

Jervis Bay Brewing Company Sustainability Statement

Rationale

We are living through dual biodiversity and nature crises and have entered a new epoch in geological time called the Anthropocene where the human impact on earth is apparent in all ecosystems and the atmosphere. Business as usual will not be an option for much longer. All directors have identified sustainability as a key pillar of JBBC, so we must aim to take action on a local level that can help solve global challenges. In order to reflect – and profit from – the unspoilt natural environment that makes Jervis Bay a renowned national and international destination, we must strive to ensure JBBC's activities leave as small a footprint as possible. We aim to be seen by our community as a model company in the way it conducts business, to be a source of pride and inspiration for people and businesses who care about the impact of their life choices and to create a business that is a force for good. By embedding this in our business early, our attention to detail in this regard can be a point of difference for our brand, which can help us be as successful as possible.

The advance of climate change will make the foundational elements of our business (water, hops, malted barley and the energy to turn them to beer) less predictably available. It is highly likely that at some point in the medium-term future (10-20 years), we will be living in a carbon-constrained world, where all businesses will be expected to reduce carbon to a target level. The businesses that will continue to thrive in this sort of reality are those who have proactively taken the steps to prepare for it and to whom the reality comes less as a shock than an opportunity that will provide a competitive edge.

Ultimately, we should strive to be a Certified B-Corporation, recognised for our transparency and attention to detail in minimising our impact throughout all elements of our business. B-Corporation certification places a legal requirement on the business to consider the impact of its decision making on workers, customers, suppliers and the environment.

This document seeks to lay the groundwork for eventual B Certification by identifying broad areas of sustainability risk, suggesting options to reduce risk in those areas and suggesting a timeframe in which this should occur (immediate (as business is established), medium term (within 5 years), longer term (>5 years)). An action table is included for next steps. It is anticipated that this document be reviewed on an ongoing basis to identify which elements were successfully delivered and which are outstanding / ongoing.

Business decision making

All of our decisions should be made through an environmental and sustainability lens. It is likely that there will be regular tensions with cost and a key question for us when this arises is 'can we afford not to make the sustainable choice?' Cost is both financial and reputational, and if we set ourselves up to profit from our environmental responsibility, we must not appear hypocritical. Other tensions may arise, such as whether to choose an organic supplier further away over non-organic closer to home as we seek to minimise carbon footprint through transport miles.

Key areas

Water

Water consumption in a brewery is going to be extremely high relative to many other businesses. The Shoalhaven is very fortunate in that it has a large catchment and a very secure water supply.

However, the Shoalhaven's water can also be diverted to Sydney, and in an era of increasing weather uncertainty we should assume that extended periods without rain will become more common. It is therefore prudent to reduce water usage as much as possible.

Potential means to reduce water usage:

- Urinals in male toilets, dual flush toilets throughout, hand washing basins that drain into the cistern
- Pedal taps for handwashing to reduce water wastage
- Installing rainwater tanks that are used for toilet flushing, hand washing and cleaning (we will not have enough space for tanks to be able to brew beer from rainwater). Shoalhaven water gives a \$500 rebate to customers who install tanks with a capacity >2,000L (<https://shoalwater.nsw.gov.au/Your-Home/Rebates-and-Offers/Rainwater-tank-rebates>), suggest we install as large a tank as possible that doesn't require a Development Application
- Recycling of brewery water in settling tank for cleaning and irrigation of plants and vegetables
- Low-flow taps in kitchen and bathroom
- Water-efficient dish and glass washers

Energy

Energy will be our largest cost after wages and should therefore be a primary focus. The size of our brew house means that gas is our only option for brewing. So, efforts to reduce energy use will have to focus on energy efficiency and generation. The roof orientation of our brewery is NNW, which is a good orientation for solar generation for our business as it peaks around noon (approximate opening time) but has an evening tail due to the slight westerly orientation. Further, the rapid progress in battery technology means we may have opportunities to store energy for use on the premises at night. The indicative payback time for solar systems <100kW is between 2 and 5 years, but this falling as the cost of electricity rises. The approximate cost of a solar system is \$1,000 / kW, with options to pay up front or a hire-purchase type agreement. We have sought a business plan and quote from Solar Choice, and it is likely we will require a system of 30-50kW. One of the future benefits of solar will be to charge electric vehicles, giving us a means to reduce emissions from delivery vehicles and courtesy buses and charging electric bicycles.

Our largest area of electricity use will be refrigeration. This will be most required when it is warmest and therefore when solar is generating. However, energy efficiency will also play a key role in reducing costs. Transport (in particular, delivery and collection of kegs, transporting customers and transport miles for supplies) is another area of focus.

Steps to reduce energy demand and increase energy efficiency include:

- Install an appropriately sized solar system (COMPLETE) and battery (MEDIUM)
- Investigate electric vehicles for the brewery (DONE)
- Ensure any vehicles purchased are as fuel efficient as possible, and encourage the use of bicycles or scooters for staff / directors (ONGOING)
- Encourage families to cycle via adequate and secure bike parking and consider a reward for families that arrive by bike (ONGOING)

- Ensure efficiency is the key consideration when purchasing new equipment such as cool room and fridges (ONGOING)
- Ensure LED lighting throughout with smart lighting in toilets
- Insulate roof and walls to passively cool the building (ONGOING)
- Ensure all refrigerant pipes are fully lagged and that lagging is maintained (ONGOING)
- Investigate whether the hot liquor tank can be electrically heated, and therefore run off solar (IMMEDIATE)
- Choose local suppliers over more distant ones assuming they are aligned with our principles and that other considerations do not trump distance (IMMEDIATE)
- Consider whether a kitchen could run on electricity in the event we install a kitchen in future (MEDIUM)

Waste

Waste is another primary area of concern. Much of our waste will be compostable, such as spent grain and food waste. This provides an excellent opportunity to divert the majority of our business's waste from landfill. Considerations to reduce compostable waste include:

- Provide spent grain to farmers to feed to livestock (ONGOING)
- Investigate reprocessing spent grain into other products, such as dog biscuits and breads (MEDIUM)
- Investigate installing a commercial-scale worm farm either onsite underground or on another property offsite to produce compost to use on our garden and supply to community gardens (IMMEDIATE)
- Producing and composting as much food (fruit and vegetables) onsite as possible (IMMEDIATE-MEDIUM)
- Ensure that third party food providers are aligned with our approach to waste (IMMEDIATE)

Other areas of waste to consider and steps to reduce them include:

- Ensure as few disposable coffee cups as possible are provided by encouraging customers to drink on site, offer a significant discount for customers bringing a keep cup and sell keep cups on site at low cost (IMMEDIATE)
- Ensure there are no single use plastic straws or eating utensils used on site, including by third party food providers (ONGOING)
- Ensure any single use containers are compostable (IMMEDIATE)
- Install direct worm composting in garden beds (IMMEDIATE)
- Ensure chilled tap water is available to customers to refill water bottles and supply either cans, glass bottles or use guns for soft drinks in place of plastic bottles (IMMEDIATE)
- Investigate whether there are grain suppliers that do not line sacks with plastics (IMMEDIATE)
- Use hand dryers in toilets instead of paper towels (IMMEDIATE)

Products

The source of the products we will use in our business are an important consideration as this is part of the extended footprint of our business. Grain and meat production have significant impacts on land use, while meat and dairy are water and carbon intensive products. Australia is identified as one of 11 global deforestation fronts, primarily due to land clearing for beef production in Queensland. Land clearing is accelerating in NSW also, primarily for cotton growing but also including grain production. Industrialised hardwood timber production from native forests is not sustainable and is significantly impacting many species and ecosystems as well reducing the carbon storage capacity of

forests and impacting catchments. Important considerations to minimise the extended impact from product choices are:

- Use organic suppliers for grain, food and wine where possible (IMMEDIATE)
- Ensure grain is not sourced from recently (<10 years) cleared land (IMMEDIATE)
- Ensure animal products are locally sourced and traceable to the farm, that beef is grass fed and not from Qld (IMMEDIATE)
- Promote consumption of vegetables over chicken over pork over beef (IMMEDIATE)
- Ensure we offer a wide range of vegetarian food options and consider making them cheaper (IMMEDIATE)
- Ensure suppliers are aligned with our principles (IMMEDIATE)
- Use second hand and scavenged wood for interior design (IMMEDIATE)
- Use no herbicides and only organic-approved pesticides in the garden and seating areas (IMMEDIATE)
- Use low impact or naturally derived chemicals for interior cleaning (IMMEDIATE)