantic Invertebrate Specialist Group	02/03/2020	2.1	1.4.1	Has there been a way of assessing what, where and when should be prioritised and strategic process, starting with priority connections and building up. Suggested addition of 'Identify priority connection areas, by assessing priority species, remaining habitat quality, feasibility of creation and long-term management etc. '	Y	Addition of 'Prioritise habitat corridors during action 0.3.1'
32	Vicky Wilkins	IUCN Mid-Atlantic Invertebrate Specialist Group	02/03/2020	2.1	1.4.2	Corridors need an assessment for quality/priority like the fragments, it would be nice to monitor movements but using the same assessment as fragments.	N	Important point, but needs to be considered during the delivery of the action
33	Vicky Wilkins	IUCN Mid-Atlantic Invertebrate Specialist Group	02/03/2020	2.1	1.5.1	Suggested addition of 'integrate invertebrate microhabitat requirements'	Y	Addition of '[link to 4.6.1, 4.18.1, 5.3.1]'
34	Vicky Wilkins	IUCN Mid-Atlantic Invertebrate Specialist Group	02/03/2020	2.1	NA	This is a bit odd as suggested integrate into above action	Y	Action deleted
35	Vicky Wilkins	IUCN Mid-Atlantic Invertebrate Specialist Group	02/03/2020	2.1	1.8.1	This was in the invert strategy. Suggested addition of 'including sensitive areas for rare and threatened endemic invertebrates (utilising maps)'.	N	Considered just a general point. Considered that 'minimising impact to biodiversity' captures inverts already
36	Vicky Wilkins	IUCN Mid-Atlantic Invertebrate Specialist Group	02/03/2020	2.1	Activity 1.9	It would be great if you could engage them in basic surveys/habitat assessments	Y	Captured in Activity 7.7
37	Vicky Wilkins	IUCN Mid-Atlantic Invertebrate Specialist Group	02/03/2020	2.1	3.1.1	Again this probably needs to be in the wider monitoring section	N	Kept linked to Activity 3.1 to sit within framework of PMP
38	Vicky Wilkins	IUCN Mid-Atlantic Invertebrate Specialist Group	02/03/2020	2.1	3.1.1	Addition of 'endemics and threatened (Red list status) species and define a list of 'priority species' to be integrated into wider monitoring '	Y	Additon of 'including endemic flagships '
39	Vicky Wilkins	IUCN Mid-Atlantic Invertebrate Specialist Group	02/03/2020	2.1	3.1.3	Suggested change to: 'Assess cloud forest fragments vegetation across Central Peaks in relation to endemic invertebrate distribution and potential habitat to ensure all fragments are fully integrated into corridor and expansion decisions'.	N	Action kept as 'Identify areas of cloud forest vegetation across Central Peaks sites with similar characteristics to sites at which SYW or other priority invertebrates already found [SYW Strat 1.1.1]'
40	Vicky Wilkins	IUCN Mid-Atlantic Invertebrate Specialist Group	02/03/2020	2.1	3.1.4	It would be better if this was integrated into the broader monitoring rather than separate – I would move up into the monitoring section	N	Kept linked to Activity 3.1 to sit within framework of PMP
41	Vicky Wilkins	IUCN Mid-Atlantic Invertebrate Specialist Group	02/03/2020	2.1	3.1.5	All invertebrate needs should be considered.	Y	Addition of 'and wider invertebrate needs'
42	Vicky Wilkins	IUCN Mid-Atlantic Invertebrate Specialist Group	02/03/2020	2.1	3.1.6	Suggested addition of 'and their appropriateness as indicator species'	N	
43	Vicky Wilkins	IUCN Mid-Atlantic Invertebrate Specialist Group	02/03/2020	2.1	3.1.7	Suggested addition of 'and integrate into restoration work on basis of findings'	N	
44	Vicky Wilkins	IUCN Mid-Atlantic Invertebrate Specialist Group	02/03/2020	2.1	3.1.9	Suggested addition of 'and map' and 'to inform nature and targeting of restoration work'	N	Considered that this would be included under 'assess'. Up to SHNT on how to deliver this action and that the results might inform more than specifically restoration work
45	Vicky Wilkins	IUCN Mid-Atlantic Invertebrate Specialist Group	02/03/2020	2.1	3.1.10	Addition of 'to further inform ongoing work, particularly for key groups'	Y	Addition of 'to further inform ongoing work, particularly for key groups'
46	Vicky Wilkins	IUCN Mid-Atlantic Invertebrate Specialist Group	02/03/2020	2.1	3.6.2	Addition of 'pollination provisions'	Y	Addition of 'pollination provisions'
47	Vicky Wilkins	IUCN Mid-Atlantic Invertebrate Specialist Group	02/03/2020	2.1	3.10.2	Change to 'with a need for'	Y	Change to 'with a need for'

48	Ben Sansom	Arctium	27/02/2020	3.1	NA	Addition of water pillar actions. See Tab 2.	Y	See Tab 2
49	Ben Sansom	Arctium	02/03/2020	4.1	NA	Need to amend numbering	Y	Numbering redone and simplified
50	Ben Sansom	Arctium	02/03/2020	4.1	NA	Section 4 needs to identify priority water resource catchments in YR1 in order to set up water resource monitoring networks. Will need to co-ordinate with teams delivering Section 3 [biodiversity] of the PMP, so they can then develop the cloud forest creation plan in YR2.	Y	Made clearer in the management pillar through the addition of Activity 0.3 ' Appropriate cross-cutting planning across pillars'
51	Ben Sansom	Arctium	02/03/2020	4.1	4.14.1	Addition of 'Co-ordinate with soil biodiversity work in 3.5 to avoid duplication of sample locations'	Y	Addition of 'Co-ordinate with soil biodiversity work in 3.5 to avoid duplication of sample locations'
52	Ben Sansom	Arctium	02/03/2020	4.1	4.14.2	Addition of 'Data used to support water resource assessments'	Y	Addition of 'Data used to support water resource assessments'
53	Ben Sansom	Arctium	02/03/2020	4.1	4.18.1	Need to ensure there is a clear narrative between 3a and 3b regarding cloud forest habitat restoration and island water security. Need to ensure that 3a and 3b have clear links. See 3a1.5.3 in Section 3a	Y	Made clearer in the management pillar through the addition of Activity 0.3 ' Appropriate cross-cutting planning across pillars'
54	Ben Sansom	Arctium	02/03/2020	4.1	5.3.1	These targets were identified during the Dec 2018 workshop [Expand continuous area of cloud forest to mitigate negative impacts of habitat loss through climate change. Stretch targets comprise: • 12ha of non-native and degraded vegetation above 690m restored to cloud forest habitat over 10 years • 4ha of existing native habitat diversified to increase mist capture • Additional water capture (33%) and improved retention and flow control within 10 years.] and included within the PMP. Need to confirm timescales (change to 5 years) and reduce the improvement in flows proportionately. Suggest halving all targets due to reduced project timescales e.g. 6ha, 2ha and 15% water capture.	Y	Made clearer in the management pillar through the addition of Activity 0.3 ' Appropriate cross-cutting planning across pillars' & matched the introduction to echo the targets listed in the PMP
55	Marcella Corcoran	RBG Kew	27/04/2020	4.3	0.1.4	Nursery tech with groups on island I am assuming with remote input from Kew if needed?	Y	Added '& other stakeholders'
56	Marcella Corcoran	RBG Kew	27/04/2020	4.3	2.1.7	Ascension Island has been growing ferns from spore in lab for a few years now. Still a bit to be ironed out but training can be modelled on what was done there; incorporating what needs to be better	N	Important point, but needs to be considered during the delivery of the action
57	Marcella Corcoran	RBG Kew	27/04/2020	4.3	2.1.9	Seed banking no problem. Living collections at Kew more challenging because of space; however, ideal to have each species backed up and represented somehow off island.	N	Important point, but needs to be considered during the delivery of the action
58	Marcella Corcoran	RBG Kew	27/04/2020	4.3	2.3.1	Has budget been set aside to complete a laboratory? Currently (I think) there is only a laminar flow bench. There are a few expensive pieces of equipment needed to make this work well	Y	Inputs from RBG Kew included in budget
59	Marcella Corcoran	RBG Kew	27/04/2020	4.3	2.4.1	Is this something that might start with the Darwin project (if successful) that is currently in for funding on banking seed at Scotland nursery (partner the Millennium Seed Bank?) It would be a good start	N	Unclear if Darwin funding is in place
60	Colin Clubbe	RBG Kew	07/05/2020	4.3	0.2.1	Ensure this links to island-wide biosecurity programme	Y	Added 'linking to island-wide biosecurity programme
61	Colin Clubbe	RBG Kew	07/05/2020	4.3	Objective 1	I would like to see more implicit expression of the importance of securing the current cloud forest even if only a slight rephrasing of overall objective as it is implicit in Activity 1.1 Eg Existing cloud forest patches are secured, connectivity improved, and overall area and quality increased through…	Y	Added 'Remaining cloud forest is secured and…'
62	Colin Clubbe	RBG Kew	07/05/2020	4.3	Activity 1.1	I suggest evaluate and monitor. It is important to establish the baseline for the monitoring, unless you think you already have this?	Y	Added 'evaluate'
63	Colin Clubbe	RBG Kew	07/05/2020	4.3	1.1.11	Can some of this be accomplished via drones to minimise possible disturbances?	N	Important point, but needs to be considered during the delivery of the action. Captured under anthoer action.
64	Colin Clubbe	RBG Kew	07/05/2020	4.3	1.2.3	I would separate our seed collecting as a separate activity because of its specialist nature and quite different from clonal collecting. You can then also make reference to links with the MSB and support from Kew in this. Also making use of material we may have that can contribute to increased genetic diversity	Y	Split into action 1.2.4

65	Colin Clubbe	RBG Kew	07/05/2020	4.3	1.2.6	Suggest you need a separate activity to ensure the adequate supply and provenance pf these cultivated plants	N	Considered that this has been appropraitely covered elsewhere – nursery actions
66	Colin Clubbe	RBG Kew	07/05/2020	4.3	1.4.2	Valuable to also have a separate activity monitoring success of corridor plantings -what is thriving, what's not etc	Y	Addition of Action 1.4.3
67	Colin Clubbe	RBG Kew	07/05/2020	4.3	1.7.2	A general comment on invasive plants. There are several paces and activities where invasive plant removal comes up and they sound like individual activities. It's important that these activities are co-ordinated together to provide an integrated approach to invasive plants control and I think it'd be helpful to draw these together in the plan eg make reference to an invasive plant management strategy which broadens consideration beyond the Park and the specific buffer zones and considers the wider source populations.	Y	Addition of Action 0.3.3
68	Colin Clubbe	RBG Kew	07/05/2020	4.3	Activity 2.1	Kew are happy to be a back-up/support/advice in any of these sections wherever you would like to include an overseas partner	Y	RBG Kew added to the 'who?' column
69	Colin Clubbe	RBG Kew	07/05/2020	4.3	2.1.10	Perhaps useful to add Kew here as well to support seed banking activities and cross-reference between StH and MSB. Happy to see Kew in a supportive role for any of the ex situ activities – whatever you think appropriate	Y	RBG Kew added to the 'who?' column
70	Colin Clubbe	RBG Kew	07/05/2020	4.3	Activity 2.2	Likewise - Kew are happy to be a back-up/support/advice in any of these sections wherever you would like to include an overseas partner	Y	RBG Kew added to the 'who?' column
71	Colin Clubbe	RBG Kew	07/05/2020	4.3	2.4.2	Are there thoughts to have cryopreservation facilities on island or is this impractical and too expensive?	N	Need guidance from SHG on this
72	Colin Clubbe	RBG Kew	07/05/2020	4.3	2.4.3	Are you thinking of a serious upgrade in your facilities for long-term storage and will this include cryopreservation (see above) and is this contingent on getting the D+ grant? Are full costs of the new facilities needed included in the budget?	Y	Ensure costs are built into the budget
73	Colin Clubbe	RBG Kew	07/05/2020	4.3	3.3.1	Stating the obvious: this is a big and specialist task to complete in one year, even at a scoping level. Do you have interested researchers lined up with appropriate facilities and expertise?	N	Need guidance from SHG on this
74	Colin Clubbe	RBG Kew	07/05/2020	4.3	Activity 7.2	I think it would be important to undertake a full natural capital assessment of the Peaks to demonstrate I's value and importance across these various sectors, unless this has already been done and is current and available. I would make reference to it here.	Y	Added link to JNCC's Natural Capital report
75	Silvia Pressel	NHM	03/07/2020	4.4	1.1	Epiphytic bryophytes (and lichens) are also very good indicators of habitat quality/forest integrity, although in terms of diversity, bryophyte diversity is highest in the Peaks (most endemics occur there) while lichen diversity is fairly low. Most actions listed here for invertebrate species could be applied to bryophytes, including training/capacity building	Y	Incorporate bryophytes into monitoring programme and add actions adapting 1.1.1, 1.1.4, 1.1.5, 1.1.6 for bryophytes
76	Silvia Pressel	NHM	03/07/2020	4.4	1.2.2	In terms of invasive bryophytes, the invasive moss Scleropodium purum, which is fast spreading on the islands, including the highest peaks, should be monitored. Scleropodium is not a forest species but may become a threat in open areas where the endemic Sphagnum helenicum grows. Perhaps set up mapping to see if it starts to take over. It may also pose a threat to another indigenous species, the complex thalloid liverwort Marchantia berteorana, which is only known to occur in one place just below Diana's Peak (see Martin's book). Control of the invasive Scleropodium purum should be a priority – I guess it already is. Possible overgrowth of Sphagnum by grass may also be a problem and should be monitored	Y	There is a danger of issues falling between the gaps because of the separate focus given to the 120 fragments, catchments and path management which the Peaks Imp Plan now needs to address. Include invasive bryophyte monitoring (there's another species that might warrant addition) in monitoring and development of effective control techniques. There's a lot of very specific species conservation work that needs a microhabitat approach - ferns, bryophytes are good examples here. The Marchantia and Dryopteris napoleonis may well have been negatively affected by path construction/management. Some scleropodium control measures incorporated into path management, but needs recording, reviewing, refining. Depot a key biodiversity spot for S. helenicum, as well as D. napoleonis, W. linifolia and B. burchelli not included in 120 fragments - what's there now? Must be part of the Peaks Imp Plan. Suggest we add an

								action 1.2.11 Map Scleropodium on the Peaks, describe current control measures, identify priority control areas, review and refine current activities and expand control in priority areas?
77	Silvia Pressel	NHM	03/07/2020	4.4	2.1	This objective could also include endemic bryophyte species e.g. Sphagnum helenicum and possibly others if identified as threatened – this may require Action 3.2.3 to be brought forward from yr 4.	Y	Identify priority species for gene banking and ex-situ propagation. Include training. Add an action under 2.1 to review bryophyte priorities for living gene banking. May need to incorporate into 2.1.7 when taking forward the implementation of the plan. Include bryophytes when developing protocols 2.2.1 & 2.2.6 can be done in implementation of the plan.
78	Silvia Pressel	NHM	03/07/2020	4.4	3.1	Bryophytes also good indicators; priority species could be identified and monitor accordingly. One species that comes to mind is the endemic epiphytic hornwort Dendroceros adglutinatus – very distinctive and easily identifiable in the field vs. several epiphytic leafy liverworts in the Lejeuneaceae which are more challenging to do with a hand lens but have similar habitat requirements. These epiphytes are not necessarily host specific but, at least some, occupy a very narrow niche, being confined to the most pristine cloud forest on the Peaks – these require high humidity afforded by a closed, think canopy. Again, most of the actions listed under activity 3.1 could be extended to and adapted for bryophytes	Y	Add new Action with Activities adapted from actions 3.1.1, 3.1.2, 3.1.5, 3.1.6, 3.1.8, 3.1.9, 3.1.11 for bryophytes. Other actions captured in 3.2 see below.
79	Silvia Pressel	NHM	03/07/2020	4.4	3.2.3	The most striking aspect of the bryophyte flora of St. Helena is the number of endemic species, with at least 29 species out of a total of approx. (probably more) 110 species of bryophytes being endemic to the island – some 26% of the total bryoflora. These include three species 'shared' with Ascension Island. Endemic species include mosses, such as the threatened Sphagnum helenicum, several liverworts, including many tiny leafy adorning the fronds of ferns, and at least one hornwort, Dendroceros adglutinatus. We suspect that the Ascension endemic Anthoceros cristatus may also occur on the island i.e. the unidentified Anthoceros sp. described by Martin Wiggington in his 2012. This hornwort occurs on Diana's Peak and we also found a large population at Blue Point, growing with an abundant Fossombronia sp. new to the island. Sequencing work to determine phylogenetic affinities of this species (and others, especially endemics) would also be very useful.	Y	Amend actions 3.2.3 to say "Conduct new and update existing Red List Assessments of priority plant, invertebrate and bryophytes species (including but not limited to S. helenicum) in Year 4". This action would be carried out in Year 4 or earlier based on new data being provided in the preceeding years. Amend Action 3.2.4 by removing "and conduct Red List Assessment for Sphagnum helenicum" because this is now part of 3.2.3. Add new action 3.2.5 "Implement research recommendations (from 2012 & 2017 research led by Martin Wigginton & Silivia Pressel for priority bryophytes mapping of species distributions, abundance & habitat requirements
80	Silvia Pressel	NHM	03/07/2020	4.4	3.2.3	The main threat to the bryophyte flora comes from habitat degradation/loss, if you maintain the pristine vegetation then you will maintain most of the bryophyte diversity, including most endemics. Indeed, about 20 of the endemics are found in the Peaks National Park – but see previous comments on Sphagnum. Actions (some already mentioned before): Accurate mapping of species distributions/habitat requirements and specifications etc. Dendroceros, same distributions as most Lejeunaceae, accurate mapping of Dendroceros would be a good start Sequencing work Preserve pristine forest Ex situ conservation – in-vitro cultivation of bryophytes alongside ferns Training in bryophytes for local conservations staff	Y	see comment above

81	Silvia Pressel	NHM	03/07/2020	4.4	7.1	Bryophytes could also be integrated here e.g. some stunning bryophytes either because of incredible coverage of tree trunks, branches and leaves but also see large, stunning species such as the liverwort Pleurozia gigantea, very easily appreciated by non-experts. This could be directed to the 'island' but also targeted at tourists, see for example: https://www.cascada.travel/en/News/Mosses-and-Men-Inside-Enchanting-Miniature-Forests-Cape-Horn	Y	Of mosses and men is a good example of micro tourism - and combines nicely with the invertebrate work - to develop a 'Magnifying Glass Tourism" approach. Ensure bryophytes incorporated into 7.7.1 and that the Research Programme is holistic, responsive and adaptive to identified knowledge gaps and new findings (7.7.5). Amend action 7.7.2 to include websites and training as communication channel and visitors and tour guides as a target audience and add and action to "Keep under review the incorporation of new scientific knowledge into education/interpretation and promotional actions and activities"

Appendix 4 Feedback received from informal landowner consultation in April 2020

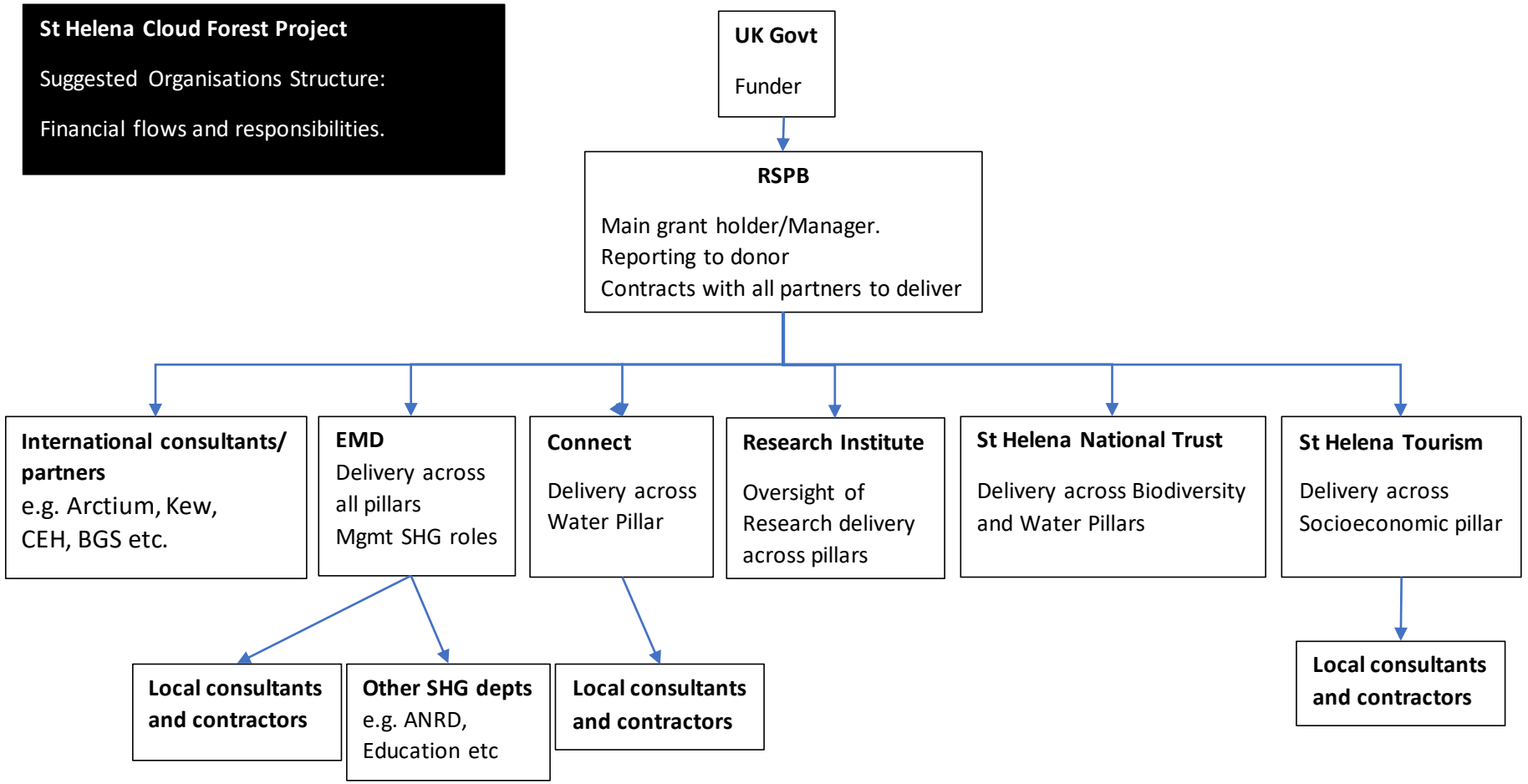
'There are two elements that we consider it is important to raise. The first being the need to ensure that the ecological restoration work for water security is fully integrated within the biodiversity pillar. This we note Ben [Sansom] has highlighted in his comments and we support that. The water catchment management element, supported by the Peaks teams, will contribute (over the 10 year life span of the Peaks Management Plan) the most significant increase in cloud forest habitat (if I remember my sums – from the plan it was about 4 ha from the 120 fragments, their radial expansion and corridor connectivity and the rest – 8 ha comes from the wider restoration work (in the catchments, on the ridge etc. – and I have suggested links to these in the document). The development of the existing teams and integration of new staff with them to deliver the restoration work across all activities is critical to the success of this project. This was raised and discussed by the biodiversity pillar group.

The second is the addition of potential to drill new bore holes to monitor water table (4.12.4 and 4.12.5). We question the need to include this activity and ask for justification and ask whether less invasive alternatives could be considered. There is already much concern about impacts of drilling boreholes and water security. Identification and monitoring of existing boreholes makes sense. [Actions 4.12.4 – 4.12.6 have been modified to incorporate this feedback].

This time of year is when the whiteweed erupts into a mass flowering spectacular clothing the countryside and roadside verges in white fragrant flowers. It can be quite depressing in its beauty and sweet scent! We hope that the development of the Peaks Management Plan, in due course, will act as a catalyst for developing ambitious land management plans to secure funding for the land adjacent to and below the 690 m contour that will lead to actions to ensure the resources are available to deliver continuity of effort to bring weeds under control in managed areas and support the expansion of agricultural and forestry programmes in support of Island productivity/greater self-sufficiency and conservation. The Peaks cannot be managed in isolation, nor can the Island afford to let land become less or unproductive and a source of weeds. Lesson learnt and skills sets developed in the different sections can be shared across ENRPD. The Island needs to maintain productive land and increase the land area that is managed sustainably (economically).'

'Thanks for the invite, we will be in the middle of cargo on Tuesday but please let me know if you need anything from [us]. We don't have any questions about the plan but we fully support it, especially the bit about replanting endemics for mist capture.'

Appendix 5 Proposed organisational structure of a large project to enable delivery of the Peaks Management Plan



Appendix 6 Terms of Reference for Project Development Group and Technical Advisors

Peaks Management Plan: Project Development Group

TERMS OF REFERENCE Version 1.1. January 2020.

Purpose/role: To support the development of an implementation plan and fully costed budget to enable the development of a project proposal for external funding to support the delivery the 2019-2023 Peaks Management Plan (PMP). The proposed future management would involve a Peaks National Parks Authority responsible for the delivery of the PMP and a separate project team to manage and deliver the externally funded project. Once developed and signed off by SHG by the 31 March 2020, this will be taken to the UK Government as a large-scale project as part of a fundraising effort.

Membership: Membership of the PMP PDG discussed and agreed upon during the first meeting to ensure appropriate representation. Should any member need to stand down from the group or cannot attend meetings, an appropriate replacement member will be identified/designated in advance to ensure appropriate representation of the PMP stakeholders on this group is maintained. The group membership is as follows:

- Sasha Bargo, Environmental Management Division, SHG
- Rebecca Cairns-Wicks, St Helena Research Institute, SHG
- Steve Coates, Education, SHG
- Amanda Curry-Brown, corporate services, SHG
- Amy Dutton, St Helena National Trust
- Neil Fantom, corporate services, SHG
- Melissa Fowler, Tourism
- Sarah Havery, RSPB
- Lawrence Muranganwa, Connect
- Isabel Peters, Environmental Management Division, SHG
- Vanessa Thomas-Williams, Environmental Management Division, SHG

Responsibility: Sasha Bargo (EMD) and Sarah Havery (RSPB) are responsible for draft versions of the implementation plan, version control of the plan documents and budget based on agreed consensus of the group, and scheduling, chairing and minuting meetings. All members of the group are responsible for the following:

- Attendance of regular meetings to provide verbal input to implementation plan development;
- Support the development of the implementation plan by providing written feedback on draft versions of the implementation plan document;
- Support the development of the budget by sourcing appropriate figures as required/ delegated;
- To request specific input from the identified technical advisors as required;
- To provide regular updates as appropriate to their respective colleagues and management of their organisation and externally as required;
- To adopt a positive collaborative approach and to advocate externally for the need to develop and to fund this implementation plan as an independent project.

Accountability: Each member of the group is accountable for the following:

- To act as a representative for the respective stakeholder involved in the delivery of the Peaks Management Plan;
- To ensure appropriate input from their respective organisation into the development of the implementation plan.

Review: The ways of working of this group will be reviewed as appropriate during the regular meetings.

Ways of working: The proposed structure for pulling the implementation plan together is to have (a) this development decision-making group, (b) a group of Technical Advisors to input as needed, and (c) a group of higher-level staff in SHG, FCO etc to be kept up to date, informed and supportive of the plan as it develops.

Sasha Bargo (EMD) and Sarah Havery (RSPB) will coordinate this group. This group will be in regular communication via email to provide written input/feedback to the draft implementation plan and budget. Progress will be discussed during regular meetings, and any arising actions will be delegated to appropriate group members.

Any decisions will be made through agreed consensus of this group during one of the regular meetings.

Meetings: Regular meetings will be held with the PDG approximately every two weeks between mid-December 2019 and end March 2020. With the short-timeframes involved, it is unlikely that all group members will be able to attend all meetings, therefore meetings will be held when a minimum of 80% of group are available.

Peaks Management Plan: Technical Advisor

TERMS OF REFERENCE Version 1.1. January 2020.

Role: To support the Project Development Group (PDG) by providing specific technical advice during the development of an implementation plan and fully costed budget to enable the development of a project proposal for external funding to support the delivery of the 2019-2023 Peaks Management Plan (PMP). The proposed future management would involve a Peaks National Parks Authority responsible for the delivery of the PMP and a separate project team to manage and deliver the externally funded project. Once developed and signed off by SHG by 31 March 2020, this will be taken to the UK Government as a large-scale project as part of a fundraising effort.

Responsibility: All Technical Advisors are responsible for the following:
- To provide relevant advice to aid the development of the implementation plan in their area of expertise at the request of the PDG;
- Support the development of the implementation plan by providing written feedback on their area of expertise within the draft versions of the implementation plan document at the request of the PDG;
- Support the development of the budget by sourcing appropriate figures as required/ delegated at the request of the PDG;
- To respect the decisions made by the PDG in terms of the development of the implementation plan and budget;
- To provide regular updates as appropriate to their respective colleagues and management of their organisation and externally as required;

- To adopt a positive collaborative approach and to advocate externally for the need to develop and to fund this implementation plan as an independent project.

Accountability: All Technical Advisors will ensure that any advice that this given to the PDG is appropriate for the delivery of the Peaks Management Plan and adheres to their organisation's policies and procedures.

Review: The feedback received by the Technical Advisor will be reviewed by the PDG during their regular meetings (approximately every 2 weeks between mid-December and end March 2020).

Ways of working: The proposed structure for pulling the implementation plan together is to have (a) the PDG as a development decision-making group, (b) a group of Technical Advisors to input as needed, and (c) a group of higher-level staff in SHG, FCO etc to be kept up to date, informed and supportive of the plan as it develops.

Members of the PDG will contact Technical Advisors as required with specific questions and/or to request input. Any feedback received will be reviewed by the PDG and incorporated into the implementation plan as deemed appropriate by consensus of the PDG. All Technical Advisors will be acknowledged in the plan document. All members of the PDG will keep Sasha Bargo and Sarah Havery copied into emails to advisors to ensure that there is a record of the requests and the feedback received.