



# CARBON REDUCTION INSTITUTE



Carbon Audit Report

**Zilzie Wines**  
**Executive Summary**  
**July 2008**

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## Executive Summary

The Carbon Reduction Institute recently undertook an audit of the greenhouse gas emissions produced from the operations of Zilzie Wines. The audit provides Zilzie Wines with an understanding of its climate change impacts so that it can benchmark and communicate the achievements from the implementation of future emission reduction strategies and carbon offset purchases.

The Carbon Reduction Institute's audits follow the standards outlined by the World Business Council for Sustainable Development's Greenhouse Gas Protocol Corporate Accounting and Reporting Standard, and the Greenhouse Gas Protocol for the Wine Industry, which was developed by Provisor Pty Ltd and Yalumba Wines in 2008.

In calculating the emissions from Zilzie Wines' operations, the Carbon Reduction Institute applied a combination of published Life Cycle Emission factors (for the calculation of the greenhouse gas emissions from items such as fuel combustion, travel, electricity, embodied emissions in packaging; waste and wastewater and freight); privately contracted emissions factors for the greenhouse gas emissions from the consumption of grapes in the wine making process, and greenhouse intensity figures from Australian Input/Output tables for the calculation of emissions embodied in other products and services consumed by Zilzie Wines, as well as the assets used in Zilzie Wines' operations. The emissions sources included in this study are shown in Table 1.

**Table 1: Emissions sources studied**

<i>Scope(s)</i>	<i>Source</i>	<i>Emissions Type</i>
Scope 1	Fuel	*Direct and Indirect emissions from burning combustible fuels onsite at the winery, machinery and company owned vehicles
	CO <sub>2</sub>	*Direct application of purchased CO <sub>2</sub> in the winery
Scope 2	Electricity	*Indirect emissions from the burning of coal and gas at power plants to produce purchased electricity
Scope 3	Waste and Wastewater	*Methane emissions from the decomposition of waste in landfill, and from decomposition of wastewater
	Staff Ground and Air Transport	*Fuel combustion – Direct and indirect CO <sub>2</sub> e emissions from car and air travel
	Expenses	*Embodied Emissions of all expenses in the chart of accounts including all products and services used
	Assets	*Annualised embodied emissions of all assets based on depreciation rates used for tax purposes
	Purchased Grapes	*Greenhouse gas emissions from farming grapes consumed by Zilzie Wines
	Freight	*Direct emissions from freight
	Packaging	*Embodied emissions in packaging

Table 2 and Figure 1 below show a summary of the emissions produced from each source.

**Table 2: Summary of Emissions by Source**

Scope(s)	Emission Source	% CO2e
Scope 1 & 3	Diesel	0.08%
	LPG	0.07%
	Direct CO2 Emissions	0.32%
	Gas	0.54%
Scope 2 & 3	Electricity (Winery)	54.56%
	Electricity (Office)	0.22%
Scope 3	Waste	0.05%
	Wastewater	2.38%
	Flights	0.30%
	Staff Travel	1.53%
	Grapes	12.49%
	Packaging	12.92%
	Freight	2.36%
	Other Expenses	1.45%
	Assets	10.73%
	Total Tonnes CO2e	

**Figure 1: Breakdown of Emissions by Source**

