

Stony Farm Reserve

Management Plan 2017-2021



www.tasland.org.au

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Front Image: Stony Farm Reserve dry forest by Helen Morgan

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Acronyms and abbreviations

DPIPWE	Tasmanian Government Department of Primary Industries, Parks, Water and Environment
EPBC Act	Australian <i>Environment Protection and Biodiversity Conservation Act 1999</i>
FT	Forestry Tasmania
IUCN	International Union for Conservation of Nature
NC Act	Tasmanian <i>Nature Conservation Act 2002</i>
NETLT	North-east Tasmania Land Trust Inc. http://www.netlandtrust.org.au/
NVA	Natural Values Atlas database (DPIPWE)
PWS	Tasmania Parks and Wildlife Service (DPIPWE)
TASVEG	Tasmanian Vegetation Monitoring and Mapping Program (TASVEG 2.0, 19 February 2009)
TFS	Tasmania Fire Service
TLC	Tasmanian Land Conservancy
TSP Act	Tasmanian <i>Threatened Species Protection Act 1995</i>
UTAS	University of Tasmania

ADAPTIVE MANAGEMENT FRAMEWORK

The TLC aims to demonstrate excellence in management for biodiversity conservation and has adopted the *Open Standards for the Practice of Conservation*, which is an international system of adaptive management developed by the Conservation Measures Partnership (<http://www.conservationmeasures.org>). The *Open Standards* provides a guide to planning and implementing conservation actions through a model of adaptive management (Fig. 1).

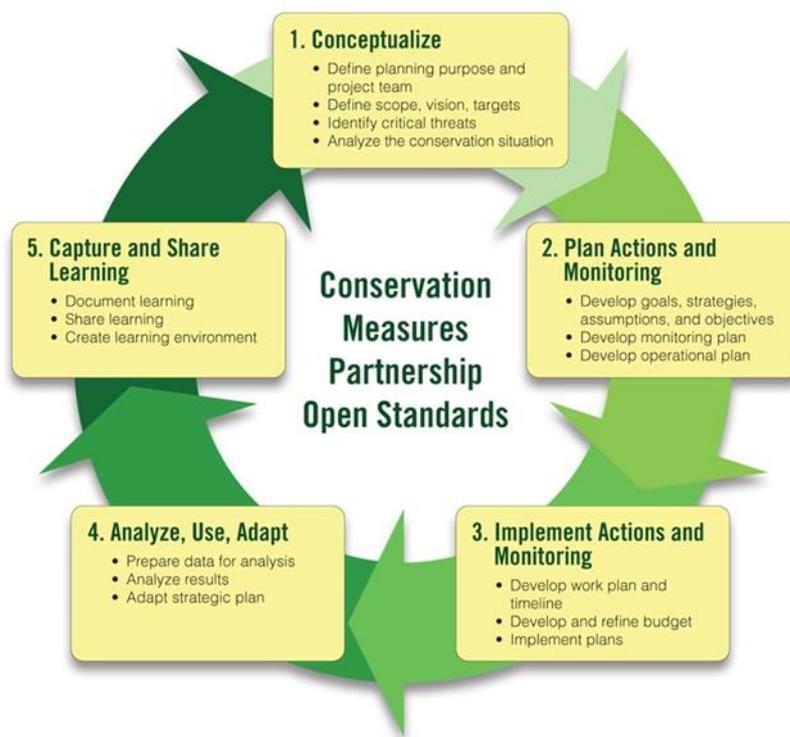


Figure 1 Open Standards adaptive management model, developed by the Conservation Measures Partnership.

Conservation Action Planning

This management plan represents the outcomes of the first three stages of the Open Standards adaptive management model. Conservation targets have been selected that describe broad ecosystem classes or habitat types. Ecological indicators are selected for each target and used to monitor changes in their condition. Threats to each of the targets are then identified, along with the factors that contribute to the threats, and these are prioritised depending on the extent, likelihood and severity of the impact of these threats to the conservation targets. Strategies to manage these threats are developed, with consideration given to the environmental, social and economic feasibility of each strategy.

Implementation of Management Strategies

Strategies to mitigate the threats to conservation targets are assessed for their feasibility and prioritised according to the likelihood and extent of mitigating the threat, the resources required and the resources available to implement the strategy.

Five-year work plans are developed to implement the management strategies and to record the specific activities to be undertaken, their timing and the resources required. Work plans also allocate budgets, allowing the TLC to plan ahead to ensure appropriate capacity to deliver reserve management activities.

Ecological parameters are also considered when scheduling works, to ensure that projects are undertaken when they are most likely to succeed. Progress against activities in the work plan is reviewed annually.

Monitoring and Evaluation

The TLC implements a monitoring and evaluation strategy across all of its permanent reserves. Monitoring of specific ecological indicators enables the collection of scientifically robust information on the status and trends of the conservation targets. Measuring the success of management actions is also critical for ensuring successful long-term management of the targets. Four types of monitoring conducted at intervals from 1 to 5 years:

- **Long-term ecological monitoring** establishes a baseline measure of ecological indicators and subsequently provides an early warning of deleterious changes in the conservation targets. The results of this monitoring allow reserve managers to develop mitigation measures and reduce future costs of remedial management.
- **Annual reserve assessments** are undertaken once per year by NETLT and/or TLC reserve management staff across all permanent reserves to identify any new or emerging threats that have the potential to reduce the viability of the targets. Early identification of threats allows early management interventions to mitigate a threat.
- **Management effectiveness evaluation** provides land managers with information that is essential to determine the efficacy of management efforts. Data are collected on management inputs and biodiversity outputs, using indicators specific to measuring the success of each management strategy.
- **Change detection analysis** using remote sensing GIS data, is undertaken to assess the impact of management strategies on vegetation cover and changes in surrounding land cover that could indicate any 'leakage' – shifting of a threatening process from a reserve to surrounding areas. Where this is identified, the TLC works with neighbouring landholders to develop local or regional mitigation strategies.

Reporting and Adapting

The results obtained from monitoring are used to adapt and direct on-ground works and update annual work plans and reserve management plans. The status of conservation targets, trends in ecological indicators and outcomes of reserve management activities are communicated to the TLC's Board and Science Council, stakeholders and the community through a range of regular communication channels including an annual report.

OVERVIEW

VISION	The Stony Farm Reserve is managed effectively for its dry forest values.
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CONSERVATION TARGET	GOAL
Dry forest ecosystem	Maintain or improve the 2016 condition of the forest
SOCIAL TARGET	GOAL
NETLT connection to the landscape	The NETLT community remain engaged with the Reserve and region
STRATEGIES	OBJECTIVES
Improve knowledge of natural values	By 2020 threatened species and other natural values on the Reserve are better known and being managed effectively
Access control	No illegal access into the Reserve by recreational vehicles
NETLT Partnership	Maintain effective communications and partnership with NETLT
Annual Reserve assessment	No new threats emerge from 2016

INTRODUCTION

Stony Farm Reserve (the Reserve) was gifted to the Tasmanian Land Conservancy TLC by the Schier family in 2014. The Reserve is 22.26ha of forested land on the slopes of North Sister in north-east Tasmania, approximately 7.5km north of St Marys (Figure 2).

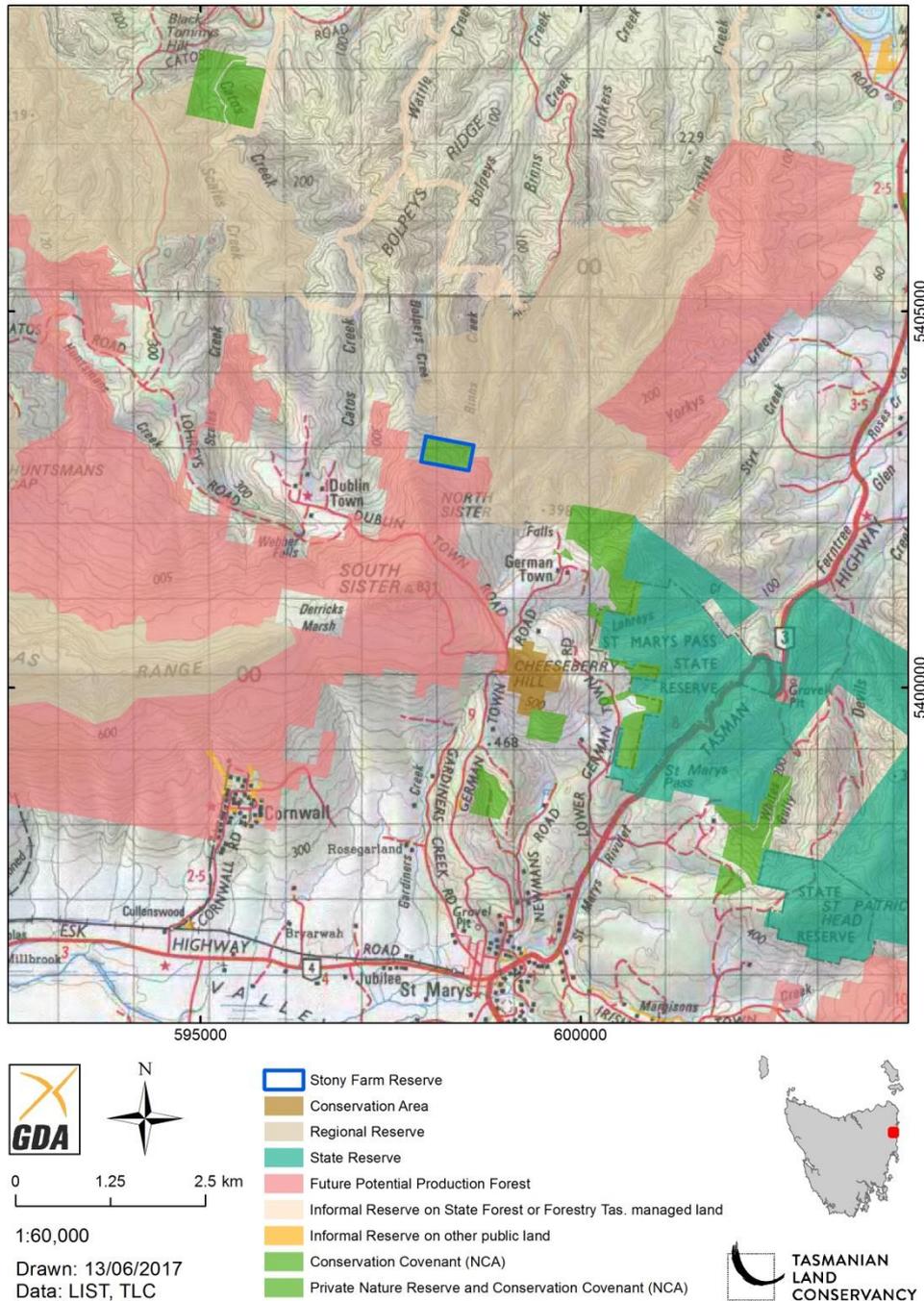
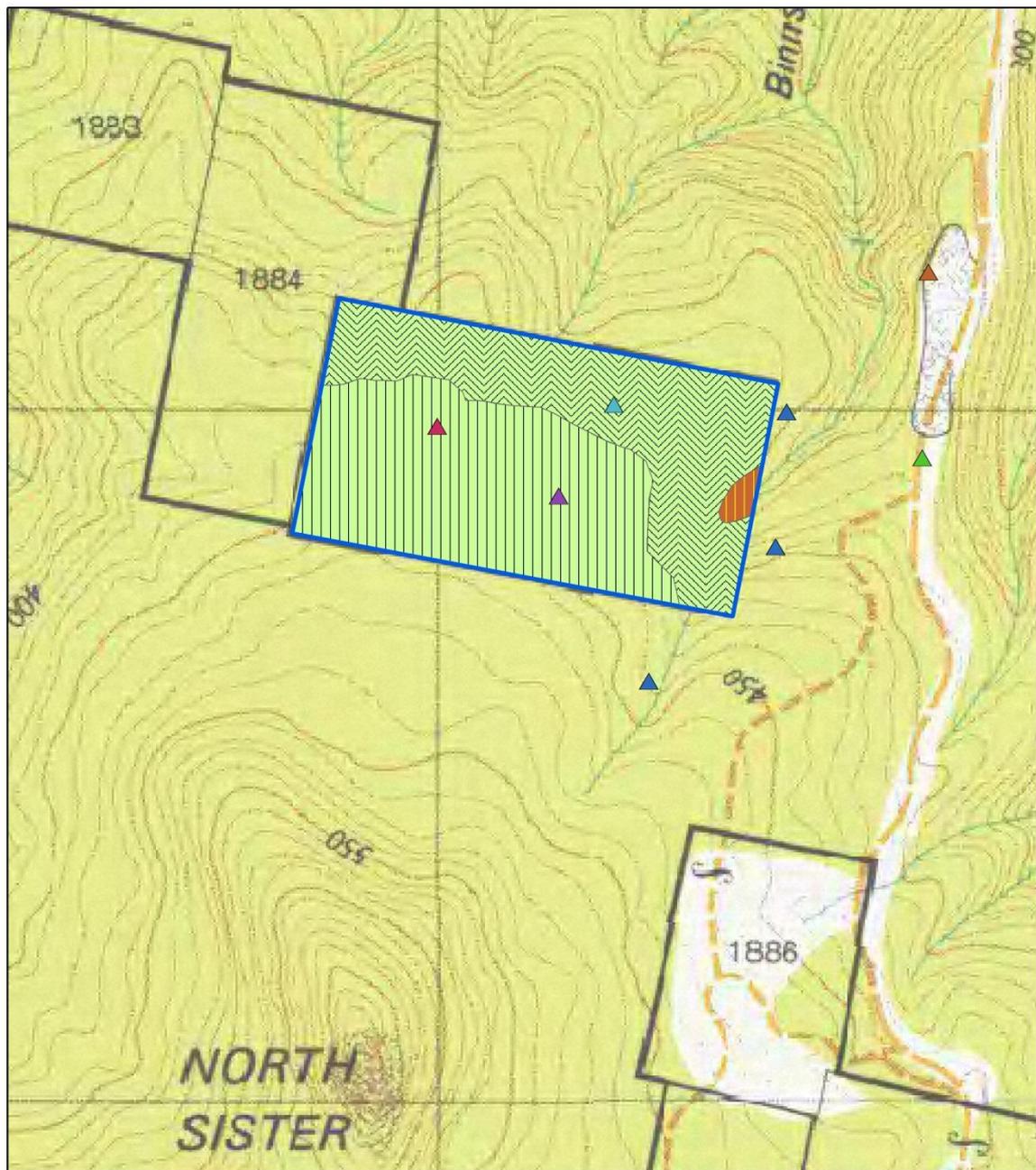


Figure 2. Location of the Stony Farm Reserve, north-east Tasmania



0 150 300 m

1:7,500

Drawn: 13/06/2017
Data: LIST, TLC

- Stony Farm Reserve
- Eucalyptus globulus forest (DGL)
- Eucalyptus obliqua dry forest (DOB)
- Broadleaf scrub (SBR)
- Eastern quoll (*Dasyurus viverrinus*)
- Shade plantain (*Plantago debilis*)
- Roundleaf mintbush (*Prostanthera rotundifolia*)
- Spotted-tailed quoll (*Dasyurus maculatus*)
- Tasmanian devil (*Sarcophilus harrisii*)
- Giant velvet worm (*Tasmanipatus barretti*)



Figure 3 Vegetation and threatened species records, Stony Farm Reserve.

Forest communities on the Reserve include dry blue gum (*Eucalyptus globulus*) forest (DGL), which is listed as a threatened vegetation community in Tasmania (see Fig.3, Table 1). The Reserve provides suitable habitat for a number of threatened species that have been recorded on or in the near vicinity of the Reserve (Tables 2 and 3).

Table 1 Vegetation communities mapped at the Stony Farm Reserve (TASVEG 3.0)

Vegetation community	TASVEG code	Approx. Area (ha)	Conservation status (NCA 2002)
<i>Eucalyptus globulus</i> dry forest	DGL	9	Vulnerable
<i>Eucalyptus obliqua</i> dry forest	DOB	11	Not threatened
Broadleaf scrub	SBR	2	Not threatened

Table 2 Threatened flora species recorded in the vicinity and which may occur on the Reserve

Species	Common name	Conservation Status (TSPA/EPBCA)#	Status/significance at the Stony Farm Reserve
<i>Euphrasia collina subsp. deflexifolia</i>	eastern eyebright	r/-	Suitable habitat
<i>Glycine microphylla</i>	small-leaf glycine	v/-	Suitable habitat
<i>Hierochloe rariflora</i>	cane holygrass	r/-	Suitable habitat
<i>Hovea corrickiae</i>	glossy purplepea	r/-	Recorded within 500m
<i>Hovea tasmanica</i>	rockfield purplepea	r/-	Suitable habitat
<i>Pimelea curviflora var gracilis</i>	slender curved riceflower	r/-	Suitable habitat
<i>Plantago debilis</i>	shade plantain	r/-	Recorded within 500m
<i>Prostanthera rotundifolia</i>	roundleaf mintbush	v/-	Recorded within 500m
<i>Solanum opacum</i>	greenberry nightshade	e/-	Suitable habitat in wet gullies
<i>Teucrium corymbosum</i>	forest germander	r/-	Suitable habitat
<i>Veronica plebeia</i>	trailing speedwell	r/-	Suitable habitat

listed on the Tasmanian *Threatened Species Protection Act 1995* (TSPA) and/or the Commonwealth *Environmental Protection and Biodiversity Conservation Act 1999* (EPBCA).

Table 3 Threatened fauna species recorded on the Reserve or likely to utilise the Reserve.

Species	Common name	Conservation Status (TSPA/EPBCA)#	Status/significance at the Stony Farm Reserve
<i>Dasyurus maculatus</i>	Spotted-tail Quoll	r/VU	Recorded on monitoring cameras
<i>Dasyurus viverrinus</i>	Eastern Quoll	-/En	Recorded on monitoring cameras
<i>Sarcophilus harrisii</i>	Tasmanian Devil	e/EN	Recorded on monitoring cameras. Devil Facial Tumour Disease is present in the area.
<i>Accipiter novaehollandiae</i>	Grey Goshawk	e/-	Potential nesting sites in blackwood gully
<i>Aquila audax fleayi</i>	Wedge-tailed Eagle	e/EN	Potential nesting sites
<i>Tasmanipatus barretti</i>	Giant Velvet Worm	r/-	Highly likely to occur in wet gullies
<i>Lathamus discolor</i>	Swift Parrot	e/EN	Highly likely, suitable nesting and foraging habitat
<i>Tyto novae-hollandiae</i>	Masked Owl	e/VU	Highly likely, suitable tree hollows for nesting

listed on the Tasmanian *Threatened Species Protection Act 1995* (TSPA) and/or the Commonwealth *Environmental Protection and Biodiversity Conservation Act 1999* (EPBCA).

A conservation covenant under the *Nature Conservation Act 2002* is registered over the entire Reserve.

This management plan outlines the management strategies needed to protect the Reserve. More information about its acquisition and special values can be found in the background report on the TLC website www.tasland.org.au.

The TLC has partnered with the North East Tasmania Land Trust (NETLT) to manage this Reserve. NETLT is a community-based group that preserves, enhances and protects the natural environment in north-east Tasmania by acquiring and managing land of significant ecological value (<http://www.netlandtrust.org.au/>). It is a not-for-profit community-based charity that raises funds to acquire, manage and conserve land and forests of significant ecological value, and to link and manage landscapes and create ecological connections.

CONSERVATION TARGET

Dry Forest Ecosystem

Goal: Maintain or improve the 2016 condition of the forest

The dry forest ecosystem is the only conservation target identified at Stony Farm Reserve and it occurs across the entire Reserve. Three vegetation communities are grouped under this target

- Blue gum (*E. globulus*) forest (DGL), which is listed as threatened under the *Nature Conservation Act 2002*;
- Brown-topped stringybark dry forest (DOB), which is structurally and floristically similar to the DGL; and
- A small area of broad-leafed shrubs (SBR) in a wet gully at the eastern end of the Reserve, which is an ecologically distinct community providing suitable habitat for the Giant Velvet Worm (*Tasmanipatus barretti*).

The relatively wet areas of dry forest on the Reserve are mature and in very good condition, with ground debris and tree hollows providing excellent fauna habitat. There is a diversity of eucalypt species present and a highly diverse, shrubby understorey. In addition to typical dry forest shrubs, there is a high representation of moisture seeking species such as yellow bottlebrush (*Callistemon pallidus*) and native primrose (*Goodenia lanata*) on the upper slopes, indicating good ground water availability. Other prominent shrubs in the understorey include native box (*Bursaria spinosa*), prickly moses (*Acacia verticillata*), native daphne (*Pultenaea daphnoides*), hazel pomaderris (*Pomaderris aspera*), guitar plant (*Lomatia tinctoria*) and creeping bossiaea (*Bossiaea prostrata*). The sedges red-fruit saw-sedge (*Gahnia sieberiana*) and sagg (*Lomandra longifolia*) are common in the ground cover, along with occasional bracken (*Pteridium esculentum*), native grasses and herbs, including Australian bluebell (*Wahlenbergia gracilis*) and button everlasting (*Helichrysum scorpioides*).

Parts of the dry forest were burnt in 2006. These areas are regenerating well, resulting in a thick and almost impenetrable understorey in many places.

The rationale for this conservation target is:

- The vegetation across most of the Reserve is structurally and floristically similar;
- Most of the vegetation is expected to show a similar response to events such as fire and drought;
- The area of broad leafed shrub (SBR) is ecologically distinct but small in extent and managing this area separately is neither realistic nor warranted;
- Most native vertebrate fauna are unlikely to show a preference to any specific vegetation communities;
- The geology, soils and climate are relatively uniform across the Reserve; and
- The major threats to the Reserve apply uniformly to all areas.

Viability

The viability of the dry forest target has been rated as good. The trends of the ecological indicators will be better quantified over time.

Key Environmental Attribute	Indicator
Vegetation condition	Floristic diversity Structural complexity Canopy recruitment
Fauna	Vertebrate fauna diversity

Threats and management

Illegal access

The Reserve is isolated, with the only track into the site being a disused and overgrown logging track that passes through the south-east corner. As a result, there is little risk of regular trespass by the public, but there is some possibility of recreational vehicles such as trail bikes, ATVs and 4WD vehicles finding their way onto the Reserve. Illegal access by recreational vehicles could cause erosion and could also act as a vector for other degrading activities such as the introduction of weeds or disease, lighting of fires and wood-hooking.

Threat	Impact	Threat rating	Management strategy
Illegal access by recreational vehicles	Erosion Potential vector for other threatening processes e.g. wood-hooking	Low	Access control, annual reserve assessment, NETLT partnership

SOCIAL TARGET

North East Tasmania Land Trust connection to landscape

Objective: The NETLT community remain engaged with the Reserve and region

The North East Tasmanian Land Trust fosters a strong community connection to the north east landscape and this is encouraged as an end in itself, and to ensure that reserve networks are valued and supported. Due to the remoteness, difficult access and sensitive values of the Reserve the TLC in partnership with NETLT do not want to encourage general access unless for specific reserve purposes.

Viability

Viability for this target is rated as good, with members of the NETLT actively engaged in monitoring and management of the Reserve.

Key Attribute	Indicator
NETLT involvement	Regular monitoring visits.

Threats

The primary threats to achieving this objective are:

- the relative isolation of the Reserve and the physical difficulty of accessing and moving around the site due to the dense understorey; and
- a lack of knowledge, understanding and appreciation of the landscape, which may arise from the difficulty involved in visiting the Reserve, poor communication with stakeholders, or the lack of opportunities for the wider community to become, or remain, engaged with the TLC.
- A breakdown in communication or partnership between TLC and NETLT which results in a loss of knowledge or reserve management.

Threat	Impact	Threat rating	Management strategy
Lack of knowledge	Lost opportunities to better understand and manage the Reserve	Low	NETLT partnership
Difficulty of access	Deters visitation which may undermine effective monitoring	Low	NETLT partnership
Breakdown in communication	Loss of knowledge and management intent	Low	NETLT partnership

MANAGEMENT STRATEGIES

Improve knowledge of natural values

Priority: Medium

Objectives: By 2020 threatened species and other natural values on the Reserve are better known and being managed effectively

The Reserve has a number of threatened species and communities as well as other potentially conservation significant values due to the availability of suitable habitat (see Tables 2 and 3), though more of these inherent values will be discovered over time. The presence of some of these species on the Reserve could affect decisions about management, including joint decisions made with neighbours (e.g. a proposal for planned burns). Targeted surveys would identify whether any of these species for example giant velvet worms occur, so that any specific management needs can be taken into consideration in future planning.

Swift parrots pose a particular challenge to all land managers of suitable habitat. While it is highly likely that the Reserve will provide important habitat for the species now or in the future, the most important management need is the retention of forest habitat.

Key actions	Details
Targeted surveys	Surveys for threatened flora and fauna listed in Tables 2 and 3, with a priority on confirming the presence of Giant Velvet Worm.
Monitoring	Details
Annual reserve assessment	Ensure no deterioration in threatened species habitat has occurred during annual reserve inspections (NETLT)
Long term ecological monitoring	Maintain TLCs ecological monitoring across the reserve

Access control

Priority: Low

Objectives: No illegal access into the Reserve by recreational vehicles

The Stony Farm Reserve is difficult to access and to move around due to its dense understorey and the overgrown nature of tracks and as a consequence is unlikely to attract visitation from supporters or the general public. This isolation is a benefit in ensuring the Reserve remains free of disturbance. Anyone wishing to visit the Reserve should first obtain information on its conservation values, biosecurity protocols and any other conditions that may apply by contacting the TLC and visiting the website.

There is currently low risk of trespass by the public, but some possibility of recreational vehicles such as trail bikes, ATVs and 4WD vehicles finding their way onto the Reserve may occur in the future. The most likely source of vehicular trespass is a disused and overgrown logging track that passes through the south-east corner of the Reserve. Access to this track is via a more established logging track that comes off Semmens Road and passes within 150m of the south-east corner.

It is also possible that someone could push a new track in from the informal reserve on State Forest to the south or adjoining private land to the west. Both of these areas have been selectively logged in the recent past to the boundary of the Reserve (Tim Devereux TLC pers comm.). The exit points onto public roads from logging tracks passing through these properties are not currently known. Regular monitoring including the annual reserve assessment will ensure any evidence of disturbance on the Reserve or near the Reserve boundaries is detected quickly and can be addressed in a timely manner.

Key actions	Details
Identify potential access points that could provide vehicle access to the Reserve	Trace internal logging tracks on adjoining land to the south and west back to exit points on public roads
Neighbour relations	Work with Forestry Tasmania and private neighbours to the west to identify access points and manage the threat
Signage	Employ if and when required
Remote cameras	Employ if and when required
Monitoring	Details
Regular monitoring of Google imagery	Monitor for signs of disturbance on the Reserve or close to the Reserve boundary that might warrant follow-up (NETLT)
Annual reserve assessment	Check disused logging track in south-east corner and the southern and western boundaries for signs of trespass.

The North East Tasmania Land Trust Partnership

Priority: High

Objective: Maintain an effective partnership with the North East Tasmania Land Trust (NETLT)

The NETLT is a not-for-profit environmental organisation set up to protect biodiversity in north-east Tasmania. The Reserve lies within the NETLT's area of interest, the organisation has an active presence in the region and has highly motivated local members who are able to spend time on monitoring and management activities.

A Memorandum of Understanding (MOU) between the TLC and NETLT was agreed in 2012 with the objective that the NETLT and TLC will work together to acquire, protect and manage private land that will be a strategic addition to Australia's National Reserve System. The partnership agreement between the two organisations provides the most practical and cost-effective approach to ensuring effective management of the Reserve. The maintenance of an effective partnership with the NETLT is a high priority for the TLC. This Memorandum of Understanding outlines the intentions of both the North-east Tasmania Land Trust (NETLT) and Tasmanian Land Conservancy (TLC) for a shared commitment to work collaboratively in relation to the shared objective of protecting biodiversity in Tasmania's north east.

Key Actions	Details
Regular communications between TLC and NETLT	Regular contact between TLC CEO and NETLT President Regular communications between TLC staff and NETLT committee over ecological monitoring, management strategies, annual reserve reports and action planning.
MOU and Management Plan	Synchronise the review of the MOU with the update of the management plan (5yrs) to ensure any changes in arrangements or status can be discussed and reflected in the reserve plan.
Monitoring	Details
Fauna monitoring and Annual Reserve Assessment	Reserve issues are discussed when fauna monitoring and or annual reserve assessment are undertaken.

Neighbour Relations

Priority: High

Objectives: Ongoing dialogue with neighbours to effectively address management issues of mutual interest or concern.

The TLC recognises the importance of maintaining good relationships with neighbouring landowners and regularly communicates with neighbours about shared management issues and cooperative approaches to regional land management issues such as livestock, feral animals, weeds and fire management. Neighbours are informed about any TLC management strategies or issues that have the potential to impact on their land. Similarly, TLC talks to neighbours about activities or management issues on adjoining land that have the potential to impact on the values of TLC Reserves.

Key actions	Details
Communication with neighbours	Discuss cross-tenure land management issues e.g. fire, illegal wood hooking, etc. and ensure NETLT are kept informed
Monitoring	Details
Annual reserve assessment	Consider and monitor cross-tenure land management issues

Annual Reserve Assessment

Priority: High

Objective: No new threats emerge from 2016

Annual reserve assessments are routinely conducted to identify any new or resurgent threatening processes that have the potential to reduce the viability of the targets. On Stony Farm Reserve this assessment is undertaken by NETLT volunteers while undertaking fauna monitoring approximately twice a year. The only threat identified is potential trespass by recreational vehicles.

Key actions	Details
Annual reserve assessment	NETLT to record any new threats and discuss information with TLC

MANAGEMENT PLAN PROCESS

Management Plan Status

A draft of this plan was prepared in collaboration with the NETLT who provided comment and input. The final draft of this Plan was reviewed by the TLCs Science Council and approved in June 2017. As part of the Open Standards adaptive management process, progress on target viability, management effectiveness and our understanding of biology and social impacts will be kept current.

Co-Management Responsibilities

TLC staff and NETLT are responsible for undertaking the management of the Reserve. This includes annual reserve assessment, the co-ordination of contractors, consultants and volunteers where they are required to implement the management actions outlined in this Plan. Wherever possible, the TLC and NETLT will work with neighbours to manage cross-tenure threats. The TLC and NETLT will endeavour to act as a good neighbour to all parties and, where possible, undertake co-operative or complementary management where both parties seek a similar outcome (e.g. weed control and fire management). The TLC will endeavour to ensure that management of this Reserve does not have a detrimental impact on the surrounding area.

Stakeholder Involvement

The major stakeholders to this plan are the NETLT (as a management partner), Forestry Tasmania (as the significant neighbouring landowner) and DPIPW (who administer Conservation Covenants). The Private Land Conservation Program within DPIPW may help to monitor the status of the conservation values identified in the covenant, while all of these stakeholders may be involved with the development or implementation of strategies and actions identified in this plan.

Management Plan Review

This document will guide on-ground management of the Reserve over the coming years and be the basis for annual work plans and budgets. This plan will be reviewed at regular intervals not exceeding every two years and these reviews may lead to minor amendments to the plan. However, as the plan is based on our best current knowledge, if major changes occur at any time we will review the plan earlier and amend accordingly.

A full review of the plan will occur at a time no earlier than five years and no later than ten years from the date of its adoption.