

## Overview of the Island LandCare Spear Thistle Control Programme 2018-2021

Report Authors: Sally Poncet and Ken Passfield, 29 November 2021

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*Spear thistle on the Pebble Island shoreline, Porvenir II at anchor, November 2020.*

### SUMMARY

Major achievements of the 2018-2021 Island LandCare Spear Thistle Control programme are:

1. Ensuring steady progress in reducing spear thistles on Saunders, Keppel and Fitzroy land at Mare Harbour
2. Initiating control of spear thistles at 'new' sites on Pebble Islet, Pebble Island and Northeast Island near Lively Island.
3. Working with Fitzroy Farm managers to encourage more systematic control of thistles on MOD leased land at Mare Harbour adjacent to Fitzroy land.
4. Development of a mobile phone weed app which has increased efficiency in documenting weed control effort, plant locations and herbicide use.
5. A greater understanding of spear thistle phenology in the Falklands.
6. Improved efficiency of control methods for achieving the weed control target of zero population density i.e. the point at which no more plants are setting seed.

## Background

Island LandCare (ILC) has been carrying out weed control in the Falklands since 2015, using cost-effective boat-based logistics (vessels *Porvenir* and *Porvenir II*) for accessing invasive plant infestations at remote field sites that would otherwise remain uncontrolled or require a vastly larger control budget. These fieldwork seasons have resulted in a wealth of knowledge which is captured in the ILC Weeds Database and Post-Visit Site Reports, with significant gains made in the efficiency of control methods, timing of application and followup visits, and a systematic record of herbicide use and progress. These are essential steps in the process of achieving the overall goals of zero population density, effective site-led eradication and preventing the spread of invasive plant species Island-wide. These goals can only be obtained through sustained annual fieldwork and adequate financial funding.

In July 2018, ILC applied for FIG funding for a 3 year spear thistle control programme 2018-2021 for Saunders Island, Keppel Island and Mare Harbour (Fitzroy Farm). The weed control programme directly addressed two of the three priorities identified in the 2016-2030 Falkland Islands Biodiversity Framework and supporting Strategy. The first priority was invasive species, in this case the spear thistle *Cirsium vulgare*. Spear thistles have been classed as a priority species, due to their ability to out-compete native plant pastures and contaminate wool. They are thought to have been accidentally introduced to the Falklands at Mare Harbour in the 1980s, then Stanley and Saunders Island in the 1990s, and have since spread to Keppel Island and other sites Island-wide. The second priority addressed was Key Sites, i.e. priority protected and designated sites, which in this case were Saunders Island (Important Plant Area, Important Bird Area), Keppel Island (IPA, IBA) and Fitzroy land near Mare Harbour, including Bertha's Beach (IBA, Ramsar site).

The aims of the 2018-2021 programme were:

1. To reduce the area and number of spear thistles and to prevent their spread at Saunders Island, Keppel Island and the Bertha's Beach area at Fitzroy Farm, using foliar application of the selective herbicide Meturon.
2. To collect spatial data on the distribution of spear thistles at these 3 sites for the purpose of recording the progress of this control programme.
3. To engage with the MOD about spear thistle control on Fitzroy land in the Mare Harbour area.

Intended outputs included:

- On-going reduction in the number of spear thistles to achieve the target of zero population density.
- Greatly reduced risk of spear thistles spreading to new sites around the Islands.
- Establishment of a mutually beneficial working relationship with the MOD contractor at Mare Harbour which is adjacent to the Bertha's Beach site.

Funding for Year 1 of the proposed 3 year programme was approved by the Environment Committee in August 2018 and a budget of £3,940 was allocated from the Environmental Studies Budget for 2018/2019. Identical funding for Year 2 (2019/2020) and Year 3 (2020/2021) was awarded in 2019 and 2020 respectively on re-submission of the original application, supplemented by additional funding in 2019 for followup thistle control at Keppel Island and two recently discovered sites on Pebble Islet and Pebble Island, and in 2020 for

late summer followup thistle control on Saunders Island, Keppel Island and Pebble Islet.

In addition, funding for two person-days was provided each year by Fitzroy Farm (Falkland LandHoldings Corporation) for the Fitzroy Farm thistle control programme. Substantial in-kind support (equivalent in combined value to ESB funding) was available throughout the 3 year programme from the Antarctic Research Trust (quad bike and development of a Falkland Islands Weeds Database and mobile phone app), Brad Myer and Kelvin Floyd of Indigena Biosecurity Ltd NZ (advice and IT support), Ken Passfield (boat logistics), and Saunders Island Farm owners David and Suzan Pole-Evans (vehicles and accommodation). The support and enthusiasm of FIG's Environmental Officer, Denise Blake, are also gratefully acknowledged.

Post-visit weed control reports were submitted to FIG's Policy and Development Unit and the landowners following each site visit and are listed in this report. Outreach included an interview on FIRS, displays and presentations at Farmers Week in 2021 and engagement with the Department of Agriculture and landowners at every opportunity. Herbicide use and control records are currently archived with Island LandCare.

## **CONCLUDING REMARKS**

Spear thistle control at Mare Harbour, Northeast Island, Saunders Island, Keppel Island, Pebble Island and Pebble Islet will require on-going twice yearly control efforts. At the largest affected area, on Keppel Island, spear thistles have had at least 10 years of uninterrupted seeding, resulting in a high seed load in the soil. Control on Keppel started a decade later than on neighbouring Saunders Island, so it will several years before further reduction in cover will become apparent, as happened on Saunders after approximately 5 years of sustained control. However, there is already a substantial reduction in the number of plants flowering and setting seed each season, and this will have consequently lowered the risk of wind-borne thistle seed spreading to other areas on Keppel and to neighbouring islands and mainland West Falkland. Wind-assisted dispersal is very likely to have been the cause of spear thistles from Saunders Island colonising Keppel Island, and then Pebble Islet and Pebble Island. Similarly, wind-borne thistle seed from Mare Harbour has arrived at Northeast Island some time within the past 5 years, demonstrating that effective spear thistle control on MOD managed land at Mare Harbour and the Mount Pleasant Complex is required in order to prevent the spread of thistles on to other nearby islands in the Choiseul Sound and Lively Island area and adjacent Fitzroy land.

## **SUMMARY OF PROJECT OUTPUTS**

### **YEAR 1 Season 2018/2019**

November 2018: spraying on Saunders 10 person-days

December 2018: spraying on Keppel 10 person-days, Mare Harbour (Fitzroy Farm) 4 person-days, and interview with the Falkland Islands Radio Station.

March 2019: 4 person-days on Keppel, Pebble and Pebble Islet

December 2019: 3 person-days on Pebble, 2.5 person-days on Keppel

### Post-Visit Reports

Poncet, S. and K. Passfield. 2019. Island LandCare Post-Visit Report 14-19 November 2018 for Saunders Island Spear Thistle Control.

Poncet S and K. Passfield. 2019. Island LandCare Post-Visit Report August and December 2018 for Fitzroy Farm Spear Thistle Control.

Poncet, S. and K. Passfield. 2019. Island LandCare Post-Visit Report 6-11 December 2018 for Keppel Island Spear Thistle Control.

Poncet, S. and K. Passfield. 2019. Island LandCare Post-Visit Report 23-27 March 2019 for Keppel, Pebble and Pebble Islet Spear Thistle Control.

Poncet, S. and K. Passfield. 2019. Island LandCare Year 1 Spear Thistle Control Report 2018/2019.

## **YEAR 2 season 2019/2020**

November 2019: 10 person-days on Saunders, 10 person-days on Keppel, 2 person-days Pebble Islet

December 2019: 2 person-days Pebble Island, 2 person-days Mare Harbour (Fitzroy Farm)

March 2020: 2 person-days Mare Harbour (Fitzroy Farm), 3 person-days Saunders

### Post-Visit Reports:

K. Passfield. 2019. Island LandCare Post-Visit Report spring 2019 for Keppel Island Spear Thistle Control.

Poncet S. and K. Passfield 2019. Island LandCare Post-Visit Report 23 November 2019 for Pebble Islet Spear Thistle Control.

Poncet S. and K. Passfield. 2019. Island LandCare Post-Visit Report 11 December 2019 for Pebble Island Spear Thistle Control.

Poncet S. and K. Passfield. 2020. Island LandCare Post-Visit Report spring 2019 for Fitzroy Farm Spear Thistle Control.

Poncet S. and K. Passfield. 2020. Island LandCare Post-Visit Report 20 March 2020 for Fitzroy Farm Spear Thistle Control.

Poncet S. and K. Passfield. 2019. Island LandCare Post-Visit Report November-December 2019 for Saunders Island Spear Thistle Control.

Poncet S. and K. Passfield. 2020. Island LandCare Post-Visit Report March 2020 for Saunders Island Spear Thistle Control.

Poncet S. and K. Passfield. 2019. Island LandCare Post-Visit Report November-December 2019 for Keppel Island Spear Thistle Control.

## **YEAR 3 season 2020/2021**

October-December 2020: 12 person-days Keppel

November 2020: 4 person-days Saunders, 1 person-day Mare Harbour (Fitzroy Farm).

December 2020: 2 person-days Pebble Islet, 6 person-days Pebble Island

January 2021: 3 person-days Keppel, 3 person-days Saunders

February 2021: 2 person-days Mare Harbour (Fitzroy Farm)

July 2021: Farmers Week presentation

### Post-Visit Reports

Poncet S. and K. Passfield. 2020. Island LandCare Post-Visit Report October-December 2020 for Keppel Island Spear Thistle Control.

Poncet S. and K. Passfield. 2020. Island LandCare Post-Visit Report November 2020 for Saunders Island Spear Thistle Control.

Poncet S. and K. Passfield. 2020. Island LandCare Post-Visit Report 20 December 2020 for Pebble Island Spear Thistle Control.

Poncet S. and K. Passfield 2020. Island LandCare Post-Visit Report 20 December 2020 for Pebble Islet Spear Thistle Control.

Poncet S. and K. Passfield. 2020. Island LandCare Post-Visit Report 28 November 2020 for Fitzroy Farm Spear Thistle Control.