

# JINGLERS CREEK VINEYARD

TASMANIAN  
CLIMATE  
CHANGE  
OFFICE

## CASE STUDY

### THE PROJECT

The project addressed two key activities that are the most labour intensive:

- applying nets; and
- operating the complex irrigation system.

### BACKGROUND

Applying nets requires a team of people, a tractor and approximately two square kilometres of polyester netting, which is replaced every seven years.

### OBJECTIVES

Explore the use of drones and related technology to reduce crop losses to birds.

Assess the irrigation system on-site and increase efficiency of current infrastructure.



Nylon nets protect the ripening fruit from losses to birds. A team of workers applies the nets each year, just prior to fruit ripening, and removes them for harvest.

### TARGETS

Eliminate the need for nets.

Optimise water usage with current infrastructure.



## OUTCOMES

### WHAT WAS IMPLEMENTED?

We built three drones and used swarm technology, with an autonomous ground vehicle, to demonstrate proof-of-concept.

### KEY ISSUES

Our business is seasonal, limiting our opportunities for testing our solution. We overcame this by collaborating with other vineyards to conduct trials.

Finding the right technology and the right partners; we established a commercial relationship with a developer overseas for the swarm technology.

CASA regulations were a compliance barrier as our vineyard is located close to Launceston airport.

### PERFORMANCE AGAINST TARGETS

Demonstrated proof-of-concept and will undertake another pilot this summer, which will ultimately lead to the elimination of nets, not only for us but hopefully other vineyards and across other industries, eg berry farms.

We are currently seeking funding to build more drones and scale up following the pilot.



“I appreciated having people outside my business to help me reflect on my achievements and celebrate successes along the way.”

#### **Fiona Turner**

Vigneron, Jinglers Creek Vineyard



Swarm technology was used to replicate defensive bird behaviour with drones to deter birds from approaching the vines.

### LESSONS LEARNT

Understanding waste and what happens to it - we know now that our nylon nets cannot be recycled in Tasmania and that our empty bottles are effectively going to landfill.

How much office politics, corporate culture, and our actions as a country, create barriers to achieving greater resource efficiency.

The Business Resource Efficiency Program (BREP) is delivered by Business Action Learning Tasmania (BALT) in partnership with the Tasmanian government.

#### **For more information about BREP**

Visit [www.businessactionlearningtas.com.au/brep](http://www.businessactionlearningtas.com.au/brep)

#### **For more information about this case study**

Email BALT at [admin@businessactionlearningtas.com.au](mailto:admin@businessactionlearningtas.com.au)

BREP participants included:

Nichols Poultry  
Botanical Resources Australia  
Direct Edge Manufacturing  
Penguin Composites  
Bridestowe Lavender  
Red Brick Road Ciderworks  
Jinglers Creek Vineyard  
pitt&sherry  
Drysdale Training Restaurant  
CPT Engineering  
ThinkBig Printing

Tasmanian Climate Change Office  
GPO Box 123, HOBART TAS 7001

Phone: 03 6232 7173

Email: [climatechange@dpac.tas.gov.au](mailto:climatechange@dpac.tas.gov.au)

Visit: [www.climatechange.tas.gov.au](http://www.climatechange.tas.gov.au)

