

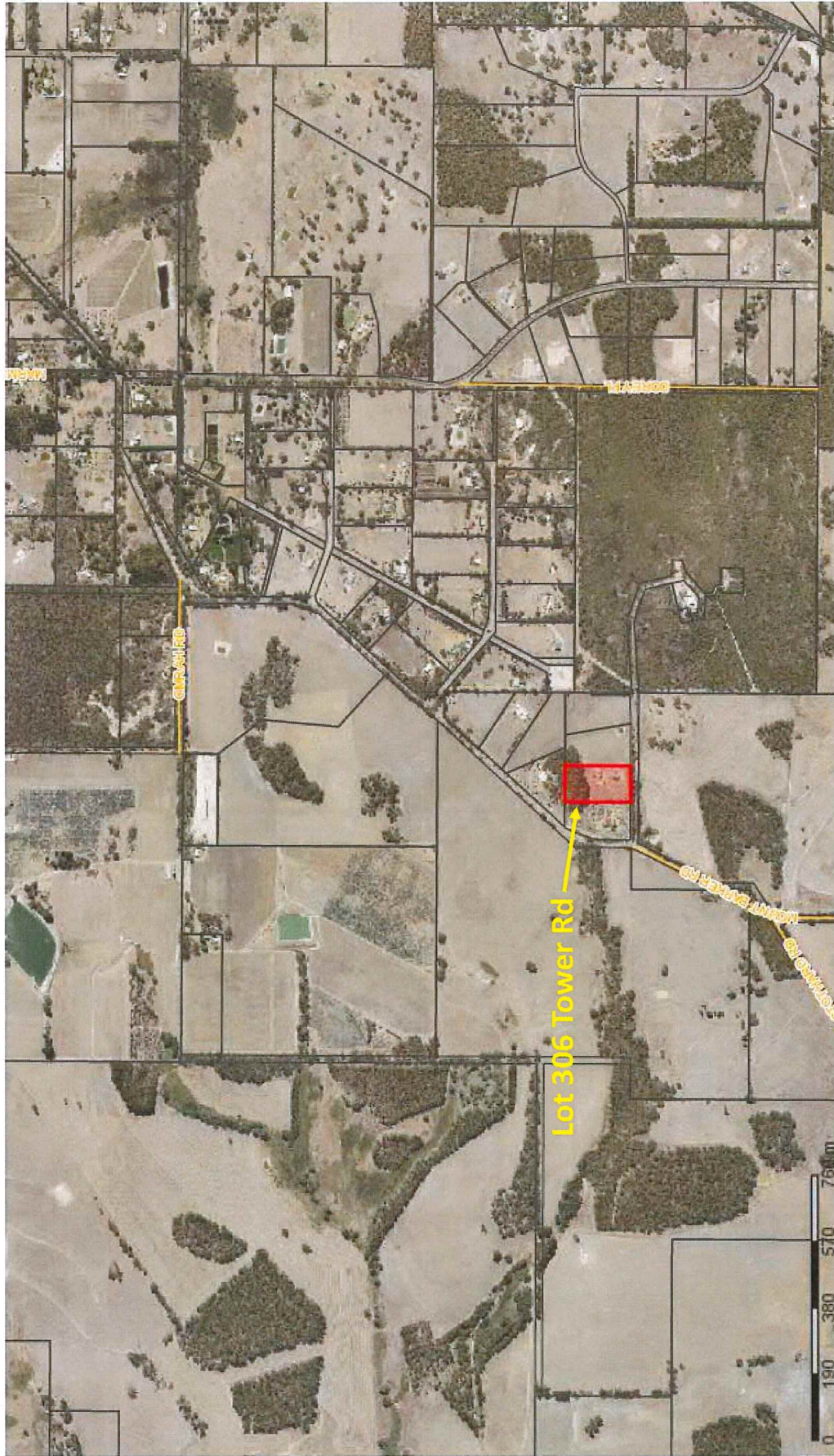
Council

LOT 306 TOWER ROAD, MOUNT BARKER -  
WINERY

Location Map  
Context Plan  
Site Plan  
Ground Floor Plan  
Mezzanine Floor Plan  
Operational Management Plan

Meeting Date: 1 December 2020

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## LOCATION PLAN

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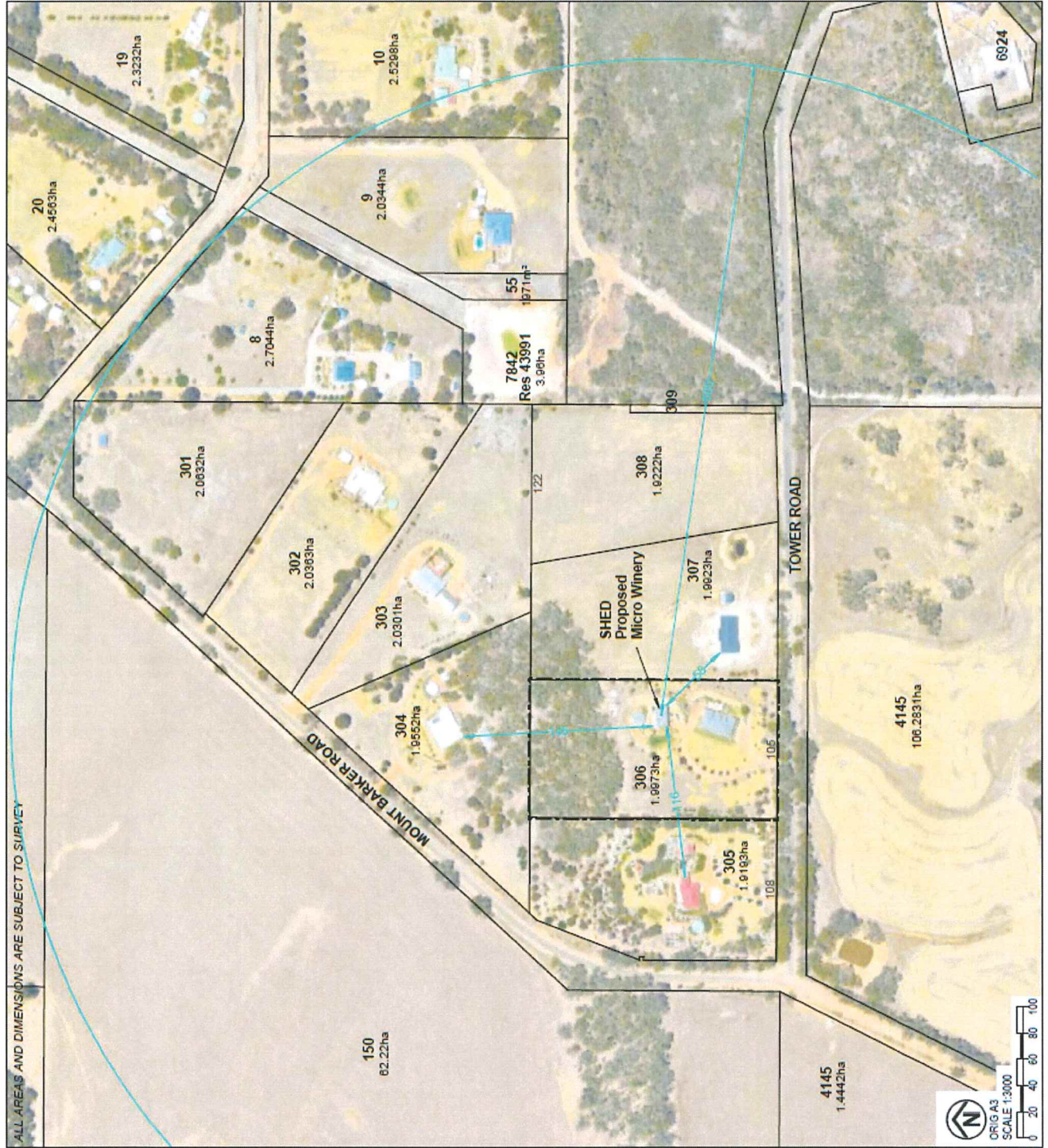




# CONTEXT PLAN Lot 306 Tower Road Mount Barker

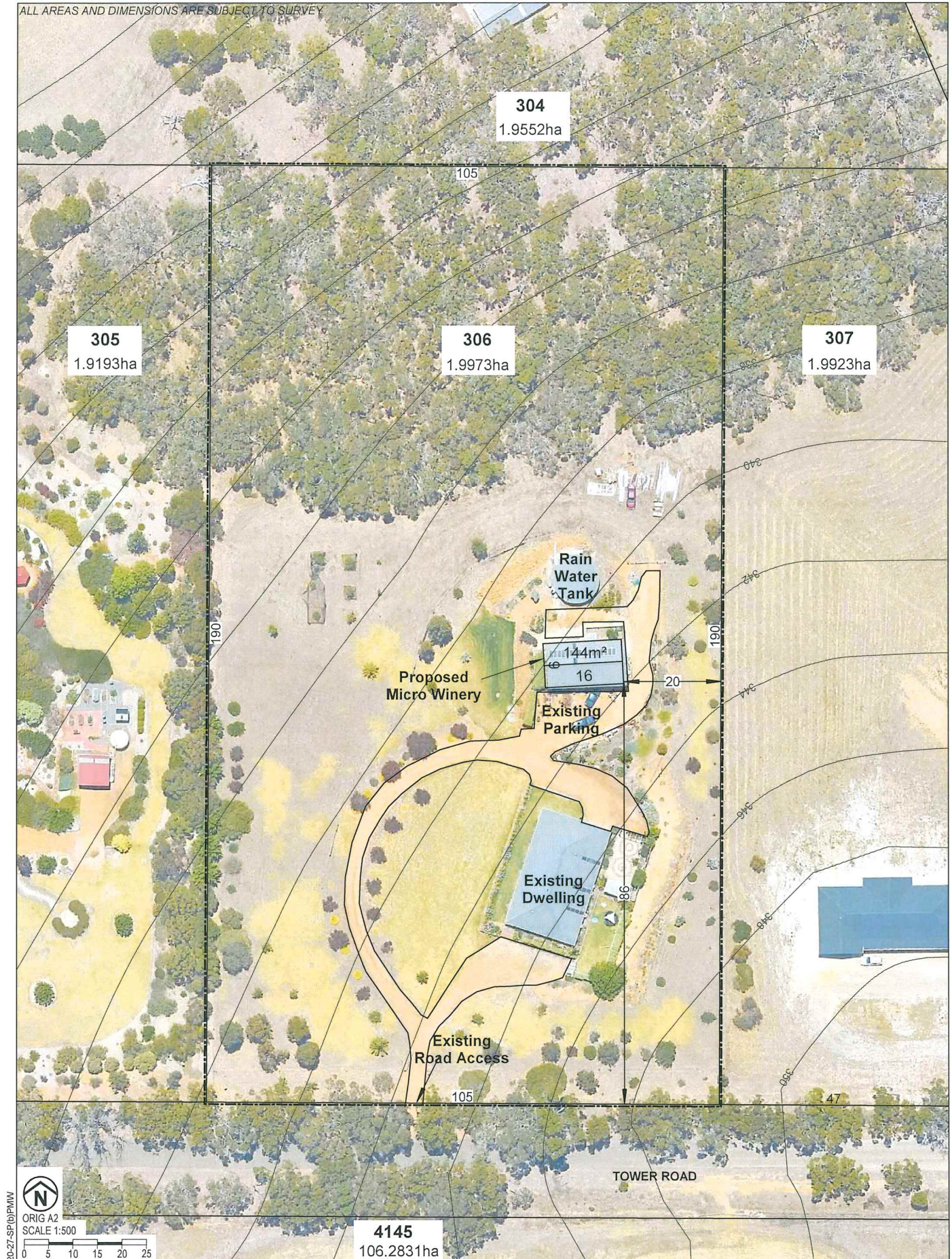
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STRATEGIC DEVELOPMENT

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ALL AREAS AND DIMENSIONS ARE SUBJECT TO SURVEY



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**SITE PLAN**  
**Proposed Micro Winery**  
**Lot 306 Tower Road**  
**Mount Barker, Shire of Plantagenet**

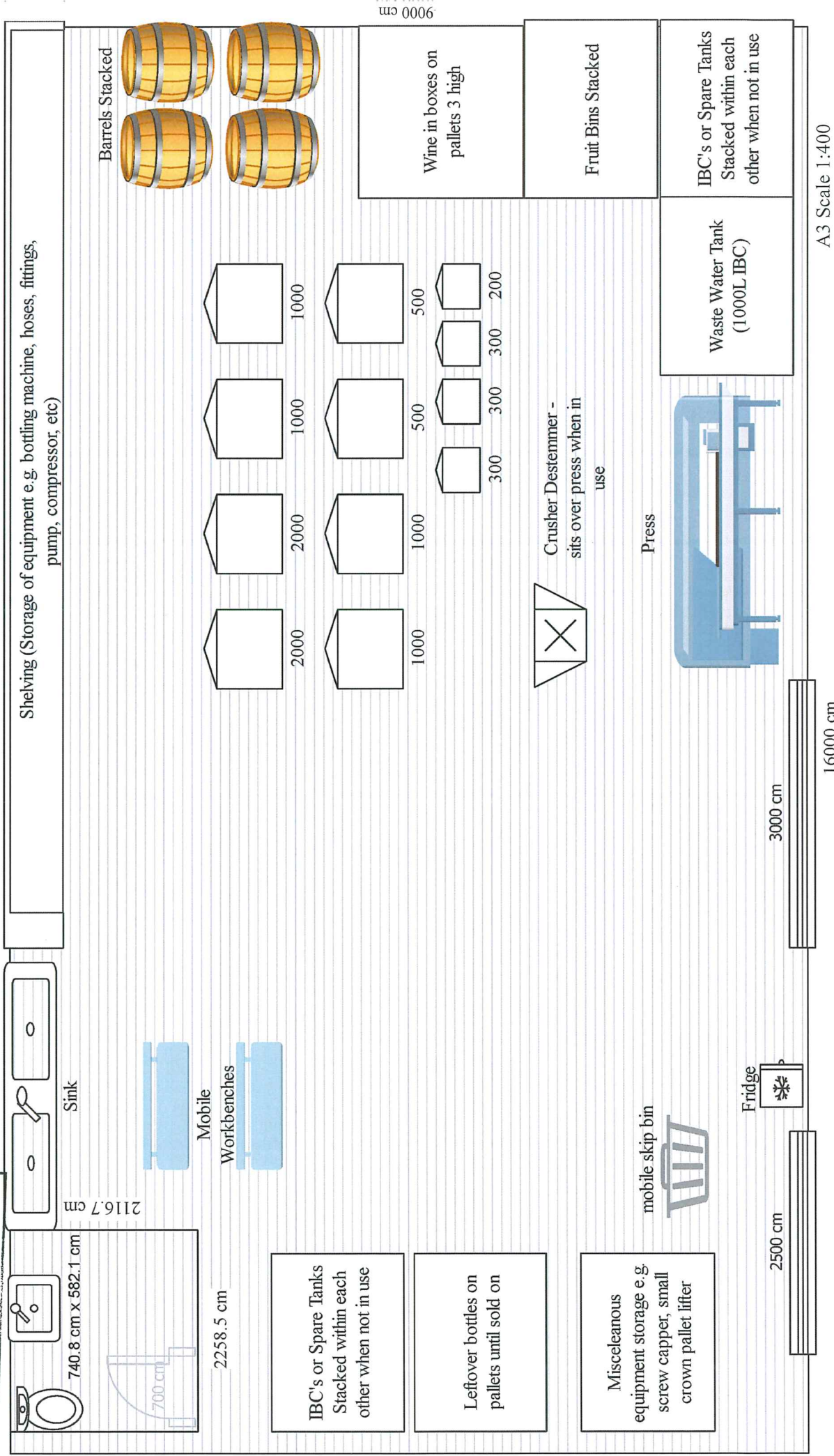


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Proposed Micro Winery Lot 306 Tower Road Mount Barker  
Ground Floor

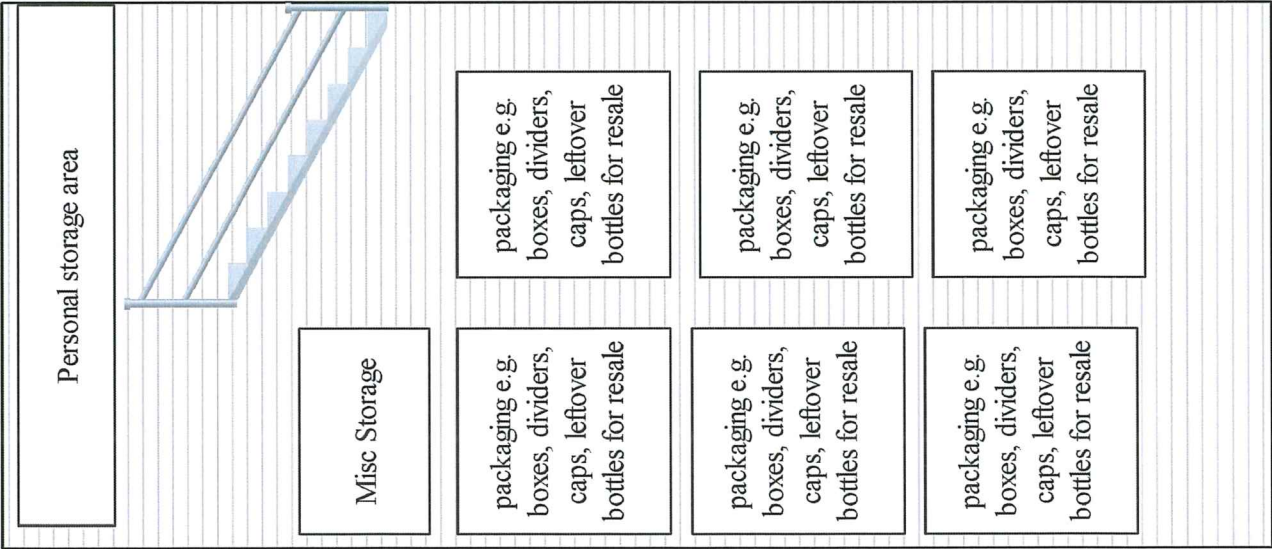


## GROUND FLOOR PLAN

A3 Scale 1:400

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STRATEGIC DEVELOPMENT

Proposed Micro Winery Lot 306 Tower Road Mount Barker  
Mezzanine (West End of Building)



MEZZANINE FLOOR PLAN



# Chalari Wines – Small Batch, Garagiste Winemaking Operational Management Plan

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## Introduction to Chalari Wines

Chalari Wines is a small, family owned, garagiste wine label. Founded by myself and family in 2016, our small batch wine business has already had considerable success, including making the Top 50 Young Gun of Wine for the last 2 years and the top 25 in the heralded WA Good Food Guide.

Originally based in Roleystone, our little business and family have recently made the move to Mount Barker, to enjoy the beautiful region, to enjoy a different lifestyle and to continue our business.

We are a small batch, garagiste winemaking business, with a maximum processing capability of around 20 tonnes of fruit per annum. Historically we have purchased a lot of this fruit from Mount Barker and the surrounding area and would like to strengthen our ties with the region and other local businesses, to become a business that is itself considered truly local to the area.

We have a minimal intervention approach to our wine making, using no or minimal chemicals throughout our entire process and feel this approach sits well with the existing 'natural' values in the region.

Being a garagiste, the existing infrastructure on the property is suitable for our business. No clearing of vegetation or new buildings are required.

Garagiste is a reference to a group of winemakers in the Bordeaux region of France who in the mid 1990's produced 'Vin de garage' or 'garage wine'. This concept has seen a lot of small producers able to start creating wonderful and different styles of wine, without the huge setup costs, impacts and scale of commercial wineries.

## Operational Plan Details

### General notes

The following notes govern all operations.

1. All activities are performed within the insulated shed. Insulated for both temperature control and noise.
2. All cleaning is done in place and waste is pumped to settling tanks for disposal of by liquid waste contractors yearly. In 2019, we had 1400litres of liquid waste water.
3. No refrigeration/tank cooling is used. Rely on the ambient temperature management using insulation.

### Volume

We are a garage small batch winemaking business, not a large scale commercial winery.

We only have the capacity to process a maximum of 20 tons of fruit, in small batches of 2 ton per wine.

This produces approximately 1000 cases of wine per year. This is the upper end of scale.

2019 saw volumes down and we only have been able to produce approximately 600 cases.

Another indication of scale is our tank space. We have the following tanks:

2 x 2000L Stainless Tanks

4 x 1000L Stainless Tanks

2 x 500L Stainless tanks

1 x 300L Stainless tank

3 x 200L stainless tanks

We also have 12-14 barrels. Wine is not fermented in these. Some wine is transferred where appropriate from stainless into barrel for maturation, freeing up stainless tanks for the fermentation of the next fruit.

### Power and Water

Not all winemaking facilities are power and water intensive, particularly garage winemaking facilities.

Water is harvested from roof of shed into tank, filtered and used as winery water. 2019 saw us collect 1400L of waste water. We do not have intensive water use as it is against our philosophy. We use what we need only and are careful with the resource.



Water usage is far lower than commercial wineries. We do not have Clean in Place systems, we use low volume high pressure washers to wash small equipment, and we conserve water. We don't water down over ripe juice, we don't have large volume tanks that require multiple cleans and flushing, we don't make additions to wine requiring large volumes of water to mix such chemicals as bentonite or sulfur. Water usage is low and the waste water is representative of that. It is vastly different to large scale commercial wineries.

Power use is minimal. We do not use refrigeration or cooling. Appliances are 10-20 amp and used for short times during vintage. Solar panels also provide some renewable energy input.

Detail in environmental management plan.

## Equipment and Machinery

Nearly all equipment is electric. The only diesel powered machine is a hot water pressure washer. The pressure washer is electric, and the diesel is used to burn and heat the water so there is no diesel motor as such. The frequency of use is only for cleaning the floors with a wet vac connection to retrieve waste water. This would happen once before vintage, and once after vintage. A standard ryobi electric pressure washer is used with a hot water connection at all other times.

- i. Flow rate (l/h) 450
- ii. Operating pressure (bar/MPa) 110 / 11
- iii. Temperature (°C) max. 80
- iv. Power rating (kW) 2.2
- v. Fuel oil consumption, full load (kg/h) 2.4
- vi. Fuel tank (l) 6.5
- vii. Number of users 1
- viii. Weight (with accessories) (kg) 65.4
- ix. Weight incl. packaging (kg) 73.6
- x. Dimensions (L x W x H) (mm) 618 x 618 x 994



Vehicles are diesel/petrol driven. No generators are used, if power is out there is no operations.

## Loading and offloading of fruit

1. During the vintage period of Jan-Apr, there would be approximately 8-10 different parcels of fruit that I would bring in, spread out over that time.
2. Fruit is always handpicked into 20kg green fruit bins
3. Fruit is sorted by hand pickers so no sorting occurs at processing.
4. 20kg fruit bins are stacked 4 high onto a pallet and then wrapped using 'Great Wrap', a biodegradable plastic wrap.
5. Pallets are covered with reusable insulating covers.
6. 2 tons of fruit = 4 pallets

7. Pallets are loaded onto a ute and trailer and driven by myself to site for processing. One trip per 3 tons of fruit. We only do 2 ton batches so never more than one trip per batch therefore no increase to traffic.
8. Pallets are either unloaded by hand, or with a small electric pallet lifter
9. Pallets are unloaded when ready for processing. No pallet will sit on the ground waiting to be processed.

#### Sorting of fruit

1. Sorting of fruit occurs at picking
2. All fruit is handpicked
3. Pickers are instructed to leave damaged fruit
4. No sorting of fruit occurs on site

#### Destemming and Crushing

1. Destemming and Crushing doesn't occur for every wine, it depends on the wine, the style, and the fruit quality.
2. If fruit is destemmed and crushed it is done using the following piece of equipment. This is classified as a hobby crusher destemmer. It has a quiet 10 amp electric motor. Fruit goes one 20kg bin at a time into the hopper whilst it is sitting over a tank. A bag is placed under the back where the stems are collected. Crushed grape and juice is collected in tank.





3. To give an indication of scale, this piece of equipment is approximately 1200mm long and 600mm high and can be lifted by one person.
4. It can be moved around, crusher rollers removed for destemming only, and as such is flexible to allow us to adapt to different wine styles.
5. Can process 1.5ton per hour.

## Maceration and Pressing

### Maceration

1. Doesn't always occur, it depends on wine style.
2. If it occurs, after the crushing phase, the crushed grape is placed into either stainless steel or HDPE plastic tank and sealed with a lid, and an airlock, for the period of time maceration needs to occur. This varies from wine to wine.
3. If maceration is occurring, daily punch down of the cap will occur. This is manual and done with a stainless steel tool that pushes the cap into the wine. The tank is then resealed.
4. Once maceration occurs, it is then sent to the press.

### Pressing

1. Pressing can occur as follows:
  - a. Whole bunch press (no crushing/destemming/maceration)
    - i. Fruit is tipped directly into the press
    - ii. Press is set to press the fruit based on a cycle that suits the wine style
    - iii. Juice is collected and sent to tank for fermentation
  - b. Crushed grape pressing
    - i. Grape is crushed and destemmed first as per section above
    - ii. Grape is gravity fed or pumped into the press
    - iii. Press cycle set and collected to tank for fermentation
  - c. Marc pressing

- i. Once grape has been macerated e.g. reds, skin contact wines, the marc is sent to the press for pressing and wine is sent to tank for fermentation or continued fermentation
2. All pressing is done using the following piece of equipment. It is a small europress press. This is a very quiet and efficient machine. It consists of a bag on the inside of a stainless steel drum. Fruit is loaded, and a vacuum and a compressor manage the bag filling with air to exert pressure on the fruit. Juice is collected in a tray underneath and pumped to tank.
3. Pressing is done to achieve quality juice over quantity. We do not press hard. We only take the light pressings achieving a maximum of 450-500L per ton of fruit.



## Fermentation

1. Fermentation occurs when grape juice is converted to alcohol.
2. Fermentation occurs in either Stainless Steel, HDPE plastic, or barrel.
3. Tank sizes vary from 200L to a maximum of 2000L tanks. These tanks are all movable by a single person, they are light and easily accessible. They are not refrigerated tanks.
4. Tanks are sealed with lids and an air lock is used to release CO<sub>2</sub> produced.
5. Any odour is highly localized to the immediate area surrounding the tank and quickly dissipates.
6. No yeasts are added, we use the native yeasts found on the grape.

## Malolactic fermentation

1. Malolactic fermentation is the conversion of the harsher malic acid into the softer lactic acid.
2. This occurs naturally during maturation of wine and is important to some wines, but not others.
3. This needs to occur mainly in red wine production and will be done in barrel in most cases.
4. Once wine is fermented and transferred to barrel, MLF will occur over the following months naturally. It is checked before bottling with test strips.



5. MLF doesn't create any odour, noise, or additional inputs. It is a biological process that occurs naturally.

## Maturation, Fining, Filtering

### Maturation

1. Maturation will depend on the wine and wine style
2. Whites will generally be matured in stainless steel until ready for bottling. Most whites are bottled the same year as processing and ready for summer that same year. This involves the wine being sealed in the stainless steel tank and allowed to settle. This is important as we do not use fining or filtration.
3. Reds and some whites can be matured in barrels. We use old oak, we don't buy new oak as it doesn't suit our style of wine. Barrels are filled, and stacked on barrel racks. We have 14 250 litre barrels at present and they sit on barrel racks stacked 3 high and take up minimal space.

### Fining

1. We do not fine our wines. We ensure fruit quality is exceptional and attention to winemaking detail is very high. We have a minimal intervention winemaking philosophy and adding to our wine is not part of that.

### Filtering

1. As per fining, we do not filter wines. They are allowed to naturally settle and clear. Wines are still 'cellar bright' due to the time allowed to settle naturally.

## Bottling

Where volumes are less than 500L, generally bottling is done on site and the following process is followed.

1. An appropriate bottle is ordered by the pallet from Cospak. Majority 750ml.
2. I collect the pallet of bottles from transporter Farris in Denmark and bring them to site.
3. Within the micro winery building, an area is setup using benches that are on wheels.
4. The bottling machine is a very quiet vacuum filler with 4 heads as per the picture below.

Specs as follows:

- a. Dimensions 650 x 460 x 450 mm
- b. Power 120 W
- c. Weight 25 kg
- d. Power 220 V – 50/60 Hz
- e. 100/110 V – 50/60 Hz
- f. Production Capacity WINE: ~ 600 b/h



- g. OIL: ~ 500 b/h
  - h. Inner diameter of the bottle neck      From 16 up to 28 mm
  - i. Bottle height      From 180 up to 350 mm
5. Bottles are taken straight off the sealed pallet, not rinsed as they are brand new and clean, put under the filler and filled.
  6. Bottles are then moved manually to the screw capper. Bottles are placed one at a time and a button pressed to descend the head to apply the cap. Specs as follows:
    - a. Bench model built entirely in Stainless Steel.
    - b. Push Button (x 2) Operation
    - c. Bottle is lifted (pneumatically) into the rotating head
    - d. Pressure Regulation valve & Air Filter installed on the pneumatic in
    - e. 4 Disc Head manufactured in S/Steel
    - f. Provided with No CAP NO ROLL detector
    - g. Motor: 0.33kW
    - h. Noise levels: Lpa < 70db
    - i. For Glass container dimensions of:
    - j. 25 – 160mm diameter
    - k. 80 – 350mm Height
    - l. Dimensions: 470 x 500 x 850mm;
    - m. Weight: 65Kg
  7. Bottles are then put straight into wine cartons and stacked 64 boxes per pallet. Boxes aren't sealed. Wines are labelled as they go out. Labelled manually.
  8. No filtration occurs as we allow wines to naturally settle so there is no filter medium (diatomaceous earth etc)
  9. 500l = ~650 bottles. This is done in 3-4 hours.



## Storage, aging and marketing

### Storage

1. Wine is stored in a combination of ways. Note a **maximum** production of 1000 cases per year.
  - a. Sent to Adelaide distributor - ~25%
  - b. Sent to Melbourne distributor - ~25%
  - c. Sent to Perth storage facility for distribution in WA only - ~25%
  - d. Stored on site - ~25%

### Aging

1. Unlike some countries, in Australia, almost no wines are aged before release.
2. Wines are generally settled after bottling for around a month before release.
3. We make wines that are good to go post that month of settling in bottle. Therefore no wine is aged in bottle by us.



## Marketing

1. We use a combination of modern marketing techniques including:
  - a. Instagram and Facebook – allows us to connect to our target market
  - b. A selection of targeted wine events such as – Urban Wine Walk, Native Wine, Young Gun of Wine
  - c. A selection of judging shows suited to our style – e.g. WA Good Food Guide, Drink Easy awards.
  - d. Having our wines on top lists around the country including – state buildings, ku de ta, orana, Adelaide botanical gardens and more
2. No signage on premise, no cellar door on premise, no tasting on premise.

## Adverse Impacts, Energy and Water Consumption

Please see environmental management plan and effluent management plan.

## Proposed Hours of Operation

Monday – Friday 0800 – 1800.

Saturday-Sunday 0900 – 1700

## Employees/Staff

We do not employ anyone, the only persons working in this business are the owners of the business.