STATE COMMISSION ASSESSMENT PANEL
A COMMITTEE OF THE STATE PLANNING COMMISSION

APPLICATION ON NOTIFICATION – Category 2

Applicant:	Bowden Brewing Pty Ltd
Development Number:	252/L028/19
Nature of Development:	Change of use from retail to microbrewery with associated restaurant and licensed premises
Development Type:	Merit
Subject Land:	Tenancy 12, Plant 3, Lot 40 Fourth Street, Bowden
Development Plan:	Charles Sturt (City) Development Plan
Zone / Policy Area:	Urban Core Zone, Main Street Policy Area 24
Contact Officer:	Jeremy Wood
Phone Number:	7109 7078
Consultation Start Date:	5 July 2019
Consultation Close Date:	5:00 PM 19 July 2019
During the notification period, hard copies of the application documentation can be viewed at the Department of Planning, Transport and Infrastructure, Level 5, 50 Flinders St, Adelaide, during normal business hours. Application documentation may also be viewed during normal business hours at the local Council office (if identified on the public notice).	

Written representations must be received by the close date (indicated above) and can either be posted, hand-delivered or emailed to the State Commission Assessment Panel.

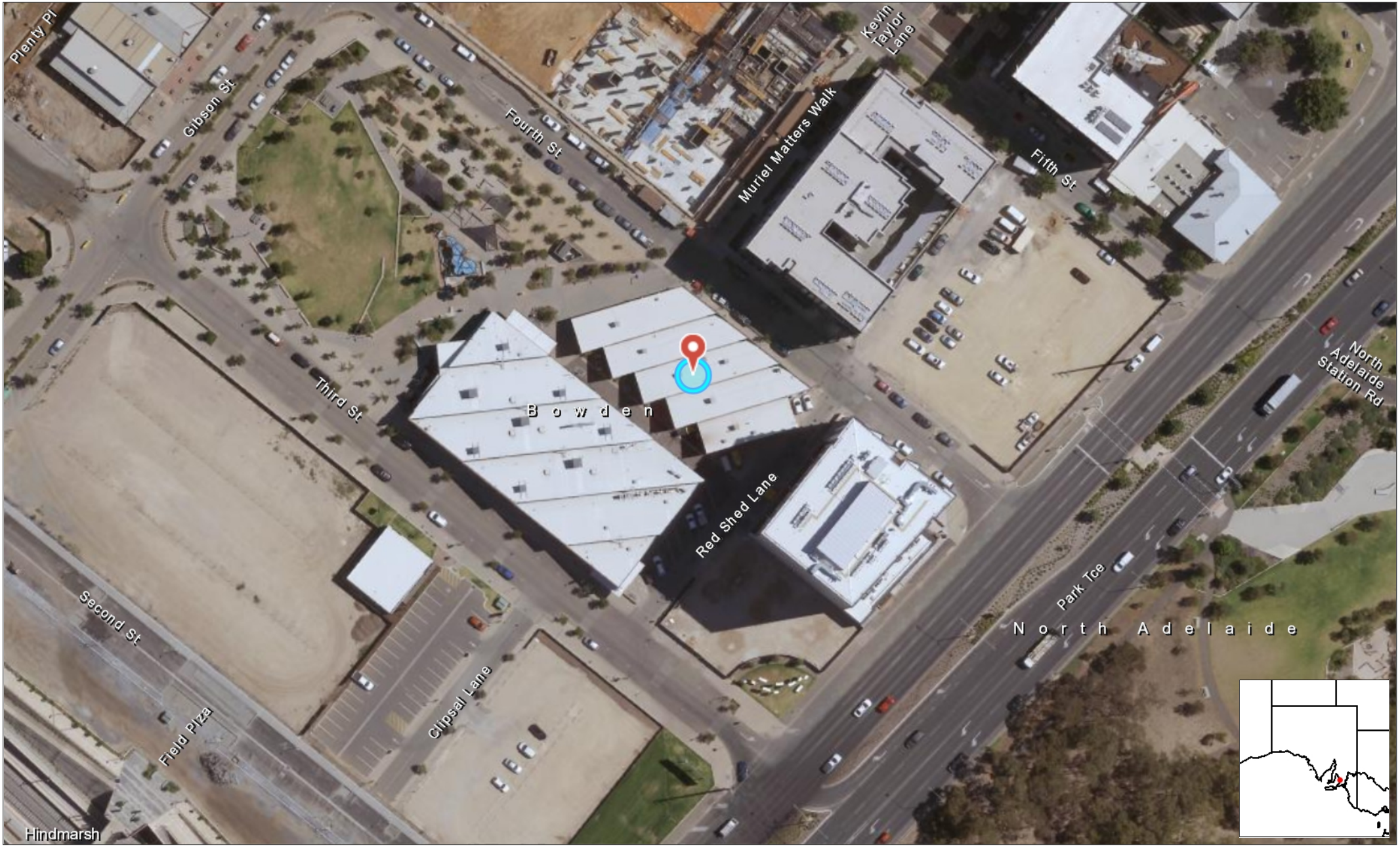
Any representations received after the close date will not be considered.

Postal Address:
The Secretary
State Commission Assessment Panel
GPO Box 1815
ADELAIDE SA 5001

Street Address:
Development Division
Department of Planning, Transport and Infrastructure
Level 5, 50 Flinders Street
ADELAIDE

Email Address: scapreps@sa.gov.au

Plant 3, Lot 40 Fourth Street, Bowden



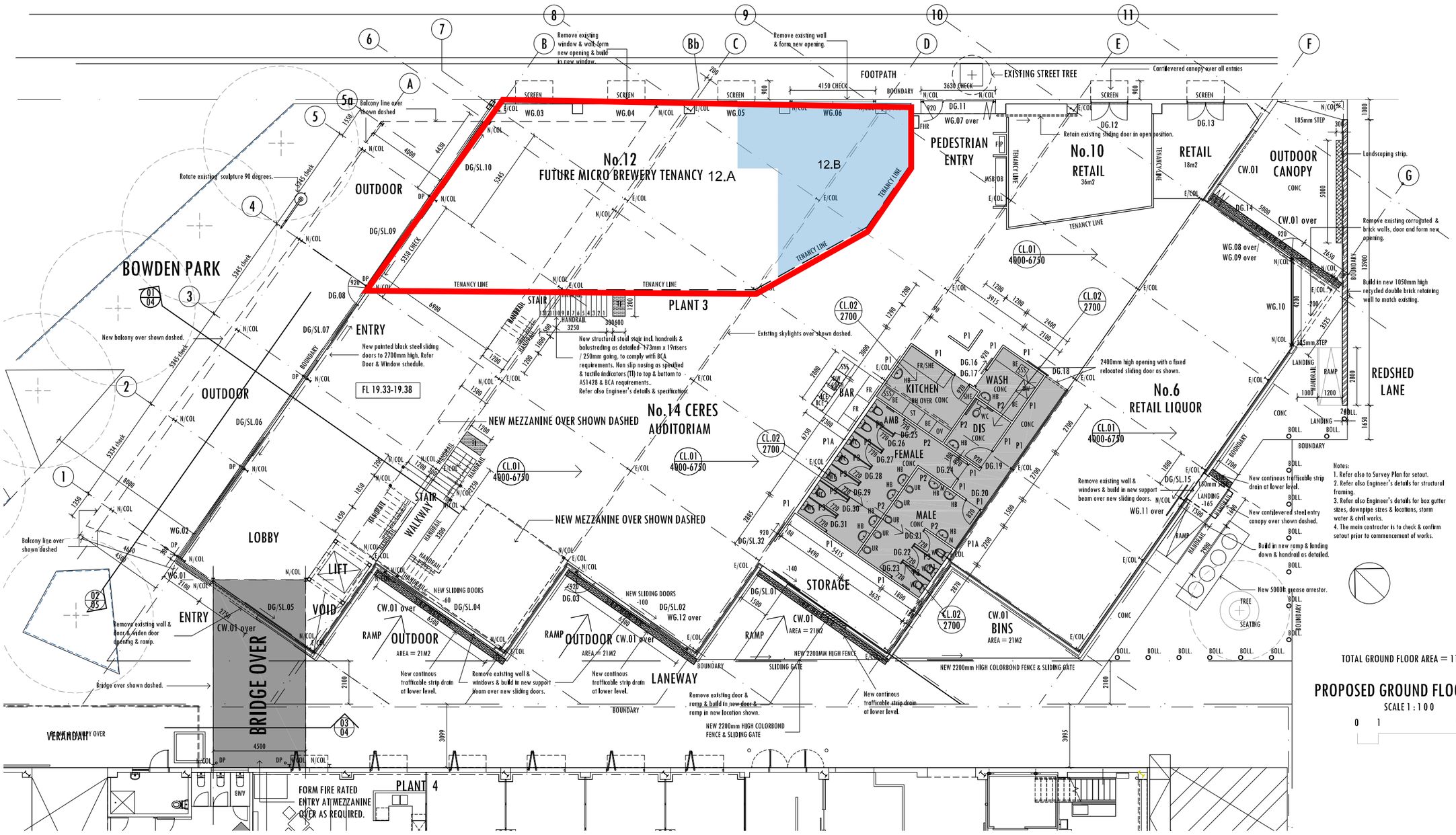
Map data is compiled from a variety of sources and hence its accuracy is variable.

N

0 57 Metres

Compiled:	12-Jun-2019
Generated at:	http://maps.env.sa.gov.au
Datum:	Geocentric Datum of Australia, 1994
Projection:	Web Mercator (Auxiliary Sphere)

Government of South Australia
Department for Environment and Water



TOTAL GROUND FLOOR AREA = 1120M2

PROPOSED GROUND FLOOR PLAN

SCALE 1 : 100

0 1 5m

1. GENERAL NOTES

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10. Signage incorporating the international symbol of access shall be in accordance with BCA-D3.6.
11. Parking areas shall be provided with appropriate regulatory signs and pavement markings as indicated on the drawings and as specified in AS 1742/1742.1 and AS/NZS 2890.6.
12. Doors to fully enclosed sanitary compartments will open outward or be easily removed from outside the compartment.
13. All lighting to comply with BCA Section J.6 and AS1680.0 for artificial lighting.
14. All glazing capable of being mistaken for a door in the path of travel will be highlighted with motifs or other similar provisions as per AS1288-2006.
15. Access to roof plant to comply with AS1657 & BCA-D2.18.
16. Fire hydrants to comply with AS2149.1 & BCA-E1.3.
17. Door frame seals to be Raven RP59 including rebate to double doors, Raven RP30 concealed sweeps under door and Raven RP87 threshold plates in accordance with BCA 3.12.3. and BCA Section J3.4.
18. To minimise air leakage construction must be enclosed by internal lining system or sealed by caulking, skirting, architraves, cornice or the like.
19. Provide integrated ramps to pathways in accordance with AS 1428.1-2009.
20. Signage to toilet doors in accordance with AS 1428.1.
21. Ambulant toilets to comply with AS 1428.1 2009 Part 16.

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1. Handrails installed to stair / ramp shall be both sides, and extend 300mm past the ends, and be in accordance with BCA-D3.3 and clause 5.3/9.2 AS1428.1
2. Install raised dome buttons to h/rails in accordance with BCA-D3.3 and clause 9 AS1428.1
3. Install tactile ground surface indicators in accordance with AS1428.4 to warn public with vision impairment that they are approaching ramps in accordance with BCA clause D3.8.
4. Unless otherwise noted, all handrails / balustrading to be 1050mm above floor level.
5. Stair treads to have colour contrasting nosings not less than 50mm & not greater than 75mm in accordance with BCA performance requirements DP1, DP7 & DP8.

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Selected colorbond vertical wall cladding with sisalation vapour barrier fixed to existing or new framing to manufacturers recommendations.

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Tontine TS82 cavity insulation.
Partition to be installed prior to ceiling with painted skirting as specified.

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Tontine TS82 cavity insulation.
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Laminate Toilet Partition System - 2100mm high Laminex Compact Laminate Partitioning system fixed 150mm above FFL. 1800mm high partitions fixed with standard Laminex System components including hinges, coat hook, latches etc.

NOTES:
SHADOW REBATE TO PARTITION/BULKHEAD AT CEILING LEVEL AS DETAILED.
ALL DIMENSIONS TO FACE OF PARTITION UNLESS OTHERWISE
THE CONTRACTOR IS TO DETERMINE AND CHECK THE EXACT FLOOR HEIGHTS.
PARTITION LAYOUT TO BE CONFIRMED ON SITE.

LEGEND

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BE	CUPBOARD BENCH
HB	HANDBASIN
M	MIRROR
WC	WATER CLOSET
MO	MICROWAVE OVEN
FR	REFRIGERATOR
OC	OVERHEAD CUPBOARD
J	JOINERY UNIT
HD	HAND TOWEL DISPENSER
UR	STAINLESS STEEL URINAL
CLS	CLEANERS SINK
SH	SHOWER
GS	GUTTER SUMP
RWH	RAINWATER HEAD
DP	DOWNPIPE
CL	CEILING LEVEL
FL	FLOOR LEVEL
TK	TOP OF KERB LEVEL
CARP	CARPET
CT	CERAMIC TILES
MAT	MATWELL
P/EC	PAINTED CONCRETE FLOOR
A/S	ALUMINIUM STRIP
FT	FLOOR TRAP
CJ	CONTROL JOINT
BLK	CEILING BULKHEAD
COL	STRUCTURAL STEEL COLUMN
FHR	FIRE HOSE REEL
B	SECURITY BOLLARDS
HR	HAND RAIL
BA	BALUSTRADE
GR	AMBULANT GRAB RAIL
PCF	POWDERCOATED GALV. STEEL FENCE
CHW	GALV. STEEL CHAINWIRE FENCE
FIN	CANTILEVERED STEEL FIN
AL	AIR LOCK
FG	FIXED GLASS
PL	PANEL LIFT DOOR
RD	ROLLER DOOR
CPR	COMPRESSOR
RACL	ROOF ACCESS LADDER
VL	VINYL FLOOR COVERING

NOTES: REFERENCE BOTH SITE AND FLOOR PLANS.

AMENDMENTS

ARCO.
Architecture + Interior Design
ABN: 67 296 351 575
93 Gilles Street
Adelaide, SA 5000
Tel/Fax: 08 83583184 Mob: 041428 2900

PROPOSED ALTERATIONS & ADDITIONS TO PLANT 3
FOURTH STREET
BOWDEN SA
PROJECT

SITE & FLOOR PLAN
DRAWING TITLE

File No.	16859
Scale	AS SHOWN
DATE	4-06-19
DRAWN	SP

16859 WD02
DRAWING No.

CONTRACTOR TO VERIFY ALL DIMENSIONS ON SITE PRIOR TO COMMENCEMENT OF WORK

DEVELOPMENT APPLICATION FORM

PLEASE USE BLOCK LETTERS

COUNCIL: City of Charles Sturt Council

APPLICANT: Bowden Brewing Pty Ltd

Postal Address: 75 Harriet St, West Croydon, SA, 5008

Owner: /Lessor Plant 3 Bowden Pty Ltd

Postal Address: 40 Fourth Street, Bowden, SA, 5007

BUILDER: **None Appointed yet**

Postal Address: _____

Licence No: _____

CONTACT PERSON FOR FURTHER INFORMATION

Name: **Jake Phoenix**

Telephone: **0407628762** [work] **0407628762** [Ah]

Fax: _____ [work] _____ [Ah]

EXISTING USE: **Warehouse**

FOR OFFICE USE

Development No: _____

Previous Development No: _____

Assessment No: _____

☐ Complying	Application forwarded to DA
☐ Non Complying	Commission/Council on
☐ Notification Cat 2	/ /
☐ Notification Cat 3	Decision: _____
☐ Referrals/Concurrences	Type: _____
☐ DA Commission	Date: / /

	Decision required	Fees	Receipt No	Date
Planning:				
Building:				
Land Division:				
Additional:				
Development Approval				

DESCRIPTION OF PROPOSED DEVELOPMENT: **Installation of a Microbrewery in an Existing Warehouse**

LOCATION OF PROPOSED DEVELOPMENT: **Plant 3 Bowden, 12 Fourth St, Bowden, SA, 5007**

House No: _____ Lot No: **12** Street: **Fourth Street** Town/Suburb: **Bowden**

Section No [full/part] _____ Hundred: _____ Volume: **6176** Folio: **3**

Section No [full/part] _____ Hundred: _____ Volume: _____ Folio: _____

LAND DIVISION:

Site Area [m^2] **46** Reserve Area [m^2] _____ No of existing allotments _____

Number of additional allotments [excluding road and reserve]: _____ Lease: **YES** ☒ **NO** ☐

BUILDING RULES CLASSIFICATION SOUGHT: Private Certifier Present classification: _____

If Class 5,6,78 or 9 classification is sought, state the proposed number of employees: Male: N/A Female: N/A

If Class 9a classification is sought, state the number o persons for whom accommodation is provided: N/A

If Class 9b classification is sought, state the proposed number of occupants of the various spaces at the premises: N/A

DOES EITHER SCHEDULE 21 OR 22 OF THE DEVELOPMENT REGULATIONS 2008 APPLY? **YES** ☐ **NO** ☒

HAS THE CONSTRUCTION INDUSTRY TRAINING FUND ACT 2008 LEVY BEEN PAID? **YES** ☐ **NO** ☒

DEVELOPMENT COST [do not include any fit-out costs]: $ **50,000**

I acknowledge that copies of this application and supporting documentation may be provided to interested persons in accordance with the Development Regulations 2008.

SIGNATURE: _____ Dated: **6 / June / 2019**

REAL PROPERTY ACT, 1886
South Australia

The Registrar-General certifies that this Title Register Search displays the records maintained in the Register Book and other notations at the time of searching.

Certificate of Title - Volume 6176 Folio 3

Parent Title(s) CT 6165/580

Creating Dealing(s) RTC 12540664

Title Issued 20/06/2016 **Edition** 3 **Edition Issued** 27/04/2018

Estate Type

FEE SIMPLE

Registered Proprietor

PLANT 3 BOWDEN PTY. LTD. (ACN: 612 663 162)
OF 33 GILBERT STREET ADELAIDE SA 5000

Description of Land

ALLOTMENT 40 DEPOSITED PLAN 113083
IN THE AREA NAMED BOWDEN
HUNDRED OF YATALA

Easements

TOGETHER WITH EASEMENT(S) OVER THE LAND MARKED S ON D113083 FOR SEWERAGE PURPOSES (RTC 12540664)

Schedule of Dealings

Dealing Number	Description
12558011	ENCUMBRANCE TO URBAN RENEWAL AUTHORITY

Notations

Dealings Affecting Title NIL

Priority Notices NIL

Notations on Plan NIL

Registrar-General's Notes NIL

Administrative Interests NIL

Jake Phoenix
Director
Bowden Brewing Pty Ltd
12 Fourth Street
Bowden, SA, 5007
Mobile: 0407 628 762
email: jake@bowdenbrewing.com

Nitsan Taylor
Senior Planning Officer
Planning and Land Use Services Division
Department of Planning, Transport and Infrastructure
Level 5, 50 Flinders Street
Adelaide 5000

Tuesday, 4th June 2019

Dear Nitsan,

Bowden Brewing plans to operate out of Tenancy 12 in the Plant 3 building at Bowden. The full tenancy space will be operating as a combined brewery and dining destination, with the products/services offered being house made beverages and meal service to suit. Bowden Brewing plans to provide a dining destination in Tenancy 12.A whilst undertaking the full brewing process in Tenancy 12.B. Drawings showing where Bowden Brewing fits into the Plant 3 development are located in the attached (highlighted blue on plan in Appendix A and B). This will include milling the grain, mashing, boiling, fermenting, conditioning and through to serving to the customer

Plant 3 development drawings have been provided and shows the location of Bowden Brewing's tenancy within the Plant 3 Development (area with blue boundary). Tenancy 12.A has received planning approval as with the remainder of the Plant 3 development under development number 252/L004/19. This letter covers the application for re-zoning Tenancy 12.B to Light industrial zone for the purposes of a Microbrewery.

Tenancy Number	Space	Area (m^2)	Percentage Area
12.A Dev No. 252/L004/19	Dining Area	245	84%
12.B Current Application	Brewery Area	46	16%
	Total Space	**291**	

A presentation to the Park Central and B Apartment Strata's was held on 18th April (at 6pm in Plant 4) for adjoining owners in both apartment blocks. This presented the overall Plant 3 Concept including the Brewery. Both of which appeared to be warmly embraced by the community. Community. Minutes of the meeting have been attached in Appendix C.

The main plant & equipment needed for our brewing operations are listed below:

- Two Vessel, Steam heated 600L Brewing kit
- 4x Conical Based Stainless Steel 1200L Fermenting Vessels
- 4x 600L Stainless Steel Bright/Serving Vessels
- 1000L Hot Liquor Tank (steam heated)
- 1000L Cold Liquor Tun
- 100L Clean In Place (CIP) Skid
- 100 kW Steam boiler and Skid
- Glycol system (for vessel temperature control)
- 65L Pilot brew kit with 2x 100L Fermenting Vessels (i.e. will allow for single keg (50L) batch experimentation)

The beer production cycle takes two to four weeks between the beer being brewed and it being ready to be served. Our small size and fermentation volumes means that it will only be possible to brew one to two days per week. Our brewhouse size puts an upper limit on our batch size of 600L of beer for a single batch and 1200L for a double batch. This results in our production capacity of approximately 8000L per month or 96,000L per year. Initially, we anticipate we will be produce approximately 4800L per month based on anticipated sales volumes. This will gradually ramp up to our production capacity as demand for our product grows.

Our operation is extremely small in the scheme of breweries and especially compared to our close neighbouring brewery, West End Brewery. Our forecasted maximum annual production of 96,000L is only ~0.08% of West End's annual production of 120,000,000L a year (and realistically likely to be even less– see attached Statement of Environmental Impacts for more information).

The small batch size and equipment selection means we will only brew 1-2 days per week and target this to be completed between Monday and Friday during daylight hours (as much as possible); whereas West End brews around the clock to meet their production targets.

No bottling or canning will occur on site at Bowden Brewery. This is decision was made to limit the footprint of the brewery. It also enables us to focus on beer served through our four serving tanks as well as kegs. Any canning or bottling we plan will occur at another brewery via a contract brewing arrangement.

Another comparison venue is the new Sparke Change Beverage Company venue at the Whitmore Hotel. This venue was selected as it is a similar size and setup to Bowden Brewing's proposed venue. Their brewhouse was installed in 2019, produces 800L per batch system which is 33% larger than the Bowden Brewing's proposed system.

The above photos show Sparke's venue is surrounded by homes on Morphett Street and high-rise apartments (17 story, Bohem Apartments) around Whitmore Square, Wright Court, Shelby Street and Wright Street and has similar venting devises. The above photos highlight the brewing vessels flues protruding from the venue as it is of similar design to Bowden Brewing's.

Staff Requirements

The below table lists the number of expected staff required to successfully operate the brewery and venue.

Job Title	Quantity
Head Brewer	2
Dining / Restaurant Support	2
Finance Manager	1
Marketing Contractor	1
Head Chef	1 FTE
Venue Manager	1 FTE
Venue Staff	3 FTE
Kitchen Staff	3 FTE

Wastewater Management Plan

The below system has been developed in consultation with our waste water consultant and has been approved by SA Waters Trade waste authority (Trade Waste Discharge Authorisation Notice 677786 Attached). The system will ensure all wastewater is within threshold:

- Floor Drains:
  - 2mm screens on strip drains
  - A sediment trap downstream of the strip drains
  - Catchment sump with pump allowing flow to balancing tank using a sump pump with float switch
- Balancing tank:
  - Around 2,000L in volume
  - Vented at building height
  - Bunded if above ground
- pH adjustment
  - Small recirculating pump (flow rate of 1L/s) to help mixing equalise pH within tank
  - Manual adjustment of pH in the tank using NaOH or HCl to within SA Water Guidelines (e.g. 6-10pH) using a chemical dosing pump. Initial and final pH to be recorded
- Manual temperature adjustment to less than 38°C (if required)
- Confirmation of temperature to be recorded on paper or tablet prior to discharge.
  - Manual discharge of tank to sewer by opening discharge valve of 20mm to throttle flow to around 1L/s max.

Days and hours of operation

Typical Brewery Operations will be targeted between 7am to 6pm Monday to Friday however it is anticipated that some checks will be required on the weekend. This work will be completed during daylight hours wherever possible and will not involve the use of any noisy equipment.

Venue hours are likely to be:

- Tuesday to Thursday 12pm-11pm
- Friday 12pm-1am
- Saturday 11am-1am
- Sunday 12pm-11pm

Traffic and Parking

Below is a list of vehicles required during brewery operations:

- Passenger vehicles – utes operated by the brewers
- Infrequent Vacuum trucks – to remove sludge's from wastewater tank
- Infrequent MR trucks – delivery of ingredients

There is no plan to operate any vehicles inside the Plant 3 development. The Existing Loading Zones will be used to:

- Take delivery of ingredients,
- Load utes with produced beer in the form of kegs
- Removal of spent grains

Environment Management Plan

The key areas for categorising potential health and environment impact from the brewing process can be split into 6 key categories:

1. Air emissions
2. Waste water
3. Solid wastes
4. Noise
5. Energy consumption
6. Water resource depletion

The only potential odour producing process external to the Plant 3 building during a brew day will be during the boiling phase which typically last for less than 2 hours and will be completed in the middle of the day whenever possible.

The only other potential source of external odour is waste water tank emissions. These emissions can develop in the wastewater tank due to anaerobic processes. Our waste water processing system has been designed in consultation with a waste water consultant and has been approved by SA Water's Trade Waste Team. This system has been designed to prevent odours by ensuring the tank is well mixed to introduce oxygen to the tank and by ensuring the water is treated as per our licence and discharged to sewer daily before any adverse odours can develop.

Our vents have also been designed to exceed Australian Standards of minimum flue height 1m above the ridge of the roof (in this case the sawtooth peak of the two opposing roof planes at the points of exit for the vents) as per AS1668.2. The Brewhouse Kettle and wastewater tank vents are designed to go above the minimum to a height of 1.5m above the ridge.

A detailed assessment of all impacts possible for each of these categories are defined in the full Environmental Impact Statement, but a high level summary of those addressed are included below:

Impact	Brewing	Fermenting	Packaging	Auxiliary
Air Emissions	• Steam and odour from wort boiling • Dusts from milling	• Odour from wort aeration		• Waste water odour • Odour from solid wastes
Waste Water	• Cleaning waste water • Hot water • Cooling water	• Cleaning waste water • Hot water	• Container cleaning waste water • Spills and breakages	• General wash down waste
Solid Wastes	• Trub – spent grain • Cleaning sludges /alkaline • filtration sludges / DE	• Yeast to waste • Fermentation solids • Cleaning sludges /alkaline	• Packaging wastes • Broken product wastes • Floor sweeps	
Noise	• Steam Generator		• High noise levels due to bottles	• Compressors and other motors

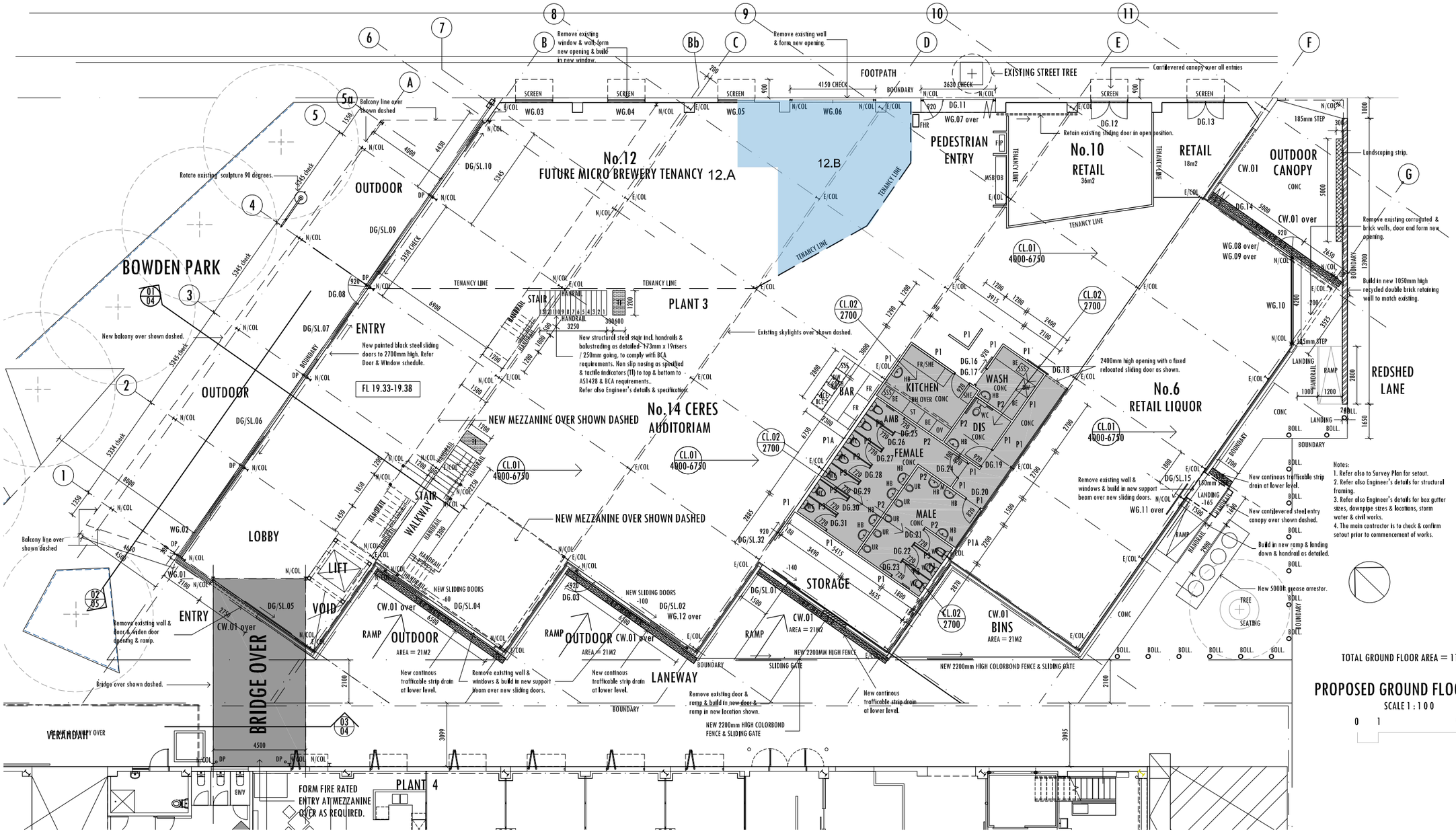
Energy Consumption	• High due to heating requirements	• Energy consumption due to cooling	• High due to heating	
Water Resource Depletion	• High water use due to extraction, boiling losses and cleaning	• Water consumption due to cleaning	• High water consumption due to bottle washing and cleaning	

More information about these impacts and how we are planning on mitigating them is detailed in the attached Environmental Impact Statement

Yours sincerely,

Jake Phoenix

Appendix A - Plant 3 Development Drawing



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RACL	ROOF ACCESS LADDER
VL	VINYL FLOOR COVERING

NOTES: REFERENCE BOTH SITE AND FLOOR PLANS.

AMENDMENTS

ARCO.
Architecture + Interior Design
ABN: 67 296 351 575
93 Gilles Street
Adelaide, SA 5000
Tel/Fax: 08 83583184 Mob: 041428 2900

PROPOSED ALTERATIONS & ADDITIONS TO PLANT 3
FOURTH STREET
BOWDEN SA
PROJECT

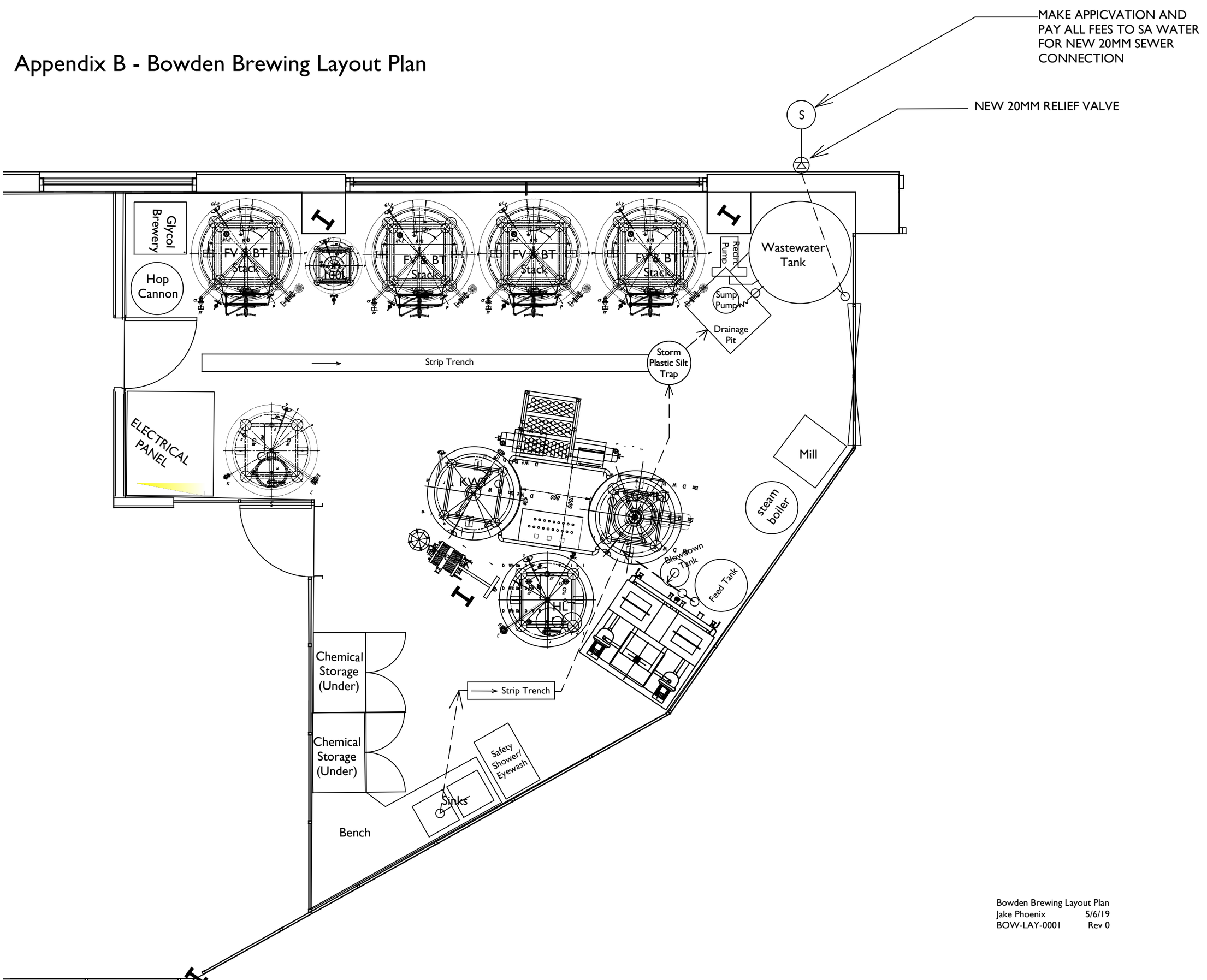
SITE & FLOOR PLAN
DRAWING TITLE

File No.	16859
Scale	AS SHOWN
DATE	4-06-19
DRAWN	SP

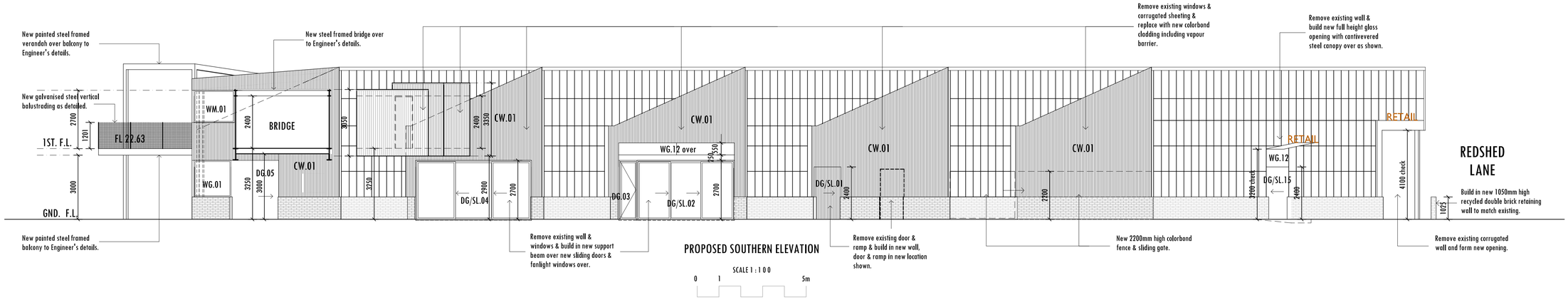
16859 WD02
DRAWING No.

CONTRACTOR TO VERIFY ALL DIMENSIONS ON SITE PRIOR TO COMMENCEMENT OF WORK

Appendix B - Bowden Brewing Layout Plan



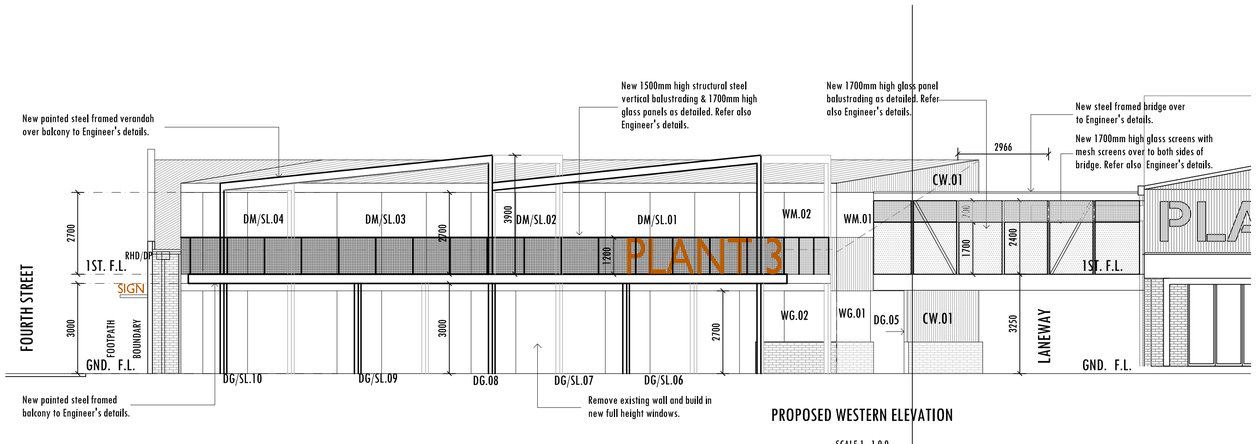
Bowden Brewing Layout Plan
Jake Phoenix 5/6/19
BOW-LAY-0001 Rev 0



PROPOSED SOUTHERN ELEVATION

SCALE 1 : 1 0 0

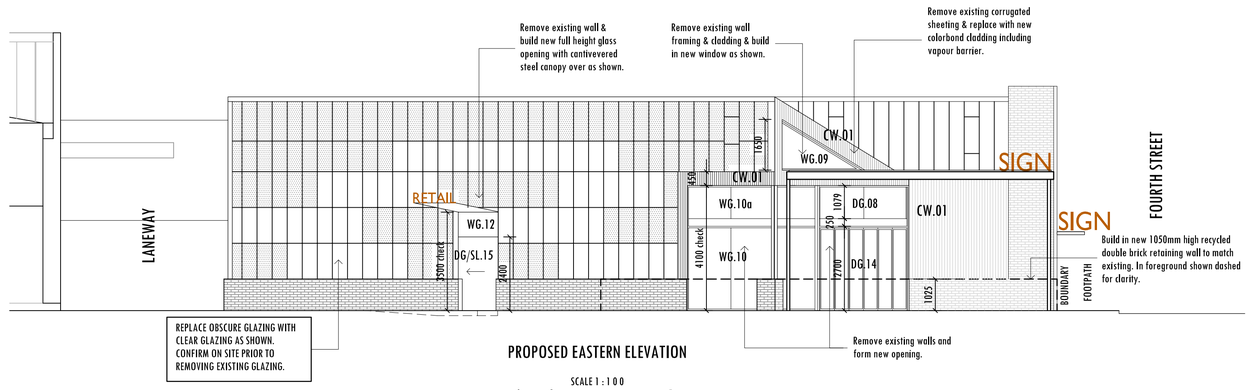
0 1 5m



PROPOSED WESTERN ELEVATION

SCALE 1 : 1 0 0

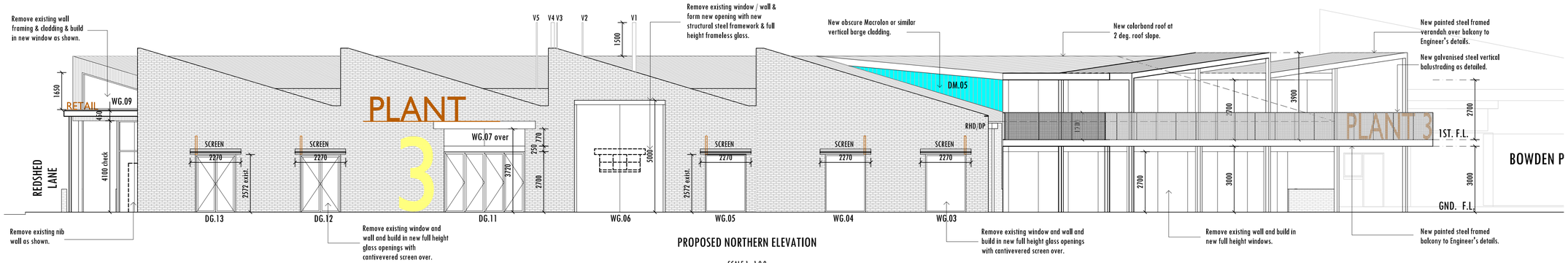
0 1 5m



PROPOSED EASTERN ELEVATION

SCALE 1 : 1 0 0

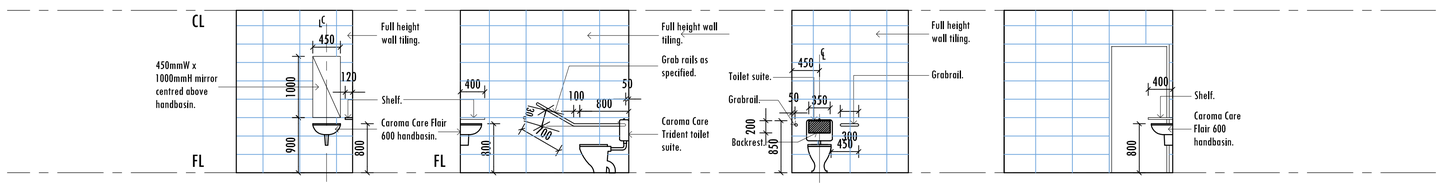
0 1 5m



PROPOSED NORTHERN ELEVATION

SCALE 1 : 1 0 0

0 1 5m



DISABLED TOILET SUITE

SCALE 1:50

Notes:
Disabled toilet installations to comply with AS1428-1 & Amendment 1 to AS 1428.1 and AS1428-2.
Provide a proprietry shelf at a height of between 900-1000mm in accordance with BCA Table F 2.4.

AMENDMENTS

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PROPOSED ALTERATIONS & ADDITIONS TO PLANT 3
FOURTH STREET
BOWDEN SA
PROJECT

ELEVATIONS
DRAWING TITLE

File No. 16859
Scale AS SHOWN
DATE: 13-06-19
DRAWN SP

16859 WD04
DRAWING No.

CONTRACTOR TO VERIFY ALL DIMENSIONS ON SITE PRIOR TO COMMENCEMENT OF WORK

FOURTH STREET

FOOTPATH

BOUNDARY

SCREEN

0.48KRAT corrugated custom orb collorbond roof cladding on 5 deg. roof slope.

Balcony line over shown doshed

1590

FALL

BOX GUTTER

SUMP

DP

N/COL

E/COL

BALCONY

No.12

ENTRY

No.10

OUTDOOR CANOPY

0.48 KRAT Klipbek 700 (or similar) roof cladding fixed in accordance with manufacturers recommendations turned up at top & down at bottom at 2° pitch with 50mm thick R1.5 insulation blanket with medium grade stainless bird over gale. support mesh.

BOWDEN PARK

01 04

New balcony over shown doshed.

BOUNDARY

PLANT 3

Existing skylights over shown doshed.

No.6

REDSHED LANE

No.14 CERES

NEW MEZZANINE OVER SHOWN DASHED

LOBBY

LIFT

4500

RWH/DP

RWH GUTTER

RWH FENCE

OUTDOOR

BINS

CANOPY

New cantilevered steel entry canopy over shown doshed.

1500

Notes:
1. Refer also Engineer for storm water design including size of box gutters & downpipes.
2. Refer also Ground & Mezzanine Floor Plans.
3. The main contractor is to check & confirm setout prior to commencement of works.

02 05

Bridge over shown doshed.

BRIDGE OVER

2100

03 04

3099

PLANT 4 CANOPY OVER

DP ← BOX GUTTER → DP

4500

LANEWAY

PLANT 4

LEGEND

SSS	STAINLESS STEEL SINK
BE	CUPBOARD BENCH
HB	HANDBASIN
M	MIRROR
WC	WATER CLOSET
MO	MICROWAVE OVEN
FR	REFRIGERATOR
OC	OVERHEAD CUPBOARD
J	JOINERY UNIT
HD	HAND TOWEL DISPENSER
UR	STAINLESS STEEL URINAL
CLS	CLEANERS SINK
SH	SHOWER
GS	GUTTER SUMP
RWH	RAINWATER HEAD
DP	DOWNPIPE
CL	CEILING LEVEL
FL	FLOOR LEVEL
TK	TOP OF KERB LEVEL
CARP	CARPET
CT	CERAMIC TILES
MAT	MATWELL
P/EC	PAINTED CONCRETE FLOOR
A/S	ALUMINIUM STRIP
FT	FLOOR TRAP
CJ	CONTROL JOINT
BLK	CEILING BULKHEAD
COL	STRUCTURAL STEEL COLUMN
FHR	FIRE HOSE REEL
B	SECURITY BOLLARDS
HR	HAND RAIL
BA	BALUSTRADE
GR	AMBULANT GRAB RAIL
PCF	POWDERCOATED GALV. STEEL FENCE
CHW	GALV. STEEL CHAINWIRE FENCE
FIN	CANTILEVERED STEEL FIN
AL	AIR LOCK
FG	FIXED GLASS
PL	PANEL LIFT DOOR
RD	ROLLER DOOR
CPR	COMPRESSOR
RACL	ROOF ACCESS LADDER
VL	VINYL FLOOR COVERING

NOTES: REFERENCE BOTH SITE AND FLOOR PLANS.

PROPOSED ROOF PLAN

SCALE 1 : 100

0 1 5m

AMENDMENTS

ARCO.
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PROPOSED ALTERATIONS & ADDITIONS TO PLANT 3
FOURTH STREET
BOWDEN SA

PROJECT

ROOF PLAN

DRAWING TITLE

File No.	16859
Scale	AS SHOWN
DATE:	13-06-19
DRAWN	SP

16859 WD05

DRAWING No.

CONTRACTOR TO VERIFY ALL DIMENSIONS ON SITE PRIOR TO COMMENCEMENT OF WORK

Appendix C - Plant 3 Development & Bowden Brewing - Strata Community Forum Minutes 18/04/19

Strata Community Forum/Presentation held on 18th April (at 6pm in Plant 4) for adjoining owners in both apartment blocks (park Central and B Apartments);

- Approx. 50 guests attended
- Informal presentation given by Marilyn Kaitatzis to introduce the overall concept of the Plant 3 development and introduced Alex Marschall and Jake Phoenix (co-owners of Bowden Brewing) to discuss the Bowden Brewing project.
- Alex Marschall and Jake Phoenix presented slides on an introduction to Bowden Brewing concept and team, the proposed microbreweries layout, the equipment to be utilised, and the how general operations will be conducted.
- Q&A session held afterwards - most questions were of an inquisitive nature, curious about the concept and displaying excitement about how it will be rolled out and fit into the Bowden Community.
- All attendees seemed to embrace the concept and positive feedback
- One small group of a couple of guests asked a question about smells and emissions from the micro-brewery. Alex explained that an extensive environmental impact study has been completed identifying all impacts and actions which will be undertaken to mitigate each. He discussed that the brewery operational hours will be restricted to daylight hours when practical, and that the flues will be elevated to a suitable height in accordance with Australian Standards*.

**Please note that the minimum flue height to meet AS1668.2 is 1m above the ridge of the roof (in this case the sawtooth peak of the two opposing roof planes at the points of exit for the vents). Bowden Brewing have elected to go above and beyond this standard for their Kettle vessel flue to a height of 1.5m above the ridge.*

Appendix D - Bowden Brewing's Statement of Environmental Impacts

A detailed description of the activities to be undertaken on site, including (where relevant):

The proposed nature and operational capacity of activities (which may include material storage, processing, production, manufacturing, treatment, preservation, melting, smelting, abrasion, fuel burning, incineration, discharge, intensive animal keeping or slaughtering, or reception, storage treatment or disposal of waste)

Bowden Brewing plans to operate out of Tenancy 12 in the Plant 3 building at Bowden. The full tenancy space will be operating as a combined brewery, bar and dining destination, with the products/services offered being house made beverages and meal service to suit.

Bowden Brewing plans to undertake the full brewing process (in Tenancy 12.B) from milling the grain, mashing, boiling, fermenting, conditioning and through to serving to the customer. A high level summary of the basic brewing process is shown below:

1. Malt Milling (the malted barley/grain to be used is passed through a roller mill to crack it open)
2. Brewing:
    a. Mashing (the milled malt is mixed with water and maintained at a temperature usually between 60-70°C to extract the usable sugars from the malt)
    b. Boiling (the sugary water (i.e. wort) is separated from the spent grains into another vessel where it is boiled for approximately 1 hour to sterilise and allow for hop additions)
    c. Cooling (once the boil is finished the wort is cooled down to fermentation temperatures usually around 15-25°C using a plate heat exchanger)
3. Fermenting (once the wort is at fermentation temperature it is transferred to a fermenting tank, yeast is added, and it is left to ferment for approximately 2 weeks)
4. Packaging (once fermentation is complete the finished produced is transferred to serving tanks or 50L kegs ready to be served)
5. Cleaning of vessels (all fermentation and serving vessels must be cleaned thoroughly after use to leave them in a sanitary condition ready for their next use)

The main plant & equipment needed for our brewing operations are listed below:

- Two Vessel, Steam heated 600L Brewing kit
- 4x Conical Based Stainless Steel 1200L Fermenting Vessels
- 4x 600L Stainless Steel Bright/Serving Vessels
- 1200L Hot Liquor Tank (steam heated)
- 1200L Cold Liquor Tun
- 100L Clean In Place (CIP) Skid
- 100 kW Steam boiler and Skid
- Glycol system (for vessel temperature control)
- 65L Pilot brew kit with 2x 100L Fermenting Vessels (i.e. will allow for single keg (50L) batch experimentation)

This arrangement allows the batch sizes brewed at one time to be a maximum of 600L. Based on the vessel sizes and operation our production capacity is ˜8000L per month, however operationally we anticipate we will be initially producing ~4800L per month based on anticipated sales volumes until the demand grows.

Predicted human health and environmental impacts from those activities (including noise, odour, dust, toxic or particulate air emissions, and potential impacts to surface, ground or marine waters)

The key areas for categorising potential health and environment impact from the brewing process can be split into 6 key categories:

1. Air emissions
2. Waste water
3. Solid wastes
4. Noise
5. Energy consumption
6. Water resource depletion

A detailed assessment of all impacts possible for each of these categories are defined in the table below:

Impact	Brewing	Fermenting	Packaging	Auxiliary
Air Emissions	• Steam and odour from wort boiling • Dusts from milling	• Odour from wort aeration		• Waste water odour • Odour from solid wastes
Waste Water	• Cleaning waste water • Hot water • Cooling water	• Cleaning waste water • Hot water	• Container cleaning waste water • Spills and breakages	• General wash down waste
Solid Wastes	• Trub – spent grain • Cleaning sludges /alkaline • filtration sludges / DE	• Yeast to waste • Fermentation solids • Cleaning sludges /alkaline	• Packaging wastes • Broken product wastes • Floor sweeps	
Noise	• Steam Generator		• High noise levels due to bottles	• Compressors and other motors
Energy Consumption	• High due to heating requirements	• Energy consumption due to cooling	• High due to heating	
Water Resource Depletion	• High water use due to extraction, boiling losses and cleaning	• Water consumption due to cleaning	• High water consumption due to bottle washing and cleaning	

Proposed environmental management measures to avoid or minimise predicted impacts

Proposed management measures for the predicted impacts are defined in the table below:

Impacts		Management Measures
Air emissions	(Brewing) - Steam and odour from wort boiling	A flue stack is to be designed to direct this steam up and out of the roof to a suitable height. The predicted rate of evaporation for our equipment is 4% which only equates to around 24L per batch. Additionally, the aroma from this process is often not considered to be unpleasant (has been likened to a bakery/making toast). In accordance with AS1668.2, the brewery vents have been designed to be a minimum of 1m above the ridge of the roof (in this case the sawtooth peak of the two opposing roof planes at the points of exit for the vents). Bowden Brewing have elected to go above and beyond this standard for their Kettle vessel flue to a height of 1.5m above the ridge.
	(Brewing) - Dusts from milling	Due to the small size of our operation this is not expected to be a major issue. However, to minimise this impact we will use a mill specifically designed for brewing operation and provide a suitable guard/screen around the mill when completing this task.
	(Fermenting) - Odour from wort aeration	Oxygen addition (aeration) will be completed within the sealed fermentation vessel to remove any possible odour
	(Auxiliary) - Waste water odour	More details are provided in the section below, but to minimise these odours our waste water holding tank will have a vent stack open to atmosphere above the roof of the building to a suitable height. Additionally, we will ensure that water is treated and discharged to sewer as promptly as possible (i.e. daily procedure where possible). In accordance with AS1668.2, the brewery vents have been designed to be a minimum of 1m above the ridge of the roof (in this case the sawtooth peak of the two opposing roof planes at the points of exit for the vents). To go even further than this we will have a recirculation pump on the waste water tank to ensure we keep the contents oxygenated to prevent anaerobic digestion (i.e. prevent the creation of obnoxious smells altogether).
	(Auxiliary) - Odour from solid wastes	To remove this impact we plan to remove solid waste from site the day it is produced to be disposed of appropriately (i.e. compost/other)
Waste water	(Brewing) - Hot water	More details are provided in the section below, but to minimise hot water being discharged to sewer it is first combined in our holding tank with other waste water and having the temperature adjusted to the less than the 38°C SA Water threshold before being discharged to sewer.
	(Brewing) - Cooling water	More details are provided in the section below, but by using a Plate Heat Exchanger to cool the wort we can

		ensure no contact between the streams and hence the Cooling water (from the Cold Liquor Tun) can be recaptured and reused.
	(Brewing) - Cleaning waste water	More details are provided in the section below, but to minimise the amount of cleaning waste water used we are using a specifically designed Clean In Place (CIP) cart where all cleaning chemicals will be recirculated and contained with the 100L tanks of the CIP skid. This will allow us to minimise the water usage as well as enable pH and Temperature correction before combining it in the waste water holding tank.
	(Fermenting) - Hot water	More details are provided in the section below, but to minimise hot water being discharged to sewer it is first combined in our holding tank with other waste water and having the temperature adjusted to the less than the 38°C SA Water threshold before being discharged to sewer.
	(Fermenting) - Cleaning waste water	More details are provided in the section below, but to minimise the amount of cleaning waste water used we are using a specifically designed Clean In Place (CIP) cart where all cleaning chemicals will be recirculated and contained with the 100L tanks of the CIP skid. This will allow us to minimise the water usage as well as enable pH and Temperature correction before combining it in the waste water holding tank.
	(Packaging) - Container cleaning waste water	More details are provided in the section below, but to minimise the amount of water used here we have elected not to package to bottles/cans on site and hence the only relevant packaging to consider here are kegs. To reduce the number of kegs used we are also implementing 4x serving vessels to allow bulk storage of the product for serving in venue. When keg cleaning in needed we have opted to use a steam keg cleaner to minimise the water usage. The minimal waste water flow from this will follow the regular route through the floor drains, silt trap, and will be corrected in the waste water holding tank.
	(Packaging) - Spills and breakages	To remove this impact, we have decided not to package to bottles/cans on site and hence there are no other fragile components expected to break. Any over flow of kegs during filling will follow the general process for waste water.
	(Auxiliary) - General wash down waste	More details are provided in the section below, but the general waste water flow from this will follow the regular route through the floor drains, silt trap, and will be corrected in the waste water holding tank before being discharged to sewer.
Solid wastes	(Brewing) - Trub – spent grain	As the spent grain and trub is a valuable resource for farmers for cattle feed and composting we will develop a partnership with a local farmer to collect the spent grain and trub and completely remove this from site.

	(Brewing) - Cleaning sludges /alkaline	To minimise this impact, where possible we will be collecting all solid waste to be removed off site and disposed of appropriately (i.e. compost/other)
	(Brewing) - filtration sludges / DE	Due to our brewing technique not regularly applying filtration (i.e. allow for natural separation by cold-crashing the product in fermenter) this impact is already minimal. In addition to this the yeast settlement is of high nutritional values so will be added to the solid waste collected by the farmer or removed from site to be disposed of appropriately.
	(Fermenting) - Yeast to waste	As per above, this yeast settlement is of high nutritional values so will be added to the solid waste collected by the farmer or removed from site to be disposed of appropriately. To further minimise this we are also planning to undertake the process of yeast harvesting and storage for re-use in future batches where possible
	(Fermenting) - Fermentation solids	As per above, this yeast settlement and fermentation solids (i.e. hops) are of high nutritional values so will be added to the solid waste collected by the farmer or removed from site to be disposed of appropriately. To further minimise this we are also planning to undertake the process of yeast harvesting and storage for re-use in future batches where possible
	(Fermenting) - Cleaning sludges /alkaline	More details are provided in the section below, but to minimise the amount of cleaning waste used we are using a specifically designed Clean in Place (CIP) cart where all cleaning chemicals will be recirculated and contained with the 100L tanks of the CIP skid. This will allow us to minimise the water usage as well as for us to pre-treat/correct the pH and Temperature before combining it in the waste water holding tank (or removing solids from sites as appropriate)
	(Packaging) - Packaging wastes	To reduce this impact we have decided not to package to bottles/cans on site. Hence, the only remaining packaging wastes will be from kegs. To reduce the amount of kegs used we are also implementing 4x serving vessels to allow bulk storage of the product for serving in venue. When keg cleaning in needed we have opted to use a steam keg cleaner to minimise the water usage. The minimal waste flow from this will follow the regular route through the floor drains, silt trap, and will be corrected in the waste water holding tank.
	(Packaging) - Broken product wastes	To remove this impact we have decided not to package to bottles/cans on site and hence there are no other fragile components expected to break and produce waste.
	(Packaging) - Floor sweeps	Routine sweeping of the floors will be completed with solids or dust collected and disposed of in the appropriate bin.
Noise	(Brewing) - Steam Generator	To minimise any disturbance due to this we have selected a steam generator to only produce 50dBA at 1m distance.

		Additionally, we have placed this in the corner of our operational space to minimise any effect to public within the building. We have also restricted the hours of regular operation to 7am – 6pm (only use outside these hours would be in response to unforeseen circumstances)
	(Packaging) - High noise levels due to bottles	We have decided not to package to bottles/cans on site and hence completely remove this impact.
	(Auxiliary) - Compressors and other motors	To minimise this impact we have restricted the hours of regular operation to 7am – 6pm (only use outside these hours would be in response to unforeseen circumstances). Additionally the equipment selection will be based on industry used and recommended components for minimal noise.
Energy consumption	(Brewing) - High due to heating requirements	To minimise the impact of high energy usage while brewing we have selected to use a steam heated brewkit as it offers the most efficient means of heating (i.e. in comparison with direct electric or direct gas)
	(Fermenting) - Energy consumption due to cooling	To minimise this impact we have given our fermenting vessels an insulating layer and will also ensure the glycol equipment selection will be based on industry used and recommended components for energy efficiency.
	(Packaging) - High due to heating	To minimise the impact of high energy usage while brewing we have selected to use a steam powered keg cleaner as it offers the most efficient means of heating (i.e. in comparison with direct electric or direct gas)
Water resource depletion	(Brewing) - High water use due to extraction, boiling losses and cleaning	Due to our small size we plan to keep tight control on our water usage. In consultation with a Waste Water Contractor he has suggested processes we can implement to get our water usage down to 3L/L of beer produced (which is well below industry standard). For example some of these processes include using the CIP Skid for cleaning, steam for sterilisation of the tanks, and using a pressure cleaner for wash down instead of a hose.
	(Fermenting) - Water consumption due to cleaning	As mentioned above, this impact will be minimised by using a specifically designed Clean In Place (CIP) cart where all cleaning chemicals and water will be recirculated and contained with the 100L tanks of the CIP skid. This will allow us to minimise the water usage as well as enable pH and Temperature correction before combining it in the waste water holding tank (or removing solids from sites as appropriate)
	(Packaging) - High water consumption due to bottle washing and cleaning	To remove this impact we have decided not to package to bottles/cans on site and hence this packaging water usage will be minimal. As discussed above we have selected to use a steam powered keg cleaner as it offers the most efficient means of cleaning both from an energy standpoint as well as water usage.

The types/volumes of liquid/solid waste to be received and/or generated on site when operating at full capacity

The total production on a brewery is limited by the duration of the beer production cycle which is 14 days. Our four fermenters which have a maximum capacity of 1200L each will be able to be used on a 3 week rotation enabling us a maximum production capacity of ˜8000L of beer per month. This would require two double batches of beer produced on our 600L brewhouse. Our site is very space constrained and so it won't be possible to install additional fermentation on site to increase capacity further.

We have been in discussions with a waste water consultant to develop a waste management system which meets the requirements of all council and government bodies whilst being fit for purpose given the size of our operation.

Solid Waste

The majority of the solid waste generated at the brewery is grains and high strength solid waste from the fermentation process (hops, yeast, lees and trub).

Liquid Waste

Due to our small size, it is unlikely liquid waste discharges will exceed 12,000L per week. Given the low production, compact footprint, and absence of packaging (canning), it is anticipated that water efficiency of greater than 4L/L is easily achievable. As low as 3L/L has been achieved for some similar scale breweries, even though for larger craft breweries it tends to be around 7-10L/L.

With this volume discharge, BOD of 18-36kg/week is anticipated. Of this, 60-80% is expected to be sugars and ethanol and hence impractical to remove. Around 12 kg/ week of suspended solids is anticipated. Some of this will be hops, but most will be yeast – again very difficult to remove at this small scale. This small amount should not stress the system provided it is adequately

With this in consideration a summary of the liquid waste would be:

1. Instantaneous discharge;
    a. The vast majority (90%) of wastes will be produced at 4 different times:
        i. Completion of boiling (around 60-120L produced)
        ii. Racking of fermenters (around 60-120L produced)
        iii. Clean in Place (around 100-200L produced)
        iv. Washing down (around 50-100L produced
    b. It is anticipated that our maximum instantaneous flow to trade waste would be around 1 L/s
2. pH;
    a. As with most breweries, the discharge will generally be acidic in nature – around pH 4 to 5.
    b. During CIPs, alkaline waste up to pH 11 would be produced. It is expected this will be partly neutralised in the CIP system prior to disposal, but could also be neutralised in discharge tank
    c. Given the small brewery size, a practical solution will be manual neutralisation of mildly acidic wastes prior to discharge.
3. Temperature;
    a. Wastes from boiling will be quite high – up to 65 degC.

Arrangements for the storage and disposal of waste, stormwater, and wastewater (including sewage)

Solid Waste

Spent grains to local farmers to feed their livestock or compost. This service is provided to other Adelaide based breweries at no cost. 100 to 250kg of spent grains will be produced per week dependant on the style brewed and how large the batch is. This will be kept in odour sealed bins until they are collected.

The small size of our brewery means the other high strength waste products can be removed from the process and taken to be composted off site.

Waste Water

The below system has been developed in consultation with our waste water consultant and since approved by SA Water. The system will ensure all wastewater is within threshold:

- Floor Drains:
  - 2mm screens on strip drains
  - A sediment trap downstream of the strip drains
  - Catchment sump with pump allowing flow to balancing tank using a sump pump with float switch
- Balancing tank:
  - Around 2,000L in volume
  - Vented at building height
  - Bunded if above ground
- pH adjustment
  - Small recirculating pump (flow rate of 1L/s) to help mixing equalise pH within tank
  - Manual adjustment of pH in the tank using NaOH or HCl to within SA Water Guidelines (e.g. 6-10pH) using a chemical dosing pump. Initial and final pH to be recorded
- Manual temperature adjustment to less than 38°C (if required)
- Confirmation of temperature to be recorded on paper or tablet prior to discharge.
- Manual discharge of tank to sewer by opening discharge valve of 20mm to throttle flow to around 1L/s max.
- Recirculation pump to keep the contents oxygenated

Storm Water

This will be captured and processed by the buildings guttering. This is provided by landlord as part of base build and will not be a part of this approval.

The type and number of vehicles using the site, traffic movements into, out of and around the site, and the kind of surface on which vehicles will be moving

Below is a list of vehicles required during brewery operations:

- Passenger vehicles – utes operated by the brewers
- Infrequent Vacuum trucks – to remove sludge's from wastewater tank
- Infrequent MR trucks – delivery of ingredients

There is no plan to operate any vehicles inside the Plant 3 development. The Existing Loading Zones will be used to:

- Take delivery of ingredients,
- Load utes with produced beer in the form of kegs
- Removal of spent grains

Days and hours of operation

Typical Brewery Operations are between 7am to 6pm Monday to Friday however it is anticipated that some checks will be required on the weekend. This work will be completed during daylight hours and will not involve the use of any noisy equipment.

Bar and Restaurant hours are likely to be:

- Tuesday to Thursday 12pm-11pm
- Friday 12pm-1am
- Saturday 11am-1am
- Sunday 12pm-11pm

Unforeseen circumstances may require additional hours above and beyond this to appropriately react and overcome faults/ problems.

Our Ref: 677786
Account No: 2550733013
Enquiries: Stephen Dixon
Office Hours: 8:00am to 4:00pm
Telephone: (08) 7424 1336
Facsimile: (08) 7003 3366
Date: 16/04/2019

BOWDEN BREWING PTY LYTD
75 HARRIET ST
WEST CROYDON SA 5008

SOUTH AUSTRALIAN
WATER CORPORATION

SA Water House
250 Victoria Square
Adelaide SA 5000

GPO Box 1751
Adelaide SA 5001

Telephone +61 8 1300 650 950

ABN 69 336 525 019

Trade Waste Discharge Authorisation

Pursuant to sections 50 and 56 of the Water Industry Act 2012, the South Australian Water Corporation hereby authorises discharges of the trade waste generated by **BOWDEN BREWING PTY LYTD** arising from **SHOP 12, FOURTH STREET, BOWDEN** to the Corporation's sewer from the brewery, from **16/04/2019**.

THE FOLLOWING CONDITIONS APPLY TO THIS AUTHORISATION. BY CONNECTING THE ACTIVITIES LISTED ABOVE TO OUR WASTEWATER SYSTEM, YOU AGREE TO ABIDE BY THESE CONDITIONS.

DURATION OF THIS AUTHORISATION
This authorisation is valid for a period of up to twelve months to facilitate the completion of necessary installations relating to your trade waste activities. Where the installation meets our requirements in full, the authorisation will continue on an ongoing basis, subject to the conditions set out in this document. Should these works not eventuate, or do not satisfactorily pass our final on-site inspection, or you have not negotiated a reasonable extension of time with us, this authorisation will lapse.

ACCEPTABLE DISCHARGE
Trade waste discharged by you must comply with our *Restricted Wastewater Acceptance Standards*. This document is available on our website www.sawater.com.au or you may request us to send you a copy.
In particular, the following key standards apply to your discharges:
Grease/Oil – maximum 100 mg/L
Suspended solids – maximum 500 mg/L
Temperature – maximum 38 degrees C.
pH – 6-10 units
Total dissolved solids – 1500 mg/L
Bio-chemical oxygen demand (BOD-5 days) – acceptance standards to be determined by the treatment capacity of receiving sewers

To achieve acceptable discharge, you must install the specified pre-treatment device(s) and satisfactorily maintain effective pre-treatment through good housekeeping practices that prevent the entry of wastes that cannot be effectively pre-treated, scheduled servicing and limiting peak discharge flow rate to the

authorised maximum of 1 litre per second.

BREWERY WASTE SPECIFIC
The settling pit receiving the brewery waste must comply with the limits above. This includes suspended solids and pH. The site must monitor the pH levels exiting the setting pit and manually correct as required, maintaining a log book of such activities.

If continued non-compliance for pH occurs with the brewery waste discharge, an automatic correction system must be installed within 6 months of the notice.

No yeast sludge/slurry, hops (solids), spent grains, or filter earth are permitted to sewer. These materials are required to be separated, contained and disposed to the solid waste stream.

All tank cleaning and sterilisation wash waters are neutralised prior to discharge to sewer. (The most economical and efficient method of neutralisation is to discharge both solutions to a balance/holding tank to permit self-neutralisation).

Contaminated brews, or spent chemicals, and sludge's are not permitted for discharge to sewer. Batch Treatment or removal by a Licensed Liquid Waste Contractor are the only approved options.

If discharge quality is in doubt, we may collect a sample of your pre-treated trade waste discharge for testing or laboratory analysis.

You must only install devices approved by us for this purpose, but may choose from the various devices listed on our Fact Sheet Approved Basic Pre-treatment Products. This document is available on our website www.sawater.com.au or you may request us to send you a copy.

PRE-TREATMENT EQUIPMENT
The minimum pre-treatment requirements for achieving acceptable discharge quality are:

KITCHEN/ FOOD SERVICE

- **Grease arrester for this operation to be determined.**
- **We require that fixed screens/strainer (3 mm mesh/hole size) must be installed to all sinks and floor drainage to capture gross solids for regular disposal to a waste bin.**

The minimum venting size for all trade Waste drains and pre-treatment devices is a DN80 or larger, however branch drain vent size is fixture unit dependent. (on web site)

An induct vent of not less than DN80 is connected to the outlet chamber of the arrestor. A DN80 or larger high level upstream vent (fitted with a wind driven turbine ventilator) is connected to the uppermost end of the drainage system gravitating to the arrestor.

Note: Vent termination must comply with AS/NZS 3500.2:2015 Section 6.8.4.

BREWERY

- **2000 litre balancing tank (as per drawing).**
- **pH correction system**
- **Throttling valve set to 1L/s**
- **We require that fixed screens/strainer (3 mm mesh/hole size) must be installed to all sinks and floor drainage to capture gross solids for regular disposal to a waste bin.**

Alternatively, you may propose a different method for achieving acceptable discharge quality, along

with supporting evidence. After consideration, we will accept, reject or amend the proposed alternative.

Pre-treatment equipment must be located in a way that facilitates maintenance operations and is accessible for inspection at any reasonable time.

PRE-TREATMENT EQUIPMENT MAINTENANCE
You must arrange for removal of accumulated waste material from specify device every 3 months. We will assess the suitability of this service frequency (and vary it if necessary) as part of our routine inspection program. The GENERAL CONDITIONS section gives more details on pre-treatment equipment servicing.

PROTECTION OF MAINS WATER SUPPLY
Backflow prevention and cross connection control of mains water supplied to your processes must at all times comply with Australian Standard AS/NZS 3500.1:2003 Plumbing and Drainage – Water Services.

GENERAL CONDITIONS

AUTHORISATION IS NOT TRANSFERABLE
You cannot transfer or assign this authorisation to another party.

WHAT MAY BE DISCHARGED
We will accept trade waste from the premises arising from the activities given in your application provided it complies at all times with the quality, quantity or other limits set out in this authorisation and is not contrary to any other requirement or condition of this authorisation.

YOUR OBLIGATIONS
We will hold you responsible for all material discharged to sewer from your operation. Therefore, you must take all reasonably practicable precautions to ensure that no person discharges material to sewer from your premises other than with your consent or direction.

You must use bunds or other means to protect all sewer entry points at the premises against the entry of any stormwater runoff, liquid wastes, concentrates, spent oils, fats and any other substances not authorised to be discharged to sewer.

You must inform us of any accidents including spills or other mishaps that may cause a non-compliance with authorisation conditions, as soon as practical once you become aware of the problem.

PRE-TREATMENT EQUIPMENT
Based on our experience, we have specified the minimum equipment needed to pre-treat trade wastes to an acceptable standard. However, we do not warrant the effectiveness of any particular pre-treatment device in meeting acceptable discharge quality and point out that your “housekeeping” practices will play a large part in achieving acceptable discharge performance.

You must arrange for installation of all pre-treatment equipment or other fixtures, as required by the authorisation conditions. Pre-existing pre-treatment equipment on the premises might not be of acceptable size or type, even if an earlier business operation for which it was installed was similar to yours.

You must maintain in good order all fixtures and equipment at the premises used to drain or pre-treat trade waste, to ensure their ongoing effectiveness, including:
any servicing requirements by a qualified technician, if specified by the equipment manufacturer;
and the removal of waste material that accumulates within any pre-treatment device, at the minimum scheduled intervals specified by us, for disposal by a licensed liquid waste contractor or other manner acceptable to the Environment Protection Authority, South Australia.

You must keep records of equipment servicing and disposal of substances not authorised to be discharged to sewer, and make them readily available for our inspection. To facilitate this, you must:
advise us of which contractor(s) you have engaged for this purpose;
provide each contractor with the identification number of this authorisation; and authorise the contractor to release information to us related to verifying that your obligations have been met.

INSPECTIONS
An authorised officer from SA Water may enter your premises at any reasonable time for an inspection, to assess whether the requirements or conditions of this authorisation have been met, or to collect samples of material that is or could be discharged to sewer.

When exercising the right of inspection, the authorised officer will endeavour to minimise any disruption to the normal conduct of your activities.

You must ensure ready access to pre-treatment devices and trade waste discharge point(s) and provide any assistance that may be reasonably required for inspection purposes.

We determine the inspection frequency in proportion to the potential risk posed to us by your trade waste discharge. You may seek information from us regarding the frequency of routine inspections related to this authorisation.

We may conduct additional inspections, as we think necessary, in relation to administering this authorisation.

The clauses in this section do not limit our statutory powers of entry.

FEES AND CHARGES
We will bill you for inspections relating to the administration of this authorisation, the cost of laboratory analysis of final discharge samples (if they indicate non-compliance with acceptable discharge quality) and other periodic charges (if applicable). These accounts are independent of those for water and sewerage rates.

You must pay for all charges by the due date given in our account.

Our fees and charges are reviewed annually. You may seek information from us regarding the current charge amounts applicable to your authorisation.

NON-COMPLIANCE WITH AUTHORISATION CONDITIONS
If we find a non-compliance with any authorisation requirement or condition, we will notify you of the particulars, what you must do to rectify the non-compliance and by when such remedial actions must be completed.

You must comply with our directions to rectify the non-compliance by the specified deadline.

Failure by you to rectify non-compliance constitutes a breach of authorisation conditions.

SUSPENSION AND TERMINATION OF THIS AUTHORISATION
We may suspend the authorisation if;
Any information given by you in the application for authorisation to discharge trade waste is found to be false, incomplete or misleading in any material particular; or
Our normal sewerage service is disrupted or interrupted and we cannot reasonably provide an alternative or partial service; or acceptance of your trade waste would be unsafe, or likely to cause us to contravene any regulatory requirements or fail to meet any of our residual product specifications.

In serving notice of authorisation suspension, we will specify:
the reason(s) for the notice;
what you must do; and the likely duration of the suspension period.

When you receive a notice suspending your authorisation, you must cease all or part of your discharges of trade waste as directed, subject only to any delay that may be required to safeguard the health or life of any person.

We will reinstate authorisation to discharge trade waste once we are reasonably satisfied that the circumstances giving rise to suspension no longer exist.

You may terminate your obligations under this authorisation upon giving one month's notice in writing to us and making payment to us of all outstanding amounts that have become payable to us in relation to this authorisation. This authorisation shall terminate at the later of:
the expiration of the one month notice period; and the payment to us of those amounts.

We may terminate this authorisation, on giving one month's notice in writing to you:
on the ground that there has been a material and unresolved breach of authorisation conditions; or you have not complied with a direction given in a notice suspending your authorisation; or on such other ground as we think fit and you have not, within the one month notice period, demonstrated to our satisfaction that the ground for termination specified in our notice is erroneous or that reasonable grounds exist for continuing the authorisation.

To the extent authorised by law you are not entitled to any remedy against us for or relating to a suspension or termination of this authorisation.

Termination will not affect any rights that have accrued to either you or us in relation to this authorisation before the time of termination.

CHANGES TO TRADE WASTE DISCHARGE
You must give us at least one month's prior notice before any changes at your premises that might significantly alter the characteristics or quantity of your trade waste discharge.

If you plan major alterations or additions, you must submit a newly completed Trade Waste Discharge Application form for our consideration.

CHANGES TO THIS AUTHORISATION
We may change any requirement or condition in this authorisation in response to:
your notification relating to changes in trade waste characteristics or quantity; or
operational problems experienced by us that are attributable to your trade waste discharge; or
circumstances beyond our control, such as changes in law or the conditions imposed on us by a regulatory authority.

We will notify you of any changes to this authorisation, as far in advance as is reasonably practicable.

CONFIDENTIALITY
If you are a tenant/lessee, we provide a courtesy copy of this authorisation to the landowner, to verify that we have authorised you to discharge trade waste to sewer from this property. In that circumstance, the landowner is not party to this authorisation and has no obligation to meet its conditions.

On sale of this property, we are obliged under section 7 of the Land and Business (Sale and Conveyancing) Act 1994 to provide a statement whether, and under what conditions we have authorised the occupier of this land to discharge trade waste to sewer.

We will treat all other data/information regarding activities at your site as confidential. Disclosure to a third party may only occur after express approval being given by both the Company and the Corporation, except as required by law or to Parliament or a Minister of the Crown.

COMMUNICATIONS AND NOTICES
Routine communications relating to this authorisation may be conducted verbally, but must be verified in writing.

Our routine communications to you will be:
delivered or mailed to your address ; or
sent by facsimile transmission via the number that you have provided; or
sent via email to the address that you have provided

Where necessary, we will serve notices in accordance with the requirements of the Act.

You may send a written communication to us via post, email or facsimile transmission, using the following contact details.

SA Water Corporation
250 Victoria Square
Adelaide SA 5000

Email: tradewastebranch@sawater.com.au

Facsimile: 08 7003 3366

GRIEVANCE AND DISPUTE RESOLUTION
We will endeavour to resolve any issues that may arise in relation to this authorisation by discussions and negotiation with you. Please contact us on 1300 650 950 to discuss your concern with our Customer Service Centre staff, or write to us, marking your letter "Attention: Customer Feedback Management Unit".

If you are not satisfied with the way an issue was handled, or with the outcome, we will provide an opportunity for your complaint to be escalated within SA Water. Furthermore, you may contact the Energy and Water Industry Ombudsman on 1800 665 565 for complaints regarding billing, credit, connection, supply, marketing and customer service, or Ombudsman SA on 8226 8699 (metro) or 1800 182 150 (country only) for complaints regarding SA Water's processes and decisions, to determine if they are fair, reasonable and lawful.

DEFINITIONS AND INTERPRETATION
In this authorisation:

"We", "us" "our" means South Australian Water Corporation or any person authorised to act on behalf of the South Australian Water Corporation.

"You", "your" means the business or organisation to which authorisation to discharge trade waste from the premises has been given.

"Authorisation" means this document along with any attachments or referenced documents.

"The Act" means the Water Industry Act 2012

"Trade waste" means any wastewater and any substances in it, arising from any commercial, industrial, trade or manufacturing activity, which is discharged from a property's internal sewer connected to SA Water's sewerage system. For the purposes of this authorisation, the discharges from toilets, hand

washing and showering facilities are not trade waste.

"SA Water" means South Australian Water Corporation.

In this authorisation:

words denoting the singular number or plural number include the plural number and single number respectively;

headings are for convenience only and shall not affect interpretation

Yours Sincerely,

For Chief Executive Officer
Email: tradewastebranch@sawater.com.au