Australian Government

Carbon Neutral Program

Public Disclosure Summary

An Australian Government Initiative

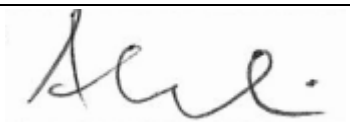
THIS DOCUMENT WILL BE MADE PUBLICLY AVAILABLE

COMPANY NAME: Keith Tulloch Wine

REPORTING PERIOD: 1 July 2017 – 30 June 2018

Declaration

To the best of my knowledge, the information provided in this Public Disclosure Summary is true and correct and meets the requirements of the National Carbon Offset Standard Carbon Neutral Program.

Signature: 	Date: 27th February 2019
Name of Signatory: Alistair James Tulloch	
Position of Signatory: Marketing and Communications Manager	

Carbon neutral certification category	Organisation and Products
Date of most recent external verification/audit	February 2019
Auditor	Benjamin Jenkins, GPP Audit Pty Ltd
Auditor assurance statement link	

Australian Government
Department of the Environment and Energy

Carbon neutral information

1A. Introduction

Keith Tulloch Wine was founded in 1997 by Keith and Amanda Tulloch, who continue to own and operate the business today, along with their children Jessica and Alisdair plus the team of 10 staff. The business encompasses grape growing, winemaking, administration and sales.

The business' grape growing covers two sites in the central Pokolbin district of the Hunter Valley, with the 'Field of Mars' vineyard on Hermitage Road and the 'Latara' Vineyard on Deasys Road. These vineyards were established in 1968 and 1978 respectively; working with and caring for this old-vine resource requires us to work in a forward-thinking, sustainable way. Inputs and decisions may not see immediate results, and decisions are made to produce the best quality of grapes not only for the upcoming harvests, but for future generations.

The winemaking element of Keith Tulloch Wine is entirely conducted on the 'Field of Mars' property, along with the administrative and sales buildings. The winery features the capability to crush, ferment and age 150-200 tons of grapes each year, resulting in 12,000-15,000 dozen bottles. A vast majority of this is wine produced under the 'Field of Mars', 'Keith Tulloch' or 'PERDIEM' labels and sold at the tasting room or local and domestic wholesale. A small percentage of this production is for contract winemaking, where wines are produced for other local grape growers or winemakers.

The sales element is a large part of the operation, with an expansive tasting room that overlooks our vineyards on the same property. Here the wines are sampled by customers, as many as 100+ per day, and tastings are conducted with seated tastings where wines are brought to the table by tasting room staff.

Another element of sales occurs in administration, where direct sales are made via the wine club manager and her assistant. The administrative part of the business, including the wine club, events and management, employs five people. Sales are also conducted offsite with tastings for domestic and international trade, which may require travel for the presentation of samples and to secure deals.

The functional unit for the life cycle assessment is a single 750ml bottle of wine sold to customers

1B. Emission sources within certification boundary

The scope of this Life Cycle Assessment (LCA) relates to all products sold by Keith Tulloch Wine and does not provide details for separate product lines. The complexity and cost of a full LCA on each wine variety ruled out a detailed analysis. All wine bottled by Keith Tulloch Wine in the period 2017 – 2018 will have emissions offset. This means that the entire product range (all vintages, red, white and sprakling wines) will be carbon neutral.

The two largest inputs to wine making is glass wine bottles and grape growing. In this case an emission factor for glass bottles from the LCA carried out by Keith Tulloch's bottle manufacturer was used. An industry average factor for grape growing based on Input-Output Analysis is was also used.

The system boundary of this analysis is from *Cradle to Grave* and includes all activities operating the business as well as grape growing, wine making, bottling and distribution to customers. The LCA also includes corporate emissions that arise from running Keith Tulloch Wine's business (Scope 1, 2 and 3). The boundary includes recycling of wine bottles (this has been accounted for in the LCA conducted by the glass bottle manufacturer). However, emissions from activities such as retail purchases, transport and refrigeration in the consumer supply chain are too difficult to track and have been excluded.

Quantified sources

The following emission sources have been included:

- Glass wine bottles, caps and labels
- Grape growing
- Electricity purchased from the grid
- Diesel used in company vehicles
- LPG and diesel used
- Natural gas
- Waste to landfill
- Recycling
- Water supply
- Business travel
- Accomodation
- Telephone and Internet
- Freight
- Printing and stationary
- Employee commuting
- Goods and services purchased by Keith Tulloch Wine in operating the business, producing wine and supplying customers (refer to Section 2 to show which goods and services have been included)
- End of life emissions – recycling of wine bottles

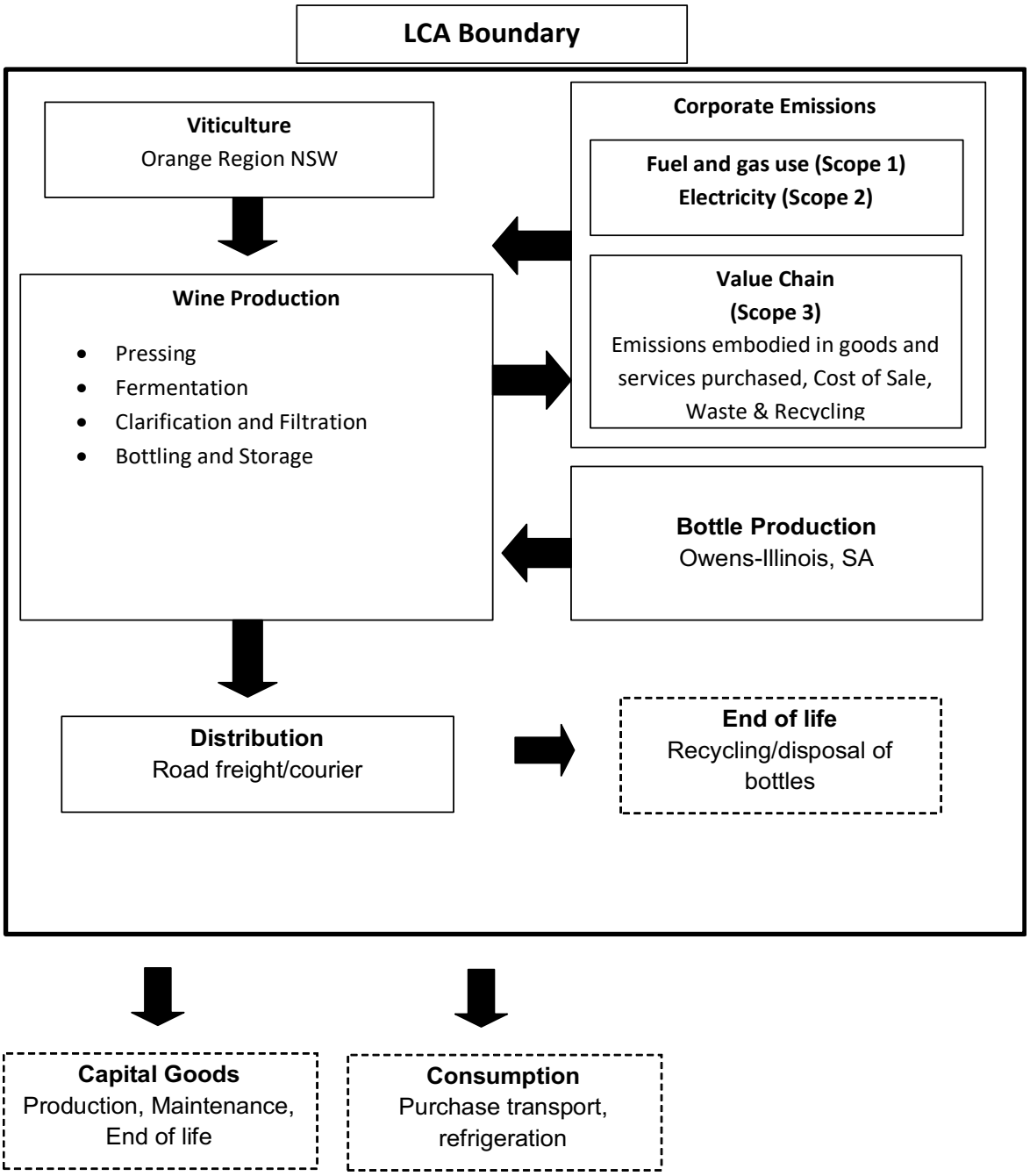
Excluded sources

The following emission sources have been excluded from the certification boundaries of the organisation and the product:

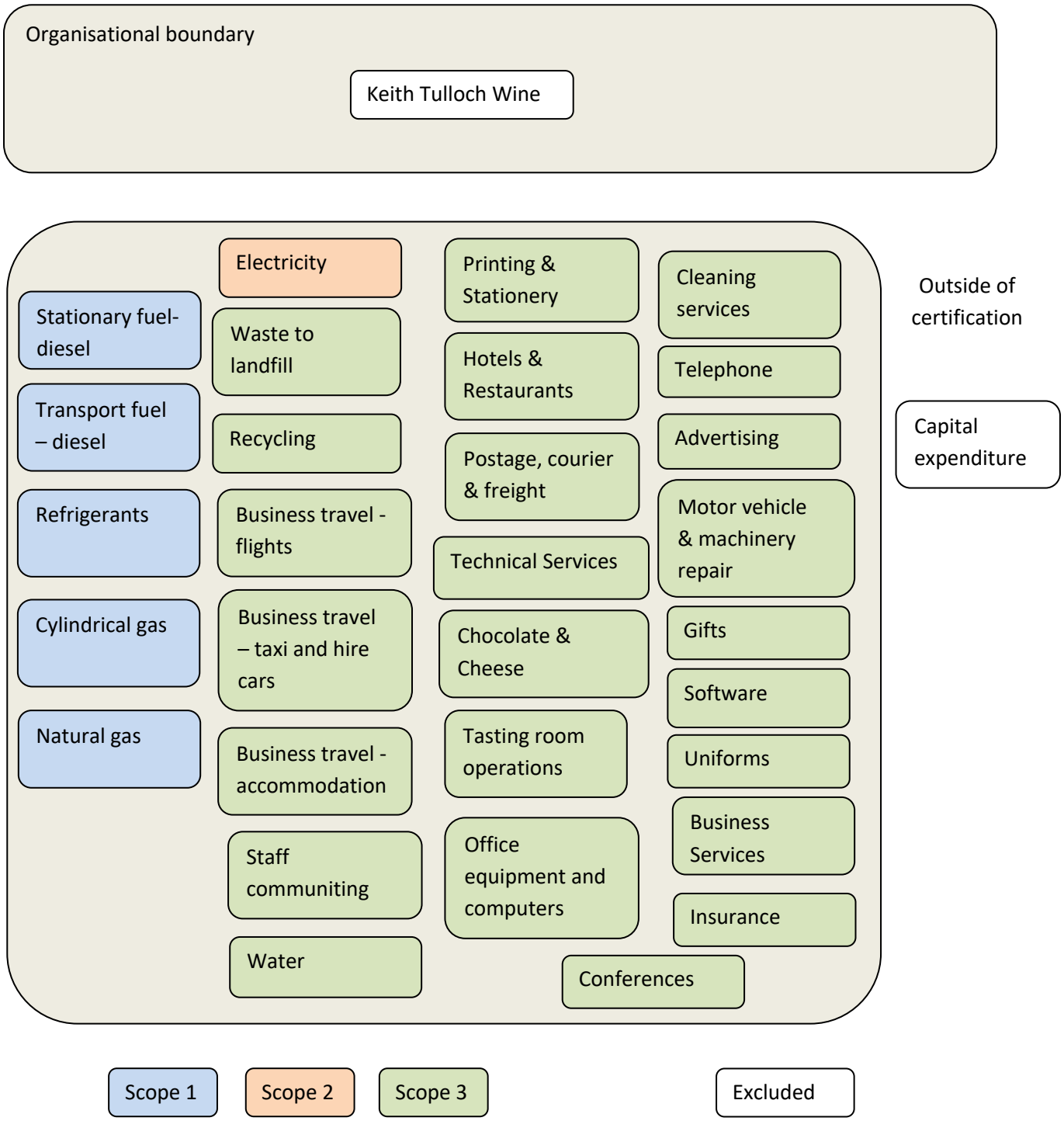
- Capital goods (machinery)
- Use phase emissions in the retail supply chain such as transport and refrigeration
- Capital expenditure

1C. Diagram of the certification boundaries

Product



Organisation



1. Emissions reduction measures

2A. Emissions over time

The base year is the 2017 -2018 reporting period. This is the first year that emissions calculations was undertaken for all business operations and the entire product range.

Table 1	**Base Year: 2017 – 2018 (tCO_2-e)**
Scope 1	34.58
Scope 2	112.21
Scope 3	501.00
Total	647.79

2B. Emissions reduction strategy

Our primary element of emissions reduction is the planned purchase of a 65kw Solar PV system which will reportedly cover almost 70% of the business's power usage. This is a significant investment in not only the future price stability of Solar, but also in significantly reducing the operation's carbon footprint.

Keith Tulloch Wine is committed to sustainability and is increasingly investing in measures of efficiency and waste management. As well as implementing a more effective plan of glass, plastic and paper recycling, discussions with our waste services has opened the opportunity to significantly reduce the amount of waste going to landfill through the separation and composting of organic material at the Remondis Awaba facility. This will significantly decrease the emissions from the disposal of organics via landfill and the use of virgin materials.

The efficiency of water has the opportunity to reduce emissions and cost, as water use in the winery requires that water be trucked in from reservoirs at considerable expense, and involves the emissions associated with water transport. Reducing the overall use of water as well as installing water-efficient spray fittings and guns will help to achieve this goal.

2C. Emissions reduction actions

Efficiencies that have already been achieved in the last year include the decrease in natural gas used for forklift operation, with the preference of using an electric forklift, as well as a decrease in the use of CO_2 for wine preservation by installing a plumbed gas line in preference to solid dry ice use. We have also made effort to move wine previously stored offsite into our own warehouses, which with the upcoming installation of solar power will have a lower overall footprint. Future storage of wine offsite will be preferentially stored in solar powered warehouses.

2. Emissions summary

Table 2. Emissions Summary

Scope	Emission source	tCO_2-e
1	Company cars fuel - Post 2004 Diesel	8.7
1	Stationary fuel - Cylindrical Gas (LPG)	1.0
1	Stationary fuel – Diesel Oil	3.4
1	Cylindrical Gas - CO_2	3.1
1	Natural Gas	0.6
1	Refrigerant Gases	17.78
2	Grid Electricity	112.21
3	Stationary fuel – Diesel Oil	0.2
3	Company cars fuel – Post 2004 Diesel	0.42
3	Stationary fuel - Cylindrical Gas (LPG)	0.06
3	Grid Electricity	13.68
3	Natural Gas	0.18
3	Business Flights	11.5
3	Employee Commute	23.5
3	Waste-landfill	14.4
3	Recycling Co-mingled	2.79
3	Glass Bottles	56.41
3	Trucked water - Post 2004 diesel	0.32
3	Road freight	111.26
3	Grapes for wine	64.22
3	Paper and cardboard	50.72
3	Mixed fertilisers	27.07
3	Wine bottle caps	24.04
3	Food products	14.10
3	Technical services	11.36

3	Winery repairs and maintenance	10.01
3	Wine barrels	8.74
3	Postal services	8.27
3	Taxi and hire car	7.08
3	Warehousing	6.63
3	Printing and stationery	5.56
3	Purchased wine	3.25
3	Hotels and restaurants	3.02
3	Chocolate	2.99
3	Advertising	2.63
3	Cheese	2.57
3	Tasting room operations	2.18
3	Office equipment and computers	2.15
3	Cleaning services	1.98
3	Telephone	1.93
3	Advertising services	1.30
3	Motor vehicle repairing	1.28
3	Accommodation	1.04
3	Machinery repairs and maintenance	0.86
3	Gifts	0.38
3	Computer software	0.34
3	Uniforms	0.23
3	Business services	0.20
3	Insurance	0.13
3	Conferences	0.06
	Total	**647.79**

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3. Carbon offsets

3A. Offsets summary

Table 3. Offsets Summary			
Offset type and registry	Year cancelled	Quantity	Serial numbers
APX VCS Registry Verified Carbon Units (VCUs) **Originating carbon offset project:** Bundled Solar Power Project by Solararise India Projects PVT. LTD. **Project type:** Energy industries (renewable/non-renewable sources) Project country: India	26/02/2019	648	VCU serial numbers: 6216-286506825-286507472-VCU-034-APX-IN-1-1762-23062016-31122016-0 Public URL: https://vcsregistry2.apx.com/myModule/rpt/myrpt.asp?r=206&h=24484
Total offset units cancelled			648
Net emissions after offsetting			0

3C. Offset Project Summary

The chosen offset project is the installation of 120MW of solar photovoltaics (PV) in different states in India theough Special-Purpose Vehicles (SPVs). Over the first 10 years of the crediting period, the project will replace greenhouse gas emissions estimated to be approximately 213,089 tCO_2-e per year, theron displacing 220,752 MWh/year amount of electricity from the generation-mix of power plants connected to the Indian grid, which is mainly dominated by thermal/fossil fuel based power plants.

3C. Offsets purchasing and cancellation strategy

Offsets are purchased in arrears at the end of the assessment period and subsequently retired. Any surplus is held over for future years.

4. Use of trade mark

Table 4. Trade mark register	
Where used	Logo type
Website*: https://keithtullochwine.com.au/*	Certified organisation and product range
Marketing materials and wine labels	Certified organisation and product range