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From: "Martina Piatrikova" <Martina.Piatrikova@dillonarchitects.com>

Sent: Thu, 12 Dec 2024 12:31:29 +1000

To: "Development Assessment" < developmentassessment@townsville.qld.gov.au>;

"Taryn Pace" <taryn.pace@townsville.qld.gov.au>

Cc: "General" <general@dillonarchitects.com>; "Steven Dillon"

<steven.dillon@dillonarchitects.com>

Subject: 24.12.12 - 3140 BREWERY, DISTILLERY, SAMPLING ROOM, DRIVE-THROUGH

BOTTLE SHOP - Response to Information Request

Attachments: MCU240083 - Response to Information Request.pdf

To: Planning and Development

Attn: Taryn Pace

Taryn,

RE: BREWERY, DISTILLERY, SAMPLING ROOM, DRIVE-THROUGH BOTTLE SHOP

POST OFFICE BREWING CO.

55 LAKESIDE DRIVE

RESPONSE TO INFORMATION REQUEST

On behalf of the Applicant, we refer to the abovementioned development application and to Information Request dated 30th September 2024 issued by Townsville City Council.

In accordance with section 13.2 of the Development Assessment Rules, we wish to respond to each item listed in your Information Request (refer to attached Response to Information Request).

We believe the information provided allows Council to assess the development application.

Regards

Martina Piatrikova



BLACKWOOD HOUSE 314 STURT STREET, TOWNSVILLE P.O. BOX 294, TOWNSVILLE 4810



TELEPHONE: (07) 4721 2510 FACSIMILE: (07) 4721 2382 EMAIL: general@dillonarchitects.com

ABN: 36 009 880 755

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Please consider the environment before printing this email.

Our Office will be closed over the Christmas & New Year Period from 3:00pm Friday 20th December 2024 until 8:30am Monday 6th January 2025. We extend to you our best wishes for a Merry Christmas and a Happy New Year.



DILLON ARCHITECTS (III



STEVEN J. DILLON
KALYPSO VOUYIOUKAS

REF: 3140

TCC REF: MCU24/0083 DATE: 12th December 2024 314 STURT STREET, TOWNSVILLE P.O. BOX 294, TOWNSVILLE 4810 TELEPHONE: (07) 4721 2510 FACSIMILE: (07) 4721 2382 EMAIL: general@dillonarchitects.com ABN: 36 009 880 755

Assessment Manager Townsville City Council Po Box 1268 TOWNSVILLE QLD 4810 Via: Email

Attn: Planning and Development

Dear Taryn,

RE: BREWERY, DISTILLERY, SAMPLING ROOM, DRIVE-THROUGH BOTTLE SHOP

LLKB INVESTMENTS PTY LTD

55 LAKESIDE DRIVE

APPLICATION No.: MCU24/0083 ASSESSMENT No.: 3230055

LOT 14 SP 334259

RESPONSE TO INFORMATION REQUEST

On behalf of the Applicant, Dillon Architects refer to the abovementioned development application and to Information Request dated **30th September 2024** issued by Townsville City Council (see **Attachment 1**).

In accordance with section 13.2 of the Development Assessment Rules, we wish to respond to each item listed in your Information Request as detailed in the Table below.

| sted in your information Request as detailed in the Table below. | | | | | |
|--|---|--|--|--|--|
| Response to Inform | nation Request | | | | |
| | | | | | |
| Request Item | Response | | | | |
| Request Item 1 Economic Need | This item is requested to demonstrate how the proposed development aligns with the purpose of the Low impact industry zone, particularly with respect to the proposed Bottle Shop and the Food and Drink elements of the development. | | | | |
| | In response to this item, we advise as follows:- The purpose of the Low Impact Industry Zone Code is to provide for Service Industry and Low Impact Industry uses. In conjunction with the Brewery and Distillery, which are categorized as a Low Impact Service Industry, and the will include marketing of the Brewery and Distillery products, with the purpose of the Sampling Room to showcase the products and facilitate the placement of orders for both products and custom-built products, both nationally and internationally. The Brewery also operates in conjunction with the Bottle Shop in order that the Brewery can sell direct to its local customers. Relative to the Brewery and Distillery, it is envisaged that there will be two types of purchases:- The placement of bulk orders, both nationally and internationally in conjunction with attending the Sampling Room to sample the Brewery and Distillery products. | | | | |
| | Relative to the Bottle Shop, the Brewery facilitates selling direct to its local customers | | | | |

Request Item 2 Staging Plans and Operational Information

This item requested further information on the proposed operations (including annual throughput) of each stage of the development. It was also requested to provide detailed staging plans (including site plans, floor plans and elevations) for the proposed development.

In response to this item, we refer to Architectural drawings as per **Attachment 2 – Concept Design Plans – Rev B**. The proposed development is divided into three stages, which are as follows:-

- Stage 1 includes a Warehouse, Bottle Shop and Sampling Room. The existing Brewery and Distillery on Flinders Street is projected to experience a shortage of storage capacity, creating the need to initially establish a Warehouse for product storage. This would be part of Stage 1, as the current Brewery and Distillery facilities are projected to be insufficient for the projected market increase. The Sampling Room is essential for marketing purposes of the Brewery and Distillery Products and to meet the increasing demand for both the Brewery's and Distillery's products. By attracting new clients and securing increased orders, the demand for the next stage of the development will increase, which will include areas for both the Brewery and the Distillery.
- **Stage 2** includes the Drive-Through for the Bottle Shop, which is projected to facilitate local customers to make purchases of the Brewery and Distillery Products.
- Stage 3 includes the balance of the Proposed Development. At this stage, the production capacity of the existing brewery on Flinders Street will be insufficient, necessitating the completion of the Brewery and Distillery Building Works to facilitate the increased demand for the Brewery and Distillery Products including Warehouse and Storage facilities for the temporary storage of both products before distribution to the various purchases.

Request Item 3 Noise Impact Assessment

This item requested to submit a Noise Impact Assessment, prepared by a suitably qualified person as per SC6.4.19 Noise and Vibration of the Development Manual.

In response to this item, a Noise Impact Assessment by Live it Acoustics has been prepared, refer to **Attachment 3 – Noise Impact Assessment**.

Request Item 4 Odour Impact Assessment

This item requested submission of an Odour Impact Assessment, in accordance with the Queensland Odour Impact Assessment Guidelines.

In response to this item, we reiterate that the odour impact is expected to be negligible, as demonstrated by the existing brewery in Flinders Street. The proposed development is located in a Low Impact Industry zone. To the east, the adjacent property operates as a warehouse. To the south, over 100 meters away and separated by Lake Idalia, a new development—including residential units—is currently under town planning assessment in the 17 D'Arcy Drive area. To the west, more than 50 meters away, lies a Low Density Residential zone, divided by the arterial road Lakeside Drive. Given these distances and the measures taken to mitigate odour emissions (see Attachment 4 — Comment on Odour Emissions), the proposed development is not expected to cause any adverse impacts.

To minimize odours from waste, the Proposed Development will adhere to its existing Waste Management Policy, which includes the following measures:-

- General refuse will be stored in enclosed bins and collected weekly by an accredited waste facility.
- Spent grains, hops and yeast from brewing process will be collected directly from mash tun and fermenters into specialized bins. These will be transferred into large, food-grade covered containers designed to handle organic waste without leaking or contaminating the environment. The containers will be ventilated to control air quality.
- Spent botanicals from the distillation process (herbs, spices, juniper berries, citrus peel, etc.) will be collected directly from the pot stills

into specialized bins. The subsequent process will follow the same procedure as brewery waste management.

- Separate, enclosed room for organic waste storage has been designed adjacent to the loading area. (see Attachment 2 Concept Design Plans Rev B) This storage area is sealed to control air quality, and waste is regularly removed to prevent odour and pests. This setup ensures that any potential odours from organic waste are contained and do not affect the surrounding environment or neighboring properties.
- Once organic waste is stored in enclosed drums, it will be picked up by local farmers for use as animal feed. Farmers use trucks with secure containers to transport the grains to their farms. The collection of organic waste will be organized regularly, typically once per week, to prevent spoilage and odour.
- Packaging waste (bottles, cans, cardboard) will be stored in a separate, designated storage area. This waste does not produce any odours or contamination.

Request Item 5 Driveway Crossover

This item requested to redesign / relocate the proposed crossover to achieve typical crossover dimensions including adequate separation from adjacent property boundaries.

In response to this item, we refer to the amended Dillon Architects' drawings (see attached **Attachment 2 – Concept Design Plans – Rev B**). The crossover has been widened at the kerb and relocated further to the west to provide increased separation from the adjoining property.

Request Item 6 Pedestrian Connectivity

This item requested to provide a pedestrian footpath and / or corridor between the Lakeside Drive cul-de-sac and the covered walkway proposed along the western side of the building, which is separate from vehicle movement areas.

In response to the item, we refer to the amended Architectural drawings (see attached **Attachment 2 – Concept Design Plans – Rev B**). The pedestrian concrete footpath between the Lakeside drive cul-de-sac and the site boundary and a pedestrian corridor between the site boundary and covered walkway to the Proposed Brewery have been added. A pedestrian access gate to the site has also been added. The concrete footpath is 1.5m wide and is separated 3m from the driveway crossover. The connection between the concrete footpath and the Lakeside Drive cul-de-sac has been modified with a kerb ramp, in accordance with Standard Drawings SD-025 (Kerb Ramp).

Request Item 7 Maintaining Overland Flow

This item requested to provide additional information from a qualified RPEQ, demonstrating that the overland flow capacity within the existing drainage easement (Easement L on SP267454) will not be reduced due to the development works (landscaping, parking and earthworks) proposed within the easement area.

In response to this item, LCJ Engineers have confirmed that the existing drainage easement (Easement L on SP267454) does not have any capacity for overland flow. Any surcharge from Lakeside Drive service road will overland flow in the grass swale along Lakeside Drive which will then discharge into the lake. LCJ drawing SK03-A (see **Attachment 5 – Maintaining Overland Flow – Additional Information**) shows the existing surface flow direction from TCC mapping contours. Easement L has been created for the TCC stormwater asset within the property boundary. LCJ Engineers have further confirmed that the [roposed landscaping, parking and earthworks within the easement area will have no impact on overland flow or the stormwater pipe.

We reiterate that the overland flow capacity will not be reduced due to development works.

Request Item 8 Drive-Through Manoeuvring

This item requested additional information confirming that the anticipated customer vehicles can generally exit the drive through facility with a single turning manoeuvre.

In response to this item, we refer to the amended Architectural drawings (see attached **Attachment 2 – Concept Design Plans – Rev B**). The driveway providing access to the drive-through facility for entering and exiting has been widened. Information about the assumed design vehicles, along with the associated swept paths, have also been added.

LCJ Engineers have confirmed that utes with trailers or cars with caravans are not design vehicles in AS/NZS 2890 Parking facilities and are not mentioned within TCC City Plan. LCJ Engineers have provided a swept path template from another region to confirm that utes with trailers / caravans can enter and exit the drive-through facility with a single turning manoeuvre using the left lane. This is showed on the amended architectural drawings.

The following supporting information has been referred in this Response to Council Information Request:-

- Attachment 1: Information Request from Townsville City Council
- Attachment 2: Revised Concept Design Plans Rev B (refer Appendix C in Application for Rev A)
- Attachment 3: Noise Impact Assessment
- Attachment 4: Odour Emissions Assessment Comment on Odour Emissions
- Attachment 5: Maintaining Overland Flow Additional Information

We believe the information provided allows Council to assess the development application.

Please contact Martina Piatrikova (Dillon Architects) should you have any queries in relation to this application.

Regards

DILLON ARCHITECTS PTY LTD

S. DILLON

DILLON ARCHITECTS CIT



STEVEN J. DILLON
KALYPSO VOUYIOUKAS

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ATTACHMENT 1

Brewery, Distillery, Sampling Room, Drive-Through Bottle Shop

Material Change of Use (Impact Assessment)

Owner – LLKB INVESTMENTS PTY LTD Address – 55 Lakeside Drive, Idalia

December 2024

INFORMATION REQUEST



Date >> 30 September 2024

PO BOX 1268, Townsville Oueensland 4810

13 48 10

enquiries@townsville.qld.gov.au townsville.qld.gov.au

ABN: 44 741 992 072

Post Office Brewing Pty Ltd C/- Dillon Architects Pty Ltd Po Box 294 TOWNSVILLE QLD 4810

Email >> general@dillonarchitects.com

Dear Sir/Madam

Information Request Planning Act 2016

As per our telephone conversation on 27 September 2024 please be advised that, upon review of the below mentioned development application, further information is required to undertake a comprehensive assessment. In accordance with section 12 of Development Assessment Rules under the *Planning Act 2016* the following information is requested.

Application Details

Application no: MCU24/0083 Assessment no: 3230055

Proposal: Special Industry (Distillery), Food and Drink Outlet (Brewery

Sampling Room), Shop (Drive Through Bottle Shop) and Undefined Use (Brewery and Bottling / Canning Facility)

Street address: 55 Lakeside Drive IDALIA QLD 4811

Real property description: Lot 14 SP 334259

Applicant's reference: 3140

The information requested is set out below >>

Request Item 1 - Economic Need

The applicant is requested to demonstrate how the proposed development aligns with the purpose of the Low impact industry zone, particularly with respect to the proposed Shop and Food and Drink elements of the development.

While it is noted that the Townsville City Plan does allow for some retail and commercial activities within industry zones, these activities are to be limited to those that directly support the industries intended for the zone. The provided application material states that is the intent to operate the Shop and Food and Drink elements independently to the Brewery and Special Industry (Distillery) uses. Further, it is noted that it is the intent to deliver the Shop and Food and Drink elements as part of Stages 1 and 2, prior to establishing any of the proposed industry uses.

Given the proposed staging and operational intent, the applicant is requested to demonstrate how the proposed Shop and Food and Drink elements represent an appropriate outcome for

Document Set ID: 26004920 Version: 8, Version Date: 30/02/2024 the site, including a demonstrated economic need for these commercial elements.

Reason

To demonstrate compliance with the Purpose of the Low impact industry zone code of the Townsville City Plan.

Request Item 2 - Staging Plans and Operational Information

The applicant is requested to provide further information on the proposed operations (including annual throughput) of each stage of the development.

Detailed staging plans (including site plans, floor plans and elevations) are also requested for the proposed development.

Reason

To allow Council to undertake a full and detailed assessment of the proposed development.

Advice

The applicant is advised to consider Request Item 1 when contemplating staging of the development.

Request Item 3 - Noise Impact Assessment

The applicant is requested to submit a Noise Impact Assessment, prepared by a suitably qualified person as per SC6.4.19 Noise and Vibration of the Development Manual.

Reason

To demonstrate compliance with Performance Outcome PO6 of the Low impact industry zone code of the Townsville City Plan.

Advice

The Noise impact assessment must consider all sensitive land uses in the vicinity of the site, including those currently proposed on land at 17 D'Arcy Drive, Idalia (refer MCU24/0093).

Request Item 4 - Odour Impact Assessment

The applicant is requested to submit an Odour Impact Assessment, prepared by a suitably qualified person and in accordance with the Queensland Odour Impact Assessment Guidelines.

Reason

To demonstrate compliance with Performance Outcome PO6 of the Low impact industry zone code of the Townsville City Plan.

Advice

The Odour impact assessment must consider all sensitive land uses in the vicinity of the site, including those currently proposed on land at 17 D'Arcy Drive, Idalia (refer MCU24/0093).

Request Item 5 - Driveway Crossover

The applicant is requested to redesign/relocate the proposed crossover so as to comply with the design requirements of the current version of Standard Drawing SD-031 (Driveway Access Industrial), in particular achieving typical crossover dimensions and adequate separation from property boundaries.

Reason

To demonstrate compliance with Performance Outcomes PO5 and PO7 of the Transport impact, access and parking code.

Advice

Widening the crossover at the kerb and shifting the crossover further west will provide less conflict with the adjoining property, and allow for improved ingress, egress and on-site vehicle manoeuvrability.

Request Item 6 - Pedestrian Connectivity

The applicant is requested to provide a pedestrian footpath and/or corridor between the Lakeside Drive cul-de-sac and the covered walkway proposed along the western side of the building, which is separate from vehicle movement areas.

Reason

To demonstrate compliance with Performance Outcomes PO2 of the Low impact industry zone code and PO6 of the Transport impact, access and parking code, noting that the proposed Shop and Food and Drink elements are likely to receive greater pedestrian traffic than a more typical industrial use.

Request Item 7 - Maintaining Overland Flow

The applicant is requested to provide additional information (and if necessary amended plans and/or details) from a qualified RPEQ, demonstrating that the overland flow capacity within the existing drainage easement (Easement L on SP267454) will not be reduced due to the development works (landscaping, parking and earthworks) proposed within the easement area.

Reason

To demonstrate compliance with Performance Outcomes PO17(b) of the Low impact industry zone code, PO10-PO13 of the Healthy waters code and PO26 of the Works code, noting that this easement both contains a pipe network and provides for overland flow.

Request Item 8 - Drive Through Manoeuvring

The applicant is requested to supply additional information confirming that the anticipated customer vehicles can generally exit the drive through facility with a single turning manoeuvre.

Reason

To demonstrate compliance with Performance Outcome PO20 of the Transport impact, access and parking code.

Advice

The supplied swept paths contain insufficient detail regarding assumed design vehicles and turning radii, noting that utes with trailers/cars with caravans are likely to frequent the proposed drive through facility.

End of Information Request >>

Under the provisions of the Development Assessment Rules under the *Planning Act 2016*, you have three options available in response to this Information Request. You may give the assessment manager (in this instance Council):

- (a) all of the information requested; or
- (b) part of the information requested; or
- (c) a notice that none of the information will be provided.

For any response given in accordance with items (b) and (c) above, you may also advise Council that it must proceed with its assessment of the development application.

Please be aware that under the Development Assessment Rules under the *Planning Act 2016*, the applicant is to respond to any Information Request within **3 months** of the request. If you do not respond to the Information Request within this time period, or, within a further period agreed

PACT1028.00

between the applicant and Council, it will be taken that you have decided not to provide a response. In the event of no response being received, Council will continue with the assessment of the application without the information requested.

Council prefers that all of the information requested be submitted as one package. If any additional matters arise as a result of the information submitted, or, as a result of public notification (where applicable), you will be advised accordingly.

Should any referral agency make an information request, you are reminded of your obligation to provide council with a copy of the information response provided to that referral agency.

You may wish to follow the progress of this application using PD Online on Council's website www.townsville.qld.gov.au

If you have any further queries in relation to the above, please do not hesitate to contact Taryn Pace on telephone 07 4727 9426, or email developmentassessment@townsville.qld.gov.au.

Yours faithfully

For Assessment Manager

Planning and Development

DILLON ARCHITECTS CIT



STEVEN J. DILLON
KALYPSO VOUYIOUKAS

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ATTACHMENT 2

Brewery, Distillery, Sampling Room, Drive-Through Bottle Shop

Material Change of Use (Impact Assessment)

Owner – LLKB INVESTMENTS PTY LTD Address – 55 Lakeside Drive, Idalia

December 2024

CONCEPT DESIGN PLANS – REV B

BREWERY, DISTILLERY, SAMPLING ROOM, DRIVE-THROUGH BOTTLE SHOP



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| PROJECT NO. 3140 | PROJECT NAME POST OFFICE BREWING CO. 55 LAKESIDE DRIVE, IDALIA PROPOSED BREWERY, DISTILLERY, BOTTLING / CANNING, BREWERY SAMPLING ROOM, DRIVE-THROUGH BOTTL |
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TLE SHOP

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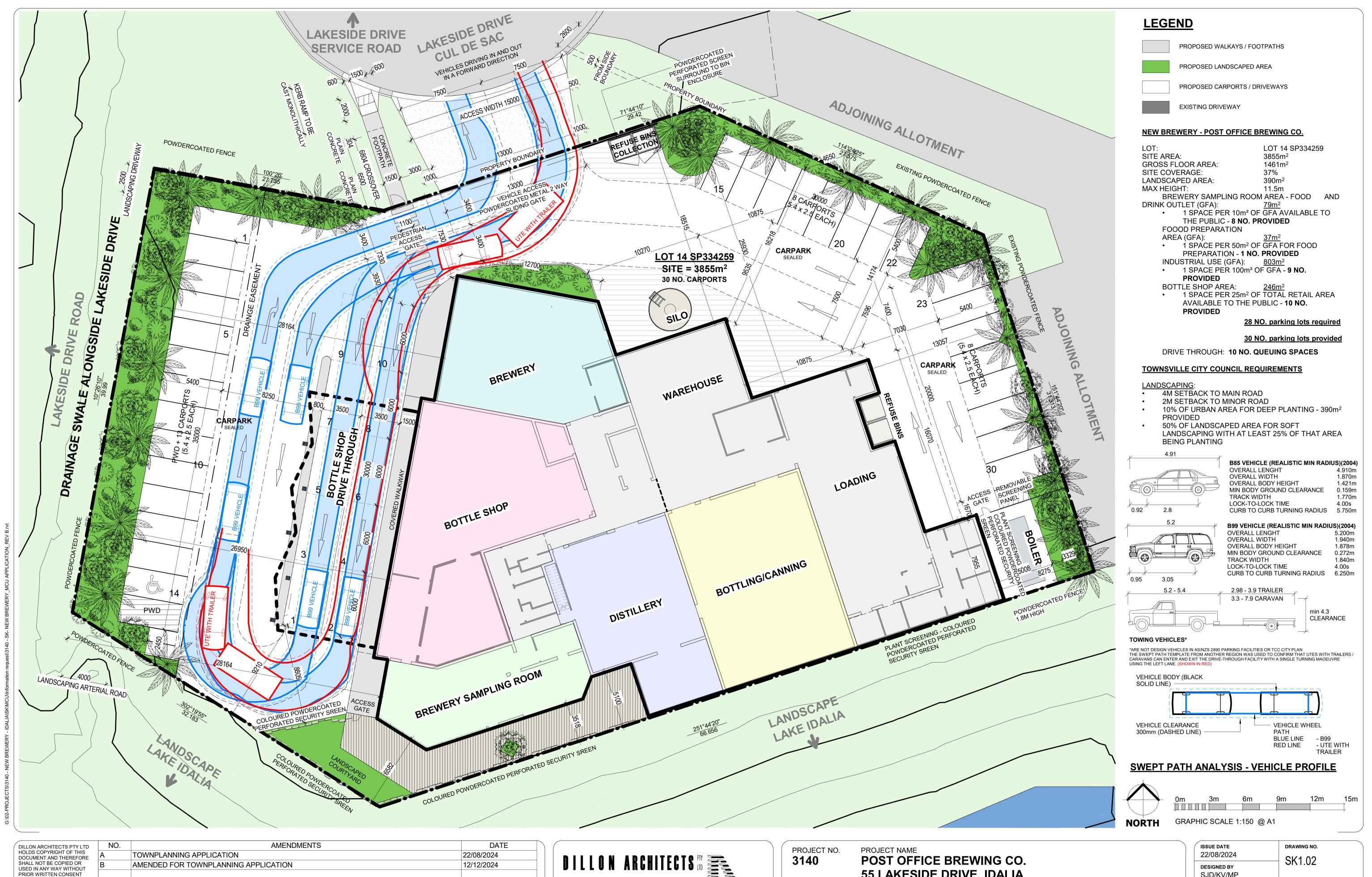
POST OFFICE BREWING CO. 55 LAKESIDE DRIVE, IDALIA

PROPOSED BREWERY, DISTILLERY, BOTTLING / CANNING, BREWERY SAMPLING ROOM, DRIVE-THROUGH BOTTLE SHOP

DRAWING NAME

PROPOSED FULL SITE PLAN - STAGES 1 - 3 INCL

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DILLON ARCHITECTS BEFORE

COMMENCING ANY WORK OR

ANY DISCREPENCIES TO

PREPARATION OF SHOP

DRAWINGS.

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55 LAKESIDE DRIVE, IDALIA

PROPOSED BREWERY, DISTILLERY, BOTTLING / CANNING, BREWERY SAMPLING ROOM, DRIVE-THROUGH BOTTLE SHOP

PROPOSED FULL SITE PLAN - VEHICLE TURNING CIRCLE, CAR WITH TRAILER / CARAVAN

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PROJECT NO.

3140

PROJECT NAME

POST OFFICE BREWING CO.

55 LAKESIDE DRIVE, IDALIA

PROPOSED BREWERY, DISTILLERY, BOTTLING / CANNING, BREWERY SAMPLING ROOM, DRIVE-THROUGH BOTTLE SHOP

DRAWING NAME

PROPOSED GROUND FLOOR PLAN - STAGES 1 - 3 INCL.

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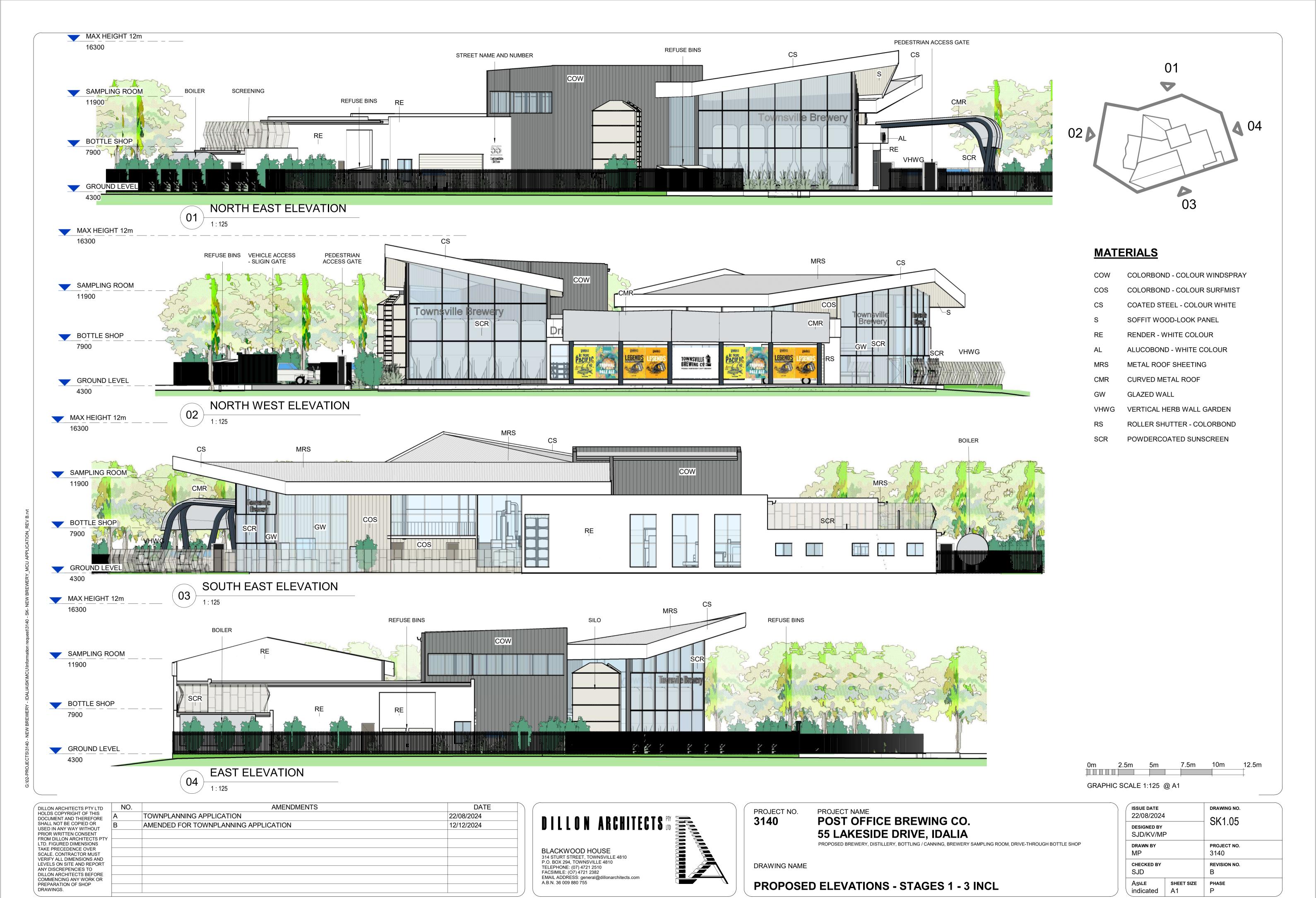
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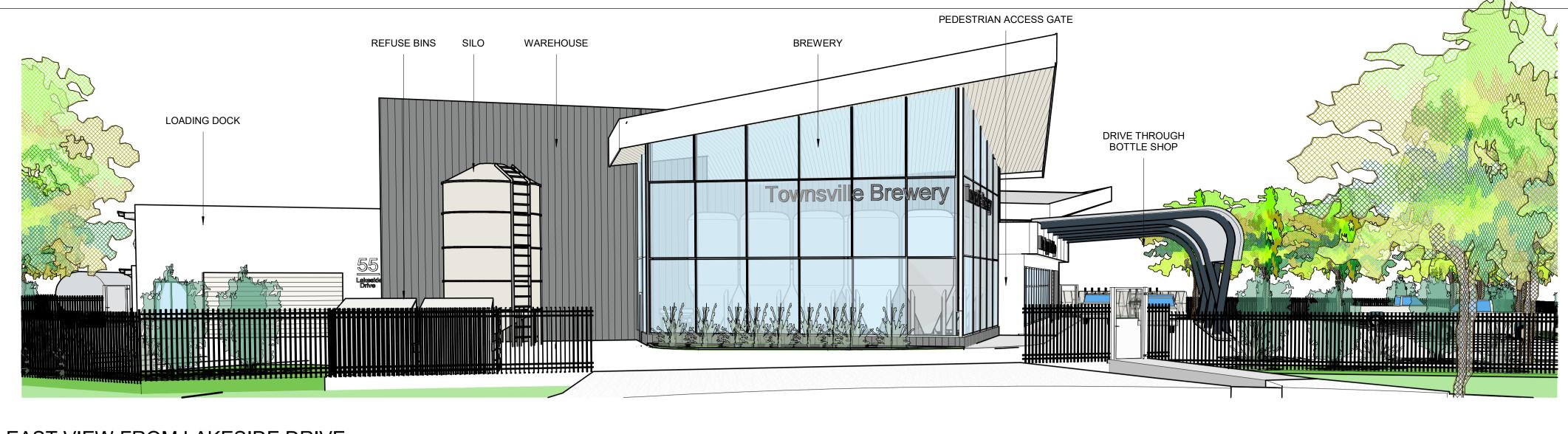
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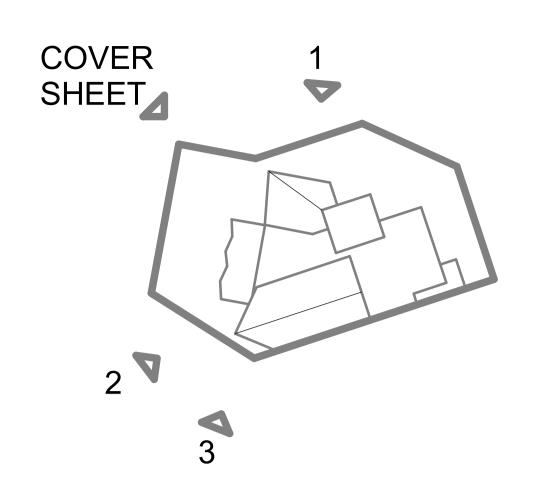
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PROPOSED ROOF PLAN- STAGES 1 - 3 INCL

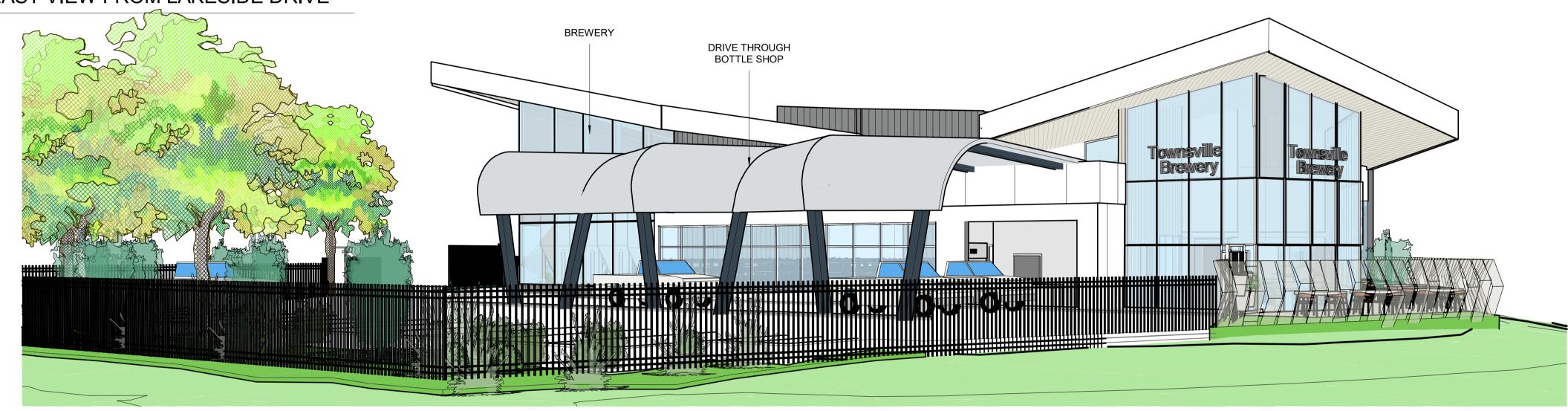
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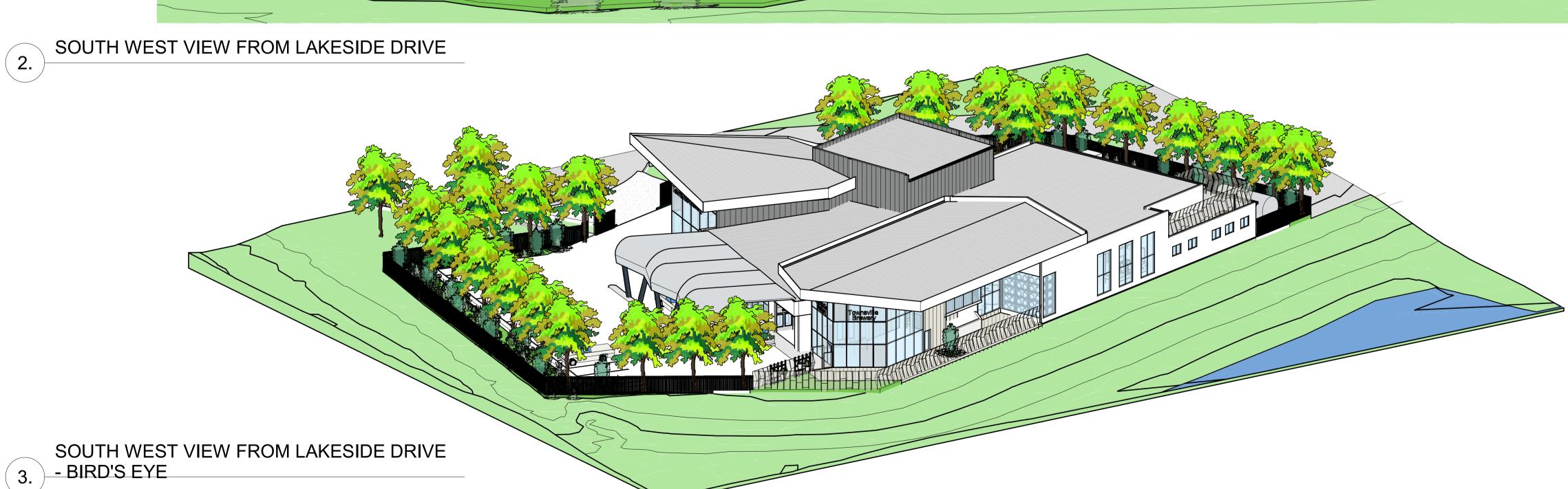












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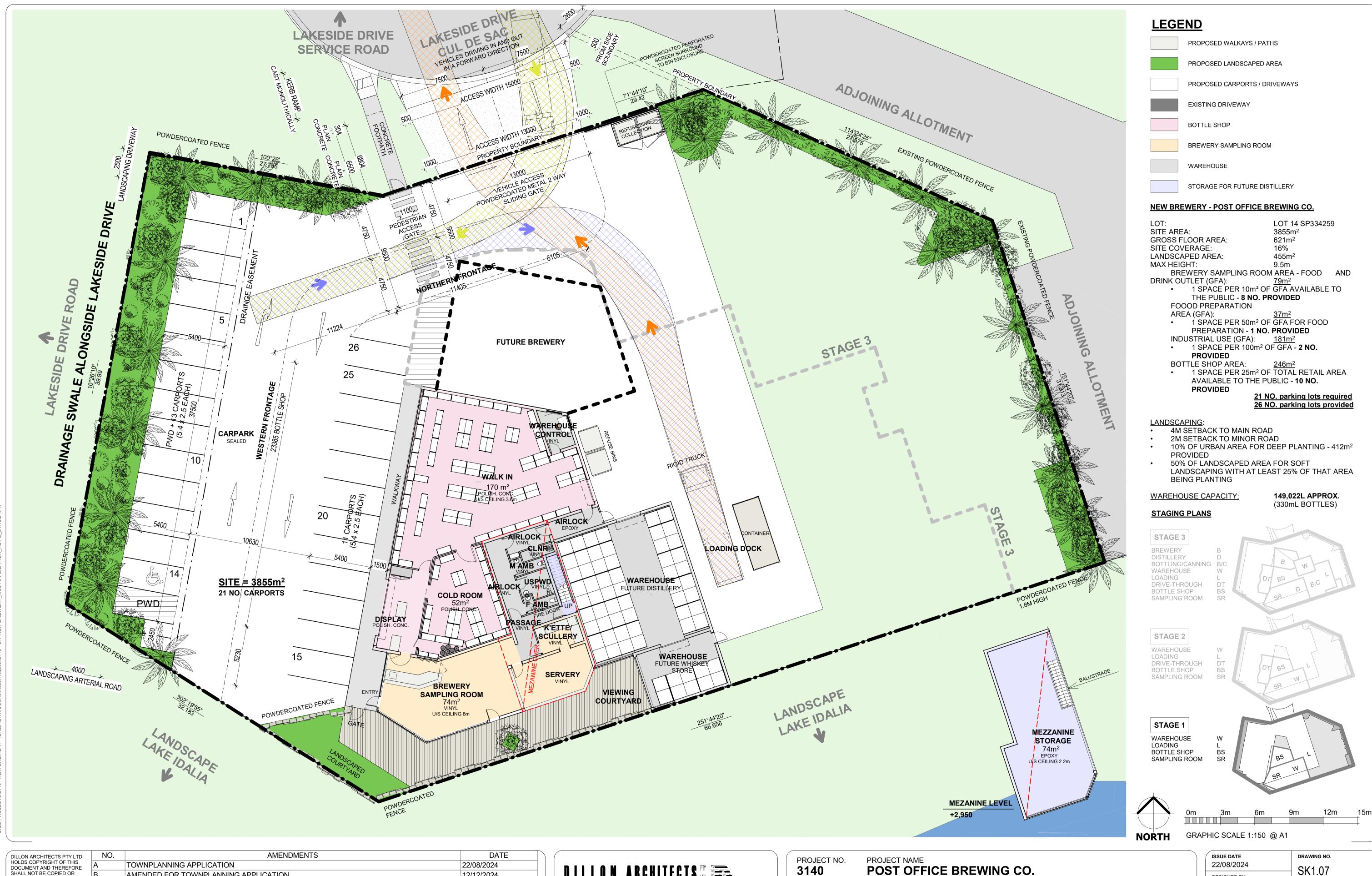
PROJECT NAME
POST OFFICE BREWING CO.
55 LAKESIDE DRIVE, IDALIA

PROPOSED BREWERY, DISTILLERY, BOTTLING / CANNING, BREWERY SAMPLING ROOM, DRIVE-THROUGH BOTTLE SHOP

DRAWING NAME

PROPOSED PERSPECTIVES - STAGES 1 - 3 INCL

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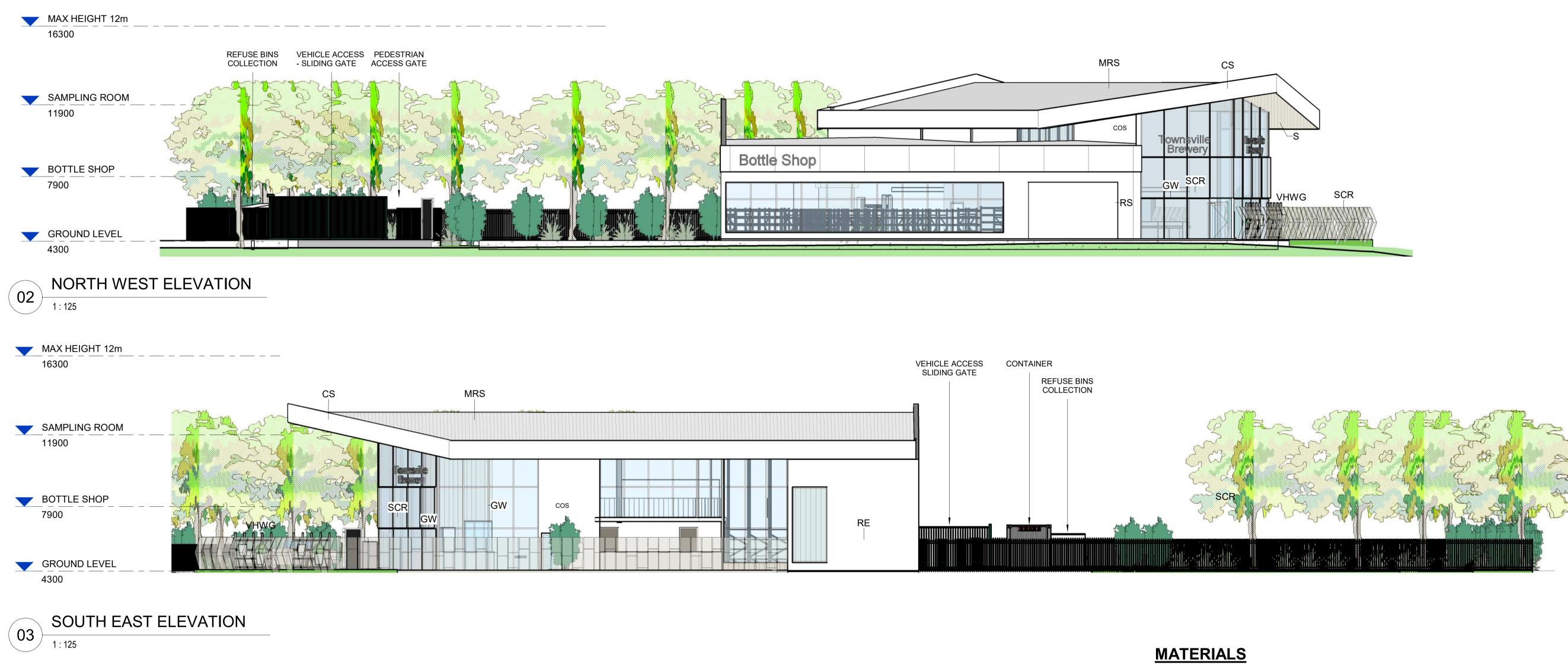
POST OFFICE BREWING CO. 55 LAKESIDE DRIVE, IDALIA

PROPOSED BREWERY, DISTILLERY, BOTTLING / CANNING, BREWERY SAMPLING ROOM, DRIVE-THROUGH BOTTLE SHOP

DRAWING NAME

PROPOSED GROUND FLOOR PLAN - STAGE 1

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| AL | ALUCOBOND - WHITE COLOUR |
|------|----------------------------|
| MRS | METAL ROOF SHEETING |
| CMR | CURVED METAL ROOF |
| GW | GLAZED WALL |
| VHWG | VERTICAL HERB WALL GARDEN |
| RS | ROLLER SHUTTER - COLORBOND |
| SCR | POWDERCOATED SUNSCREEN |
| | |

| 01 04 04 |
|---|
| 0m 2.5m 5m 7.5m 10m 12.5m GRAPHIC SCALE 1:125 @ A1 |

| 3140 POST OFFICE BREW | VING CO |
|--------------------------|---------|
| PROJECT NO. PROJECT NAME | |

55 LAKESIDE DRIVE, IDALIA

PROPOSED BREWERY, DISTILLERY, BOTTLING / CANNING, BREWERY SAMPLING ROOM, DRIVE-THROUGH BOTTLE SHOP

COLORBOND - COLOUR WINDSPRAY

COLORBOND - COLOUR SURFMIST

COATED STEEL - COLOUR WHITE

SOFFIT WOOD-LOOK PANEL

RENDER - WHITE COLOUR

DRAWING NAME

PROPOSED ELEVATIONS - STAGE 1

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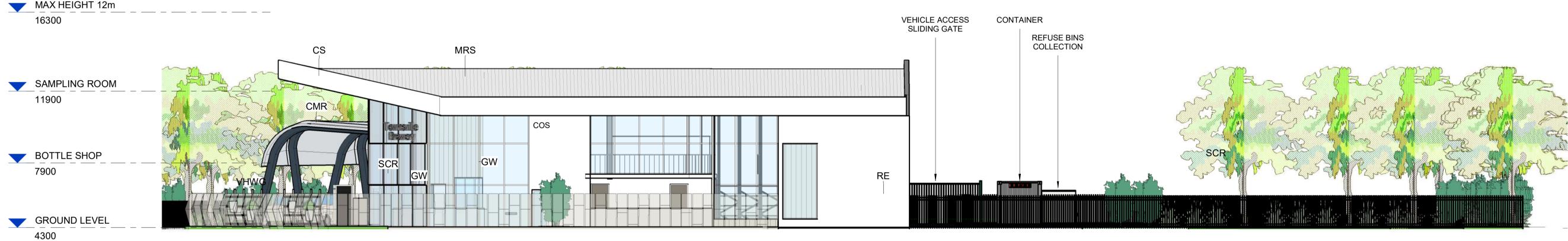
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PROPOSED GROUND FLOOR PLAN - STAGES 1 - 2 INCL

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O3 SOUTH EAST ELEVATION
1:125

MATERIALS

COLORBOND - COLOUR WINDSPRAY

COS COLORBOND - COLOUR SURFMIST

COATED STEEL - COLOUR WHITE

SOFFIT WOOD-LOOK PANEL

E RENDER - WHITE COLOUR

L ALUCOBOND - WHITE COLOUR

IRS METAL ROOF SHEETING

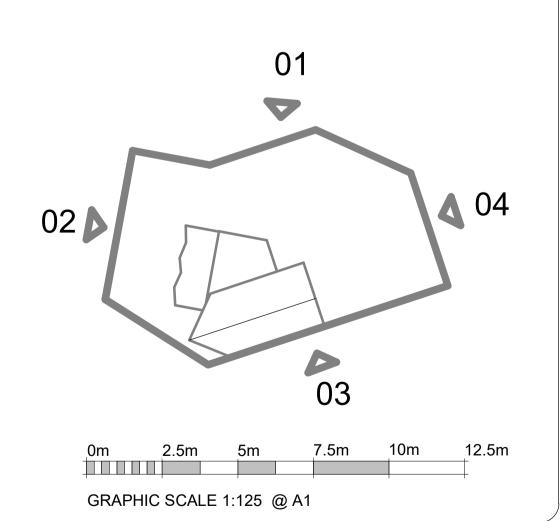
MR CURVED METAL ROOF

GUAZED WALL

HWG VERTICAL HERB WALL GARDEN

S ROLLER SHUTTER - COLORBOND

CR POWDERCOATED SUNSCREEN



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PROJECT NO. PROJECT NAME POST OFF

POST OFFICE BREWING CO. 55 LAKESIDE DRIVE, IDALIA

PROPOSED BREWERY, DISTILLERY, BOTTLING / CANNING, BREWERY SAMPLING ROOM, DRIVE-THROUGH BOTTLE SHOP

DRAWING NAME

PROPOSED ELEVATIONS - STAGES 1 - 2 INCL

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ATTACHMENT 3

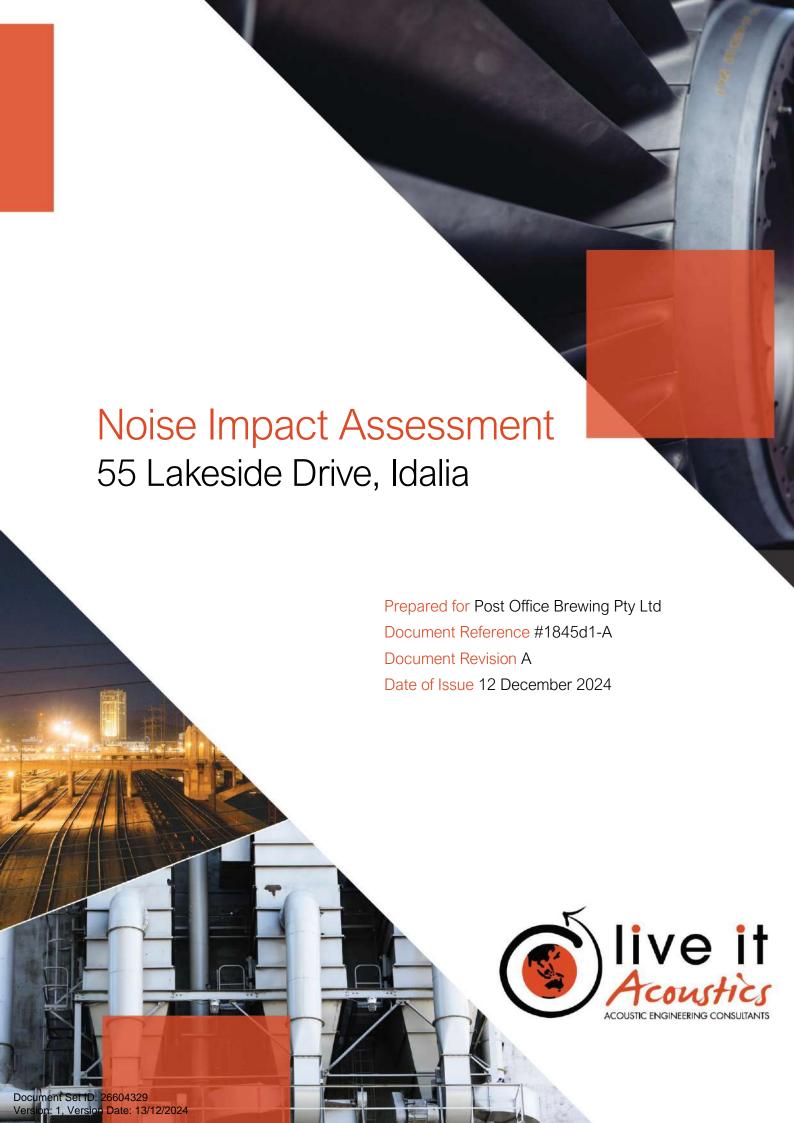
Brewery, Distillery, Sampling Room, Drive-Through Bottle Shop

Material Change of Use (Impact Assessment)

Owner – LLKB INVESTMENTS PTY LTD Address – 55 Lakeside Drive, Idalia

December 2024

NOISE IMPACT ASSESSMENT



Document Control

Prepared for

Post Office Brewing Pty Ltd C/- Dillon Architects Pty Ltd

T 07 4121 2510

martina.piatrikova@dillonarchitects.com

Reference: #1845d1-A

Date: 12 December 2024

Prepared by

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Quality Information

| Document Name | |
|---------------|------------------|
| Document No. | 1845d1-A |
| Author (s) | John Barker |
| Reviewer | Tristan Shalhoub |
| Authorised by | Tristan Shalhoub |

Revision History

| Revision | Status | Date | Principal Editor | Comments |
|----------|-------------|------------|------------------|--|
| А | Preliminary | 12/12/2024 | John Barker | Preliminary acoustic report for client review. |
| | | | | |

Disclaimer

This report was compiled in accordance with the policies and procedures found within Live It Acoustics Quality Management System (QMS) which is based on Australian and New Zealand Standard AS/NZS ISO 9001-2016 Quality management systems.

Live It Acoustics

Reference: #1845d1-A Date: 12 December 2024

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1 Introduction

Live It Acoustics have been engaged by Post Office Brewing Pty Ltd to undertake a noise impact assessment for a proposed commercial development (brewery, distillery, sampling room and drive through bottle shop) to be located at 55 Lakeside Drive, Idalia QLD 4811.

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Date: 12 December 2024

An assessment of potential impacts from the noise emissions associated with the operation of the development have been presented within this report. Where required, noise management and mitigation measures are provided.

1.1 Objectives

This assessment aims to achieve the following objectives:

- Quantify the existing acoustic environment via ambient noise monitoring.
- Undertake a review of noise policy and regulatory requirements.
- Identify sensitive receptors.
- Identify and quantify noise generating activities.
- Develop project specific noise goals.
- Produce a noise prediction model to assess the potential noise impacts against the adopted noise goals.
- Where required, specify noise management and mitigation measures.

1.2 Study Exclusions

Assessment of noise and vibration generated by the construction of the proposed development has not been assessed within this noise study.

1.3 Study Limitations

This report was prepared utilising best-practice methodologies. No expressed or implied warranty is made as to the professional advice which is included in this document. Where information provided by third parties has been indicated, there has been no independent verification by Live It Acoustics personnel of this information, unless stated. No liability is assumed for any inaccuracies in, or omissions to that information. Furthermore, this assessment should be read in its entirety. No responsibility is accepted for use of any part of this document in any other context or for any other purpose or by third parties.

Live It Acoustics Page 1

2 Subject Site and Proposed Development

2.1 Existing Site

The site is located at 55 Lakeside Drive, Idalia QLD 4811 (Lot 702 on SP247186). The property is within a 'Low impact industry' zone as per the Townsville City Plan (Version 2024/01).

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A site survey was conducted by Live It Acoustics on 1 November 2024 which identified the following:

The subject site is currently vacant.

- Directly north and east of the subject site are a mix of commercial and industrial land uses.
- South of the site is a body of water (Lake Idalia), which separates the development from future residential apartments at 17 Darcy Drive, Idalia.
- Lakeside Drive is located west of the site, separating it from residential land uses.

The nearest residential dwellings to the west of the proposed development are zoned 'Low density residential'. Future residential uses to the south are zoned 'District centre'.



Figure 1. Location of proposed development (Aerial image)

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2.2 Proposed Development

The existing development area is currently vacant, and it is proposed to construct a brewery and distillery with associated carparking as shown in Figure 2 below. The development includes the following notable features:

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- The building footprint will comprise primarily of a brewery, distillery, sampling room and drive through bottle shop.
- Carparking is located in the western and eastern areas of the site and will provide 28 parking spaces.
- Truck loading / unloading will occur within a dedicated loading dock in the eastern area
 of the site.
- A viewing courtyard external to the brewery sampling room is located along the southern site bounds.
- Site access will be via Lakeside Drive.

The proposed operating hours for the development will be:

- 8:30am to 5:00pm for the brewery and distillery; and
- 10:00am to 10:00pm for the bottle shop.

The working hours of the sampling room may extend past 5:00pm. Use of the brewery sampling room including the outdoor viewing courtyard is assessed up to 10:00pm in this report.

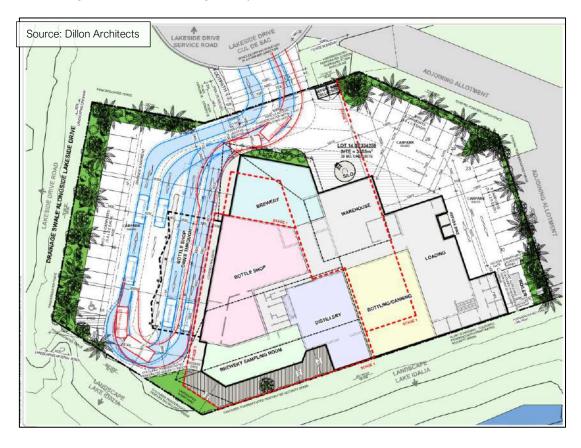


Figure 2. Proposed development floor plan

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Noise generating activities related to the development have been identified below in Table 1, along with the hours they may operate.

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Table 1. Noise generating activities.

| Noise generating activity | Hours of noise generation |
|---|---------------------------|
| Mechanical plant (Air-conditioning / condenser units / refrigeration equipment / vents) | 24 hours |
| Carpark noise (vehicle movements) | 7:00am to 10:00pm |
| Truck deliveries, loading and unloading | 7:00am to 6:00pm |
| Waste collection | 7:00am to 6:00pm |
| Patron noise (viewing courtyard) | 8:30am to 10:00pm |

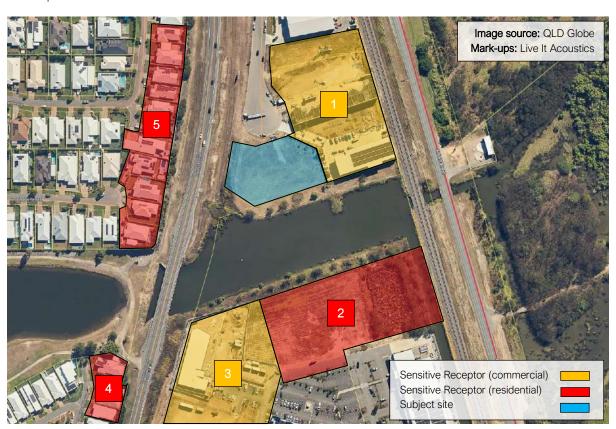
2.3 Sensitive Receptors

The *Environmental Protection (Noise) Policy 2019* defines a SR as 'an area or place where noise is measured'. In addition, the Policy also provides a list of SRs which are denoted as a:

- Residence;
- Libraries and educational institutions (including a schools, colleges and universities);
- Childcare centres or kindergartens;
- School or playground;
- Hospital, surgery or other medical institution;
- Commercial and retail activity;
- Protected area or critical area;
- Marine Park; and
- Park or garden that is open to the public for use other than for sport or organised entertainment.

The surrounding land uses are zoned as either 'Low impact industry', 'Rural', 'District centre' or 'Low density residential', as per the Townsville City Plan. The proposed development location and the nearest identified SRs are shown on aerial imagery below in Figure 3.

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Figure 3. Sensitive receptor (SR) locations

The location details of the sensitive receptors are presented below in Table 2.

Table 2. Sensitive receptors details

| Reference | Address / Description | Receptor Type | Business Name | Operating Hours |
|--|---|------------------|----------------------------------|---------------------|
| 1 | Commercial uses located at 63-71 Lakeside Drive | Commercial | Ausnorth Building & Construction | 8:00am – 3:00pm |
| ' | | | d-stress computers | 8:00am – 5:00pm |
| 2 | Future 10-storey residential apartments located at 17 Darcy Drive | Residential | N/A | N/A |
| 3 | Retail / shopping precinct located at 31 Darcy Drive | Commercial | Various | 6:00am – 10:00pm |
| 4 | Single storey residential dwellings located at 34 – 40 Greenbank Pocket | Residential | N/A | N/A |
| Single storey residential dwellings located at 44 – 56 Twinview Terrace and 17 – 20 Broadwater Terrace | | Residential | N/A | N/A |

These receptors were identified as being the nearest to the proposed development. Should noise be controlled adequately at these SRs, then noise is also predicted to be controlled at all other SRs due to additional distance losses and building screening etc.

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2.4 Noise Monitoring

To quantify the existing acoustic environment, unattended noise monitoring was conducted from the 1st to 18th of November 2024 using the Rion NL-42 precision noise logger listed in Table 3. Noise measurements were conducted in accordance with AS 1055:2018 *Acoustics - Description and measurement of environmental noise*.

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Date: 12 December 2024

The noise logger was calibrated with a sound pressure level of 94.0 dB at 1kHz before the measurements. Calibration drift was found to be within ± 0.5 dB and is therefore considered acceptable.

Table 3. Equipment

| Equipment | Serial No. | NATA calibration date |
|------------------------------|------------|-----------------------|
| Rion NL-42 Sound Level Meter | 973280 | 06/06/2024 |
| CAL200 Field Calibrator | 22787 | 10/07/2024 |

The noise logger was set to record statistical sound pressure levels Lmin, L90, Leq, L10, Lmax noise descriptors over sampling periods of 15-minutes for the entire monitoring period.

The microphone was positioned in a free-field environment at a height of 1.5 m. The noise monitoring location is indicated over aerial imagery below in Figure 4.



Figure 4. Noise monitoring location map

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Figure 5. Noise monitoring location 1 – Photograph

Presented below in Table 4 are the summarised results of the noise monitoring.

Table 4. Summarised noise monitoring results

| Assessment Period | Noise level in dBA | | | |
|-------------------|--------------------|----|----|--|
| Assessment Period | Leq L90 RBL | | | |
| Day | 51 | 45 | 44 | |
| Evening | 50 | 43 | 41 | |
| Night | 47 | 40 | 36 | |

^[1] Rating Background Levels are calculated using the methodology provided in the former Department of Environment and Heritage Protection's, Planning for Noise Control Guideline v1.0.

Periods of inclement weather or extraneous noise were identified during the following assessment periods. These were excluded prior to determining the overall results:

- Daytime (7:00am to 6:00pm) assessment period on:
 - o Friday 1 November 2024;
 - o Monday 4 November 2024;
 - o Tuesday 5 November 2024;
 - o Wednesday 6 November 2024;
 - Thursday 7 November 2024;
 - Tuesday 12 November 2024; and
 - o Friday 15 November 2024.

Noise monitoring graphs for the monitoring periods are provided in Appendix B – Noise Monitoring

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3 Policy and Regulatory Requirements

In establishing noise criteria for this assessment, the following legislative and regulatory documents were reviewed:

Reference: #1845d1-A

Date: 12 December 2024

- Townsville City Council Information Request
- Townsville City Plan
- Environmental Protection Act 1994
- Environmental Protection (Noise) Policy 2019

3.1 Townsville City Council Information Request

Upon review of the development application for the project, Townsville City Council issued an Information Request (IR). Item 3 of the information request relates to acoustics and has been reproduced below:

Request Item 3 – Noise Impact Assessment

The applicant is requested to submit a Noise Impact Assessment, prepared by a suitably qualified person as per SC6.4.19 Noise and Vibration of the Development Manual

Reason

To demonstrate compliance with Performance Outcome 6 PO6 of the Low impact industry zone code of the Townsville City Plan

Advice

The Noise impact assessment must consider all sensitive land uses in the vicinity of the site, including those currently proposed on land at 17 D'Arcy Drive, Idalia (refer MCU24/0093).

3.2 Townsville City Plan

The following relevant assessment benchmarks apply to this development:

- Low impact industry zone code; and
- Schedule 6.4.19 Noise and Vibration.

3.2.1 Low Impact Industry Zone Code

The relevant performance and acceptable outcomes relating to acoustics specified in the Low impact industry zone code are presented in Table 5.

Table 5. Assessment benchmarks

| For accepted development subject to requirements and assessable development General | | |
|--|--|--|
| | | |
| Adverse impacts on the health, safety or amenity of | | |

Live It Acoustics Page 8

nearby residential zoned land or other sensitive land uses are minimised.

Editor's note—Applicants should have regard to relevant legislative, industry and licensing requirements.

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Criteria provided in the EPP (Noise) 2019 is discussed further in Section 3.4.

3.2.2 Schedule 6.4.19 Noise and Vibration

Townsville City Plan Schedule 6 provides a planning scheme policy for noise and vibration. The purpose of the policy is to ensure the development is managed in a way which prevents nuisance from the effects of noise and vibration on the health, community wellbeing and quality of life of an individual or the community, and wildlife.

3.2.2.1 Intrusiveness Noise Limits

Intrusiveness noise limits require that $L_{Aeq,15min}$ noise levels from the site during the relevant operational periods (i.e. day, evening and night) do not exceed the rating background level by more than 5 dB.

Based on the calculated RBLs, the intrusiveness noise criteria have been established as follows:

Table 6. Intrusiveness noise limits for all sources

| Noise source | Compliance location | Noise descriptor | | Noise limit dBA | |
|-------------------|---------------------|------------------|-----|-----------------|-------|
| Noise source | Compliance location | Noise descriptor | Day | Evening | Night |
| All noise sources | Residence | LAeq,adj,15min | 49 | 46 | 41 |

3.2.2.2 Amenity Noise Limits

The ambient noise level within an area from all noise sources combined should remain below the recommended amenity noise levels. Section SC6.4.19. Table SC6.4.19.1 of the policy sets out maximum recommended amenity levels for various areas and uses.

The relevant maximum recommended amenity levels for sensitive uses are reproduced below in Table 7.

Table 7. SC6.4.19.1 - Maximum recommended amenity of noise levels for all sources

| Receiver | Noise Amenity Area | Time of day | Maximum Recommended Amenity Noise Level for All Sources LAeq,15min |
|---------------------|---|-------------|--|
| | Suburban - an area that has local traffic | Day | 55 |
| | with characteristically intermittent traffic flows or with some limited commerce or | Evening | 45 |
| Residence | | Night | 40 |
| Commercial premises | All | When in use | 65 |

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^[1] As the Environment Protection (EPP) (Noise) Policy 2008 has been superseded, the EPP (Noise) 2019 has been used.

3.2.2.3 Project Noise Trigger Level

The Project noise trigger level is the lower (i.e., the more stringent) value of the intrusiveness noise level and amenity noise level of the above points. The LAeq is determined over a 15 minute period for both intrusive and amenity noise levels and over an assessment period (day, evening and night). To standardise the time periods for the intrusive and amenity noise levels, this policy assumes that the LAeq, 15 minutes will be taken to be equal to the LAeq, period +3 decibels (dB), unless robust evidence is provided for an alternative approach for the particular project being considered.

Reference: #1845d1-A

Date: 12 December 2024

Based on the intrusiveness noise limits and amenity noise limits, the project noise trigger level has been determined as follows:

Noise limit dBA Noise source Compliance location Noise descriptor Day Night **Evening** LAeq,adj,15min 52 48 43 Residence All noise sources LAeq,adj,15min 68 68 Commercial premises

Table 8. Project noise trigger level

3.2.2.4 Sleep Disturbance

The development is not expected to operate during the nighttime assessment period of 10:00pm to 7:00am. Therefore, an assessment against the sleep disturbance criteria *SC6.4.19.6 Noise* assessment levels (6) was not conducted.

3.3 Environmental Protection Act 1994

Environmental noise control in Queensland is governed under the Environmental Protection Act 1994 (EP Act) and subordinate legislation, which aims to strike a balance between protecting the amenity of SRs and allowing industrial, commercial and development activities to occur in an ecologically sustainable manner.

Under the EP Act, noise is considered a contaminant and noise nuisance is considered environmental harm.

There is a general environmental duty to prevent and minimise environmental harm under the EP Act. The EP Act specifically states:

A person must not carry out an activity that causes, or is likely to cause, environmental harm unless the person takes all reasonable and practicable measures to prevent or minimise the harm (the general environmental duty).

The Environmental Protection (Noise) Policy 2019 provides a framework as to the prevention and minimisation of environmental harm as it relates to The EP Act.

3.4 Environmental Protection (Noise) Policy 2019

The primary purpose of the Environmental Protection (Noise) Policy is to achieve the overall objective of the Environmental Protection Act in relation to the acoustic environment. This involves the prevention or minimisation of environmental harm.

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Environmental harm, which includes environmental nuisance, is the adverse or potential adverse impact on an environmental value. An environmental value is a quality of the environment that is conducive to ecological health or public amenity or safety.

Reference: #1845d1-A

Date: 12 December 2024

3.4.1 Environmental Values

According to the Environmental Protection (Noise) Policy, environmental values to be enhanced or protected are the qualities of the acoustic environment that are conducive to:

- Protecting the health and biodiversity of ecosystems;
- Human health and wellbeing, including by ensuring a suitable acoustic environment for individuals to sleep, study and be involved in recreation, including relaxation and conversation; and
- Protecting the amenity of the community.

3.4.2 Noise Management Hierarchy

The Environmental Protection (Noise) Policy provides a hierarchy for managing noise that affects or may affect an environmental value. The Policy states that to the extent it is reasonable to do so, noise must be dealt with in the following order of preference:

- Firstly—avoid the noise;
- Secondly—minimise the noise, in the following order;
 - o firstly—orientate an activity to minimise the noise;
 - o secondly—use best available technology to minimise the noise;
- Thirdly—manage the noise.

The Policy also provide quantifiable noise criteria for SRs, which are designed to protect environmental values. This is discussed further below.

3.4.3 Acoustic Quality Objectives

Schedule 1 of the Environmental Protection (Noise) Policy 2019 provides Acoustic Quality Objectives for SRs. The relevant Acoustic Quality Objectives have been summarised below.

Table 9. Environmental Protection (Noise) Policy 2019 – Acoustic Quality Objectives

| Sensitive | Time of day | Acoustic qua | Environmental value | | |
|--|--|--------------|---------------------|-------------|--|
| тесеріоі | receptor | | LA10,adj,1hr | LA1,adj,1hr | |
| residence (for outdoors) | daytime and evening | 50 | 55 | 65 | health and wellbeing |
| | daytime and evening | 35 | 40 | 45 | health and wellbeing |
| Residence (for indoors) | night-time | 30 | 35 | 40 | health and wellbeing, in relation to the ability to sleep |
| Commercial and retail activity (for indoors) | When the activity is open for business | 45 | | | health and wellbeing, in relation |

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| | | to the ability to |
|--|--|-------------------|
| | | converse |

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It should be noted that the existing background noise levels in the vicinity of the subject site already exceed the acoustic quality objectives due to the influence of road & railway traffic, nearby commercial and other urban noise sources.

Therefore, assessment against the acoustic quality objective criteria may not be appropriate, as it does not consider the existing background levels. Therefore, the limiting criteria for this assessment has been derived as from the project trigger noise level and is presented below.

3.5 Summary of Noise Goals

Based on a review of policy and planning requirements, the limiting criteria have been derived herein.

Table 10. Adopted limiting criteria

| Naise serves | December to me | Compliance | Noise descriptor, | Noise limit, dBA | | | |
|-------------------|---|------------|-------------------|------------------|---------|-------|--|
| Noise source | oise source Receptor type location | | dB | Day | Evening | Night | |
| All poigo ocursos | Sensitive land uses, includes: Residence | At façade | LAeq,adj,15min | 52 | 48 | 43 | |
| All noise sources | Sensitive land uses, includes: Commercial | At façade | LAeq,adj,15min | 68 | 68 | | |

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4 Operational Noise Assessment

Noise prediction was undertaken using computer-aided modelling software SoundPLAN. SoundPLAN is a well-established, industry-leading noise prediction program, recognised by acoustic consultants, private companies, and government organisations globally.

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All noise sources associated with the proposed development have been incorporated into the noise prediction model. To predict noise emissions, SoundPLAN was programmed to use ISO 9613-2:1996 <u>Acoustics - Attenuation of sound during propagation outdoors - Part 2: General methods of calculation prediction methodology</u>.

4.1 Noise Modelling Extents

The noise model extents include the noise sensitive buildings and ancillary structures that are most exposed to the proposed development. The model incorporates all terrain within at least 500 m of the site.

4.2 Terrain

A terrain model based on light detection and ranging (LiDAR) was sourced from the Department of Natural Resources, Mines and Energy (DNRME).

This bald earth digital elevation model (DEM) was created as part of the 'Townsville 2018 Project'. The dataset has a resolution of 1.0 m. The DEM was converted from a raster file format to contour lines using QGIS v3.3. The contour lines were then imported into SoundPLAN as elevation lines, allowing SoundPLAN's triangulation algorithms to generate a digital ground model (DGM).

4.3 Buildings and Structures

Buildings and structures were identified using a combination of aerial imagery (Queensland Globe & Google Earth) and site visits. The buildings footprints were traced into the noise model from Queensland Government high resolution aerial imagery. Carports and other similar structures with no walls were omitted from the building footprint. Single story buildings were modelled at a height of 4.5 m above natural earth, two-story buildings were modelled at a height of 6.0 m. Commercial buildings were modelled at an assumed height of 7.5 m (unless specified on architectural plans). Auxiliary buildings such as sheds were not included within the model.

4.4 Ground Absorption and Vegetation

Minimal areas of hard ground were digitised from high-resolution aerial imagery. Local roads were modelled as acoustically 'hard' (i.e. reflective) and the remaining areas were modelled as acoustically 'soft' (i.e. absorbent) throughout.

No significant areas of vegetation were identified between the subject site and noise sensitive receptors. Bodies of water including Lake Idalia were modelled as acoustically 'hard' (i.e. reflective).

4.5 Noise Protection Barriers

An existing 2.0m noise protection barrier was identified between Lakeside Drive and the residential dwellings located along Twinview and Broadwater Terrace. This has been included in the noise model.

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4.6 Noise Sources

Table 11 below describes the noise source model inputs associated with each activity and includes the overall Sound Power Level (Lw) utilised in the prediction model.

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Table 11. Noise Source Properties

| Activity | Noise descriptor | Lw, dBA | Source Height | Noise Source Type | Reference |
|--|---------------------|---------------------------|-----------------------|----------------------|---------------------------|
| Car vehicle movements (base value per vehicle) | LAeq,adj,15min | 81 ^[1] | 0.5 m | Variable | LIA Database |
| Truck movements | LAeq,adj,15min | 95 ^[1] | 2.0 m | Variable | LIA Database |
| Refuse vehicle movement | LAeq,adj,15min | 97 [1] | 1.0 m | Variable | LIA Database |
| Waste collection event | LAeq,adj,15min | 104 | 1.0 m | Variable | LIA Database |
| Patrons | LAeq,adj,15min | Refer to Table 12 | 1.8 m | Variable | Refer to Section 4.6.3 |
| Mechanical Plant | LAeq,adj,15min | Refer to Section 4.6.1 | 1.0 m (above roof) | Continuous | - |

^[1] Modelled as a moving point source; adjusted based on vehicle speed and number of vehicles.

The above noise sources were input into the noise prediction model. A single noise prediction model scenario was created to assess all operational noise sources simultaneously.

Further discussion into the selection and use of each of the above noise sources are provided in the below sub-sections.

4.6.1 Fixed Mechanical Plant

The development plans (refer to Appendix C – Design Drawings) indicate proposed mechanical services located in an open-air plant deck above the locker / lunch room / male PWD WC areas.

As specific equipment selection is still being developed, an assessment has been conducted by Live It Acoustics to determine the maximum allowable cumulative sound power level of equipment for the open-air plant deck.

For the assessment, mechanical plant is assumed to operate 100% of the time. It should be noted however that in practical operation of the development, air-conditioning and other such fixed mechanical plant may cycle in operational status (such as compressors only turning on periodically), reducing the percentage of time that the maximum output noise level operates for. Therefore, the approach to model plant operating 100% of the time is considered conservative.

4.6.2 Carpark Activities

To assess noise emitted by vehicle movements within the development, the following inputs and assumptions were made.

4.6.2.1 Car Vehicle Activity

To assess noise emitted by car vehicle activity within the development, two moving point sources were input into the noise model to represent typical movement paths of cars:

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• The first path was traced from the access via Lakeside Drive through the eastern carpark area and exiting back via Lakeside Drive; and

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- The second path was traced from the access via Lakeside Drive, through the bottle shop drive through, western carpark and then exiting back via Lakeside Drive.
- The vehicles have been modelled to be moving a maximum speed of 10 km/hr.

The model is based on peak hour carpark activity, which assumes that the carpark will completely fill or completely empty in a one-hour period.

4.6.2.2 Vehicle Delivery Movements

To assess noise from deliveries, a both moving point source was modelled.

• A moving point source was input into the model with the path traced from access via Lakeside Drive to the designated loading dock, as shown on design drawings.

The vehicle movements assumed 1 entry/exit event per 15-minute period. The activity was assumed to occur for the entire 15 minutes within the assessment period.

4.6.2.3 Waste Collection

Refuse for the site is stored and collected at the 'refuse bins' area along the eastern wall of the loading dock and northern carpark area. Waste collection is expected to be conducted by a licensed specialist waste contractor using a typical medium sized refuse truck.

To assess noise emitted from waste collection, to following inputs were made to the model:

- A line source was traced into the model to represent a refuse vehicle accessing the site
 via Lakeside Drive, manoeuvring within the carpark to the waste collection areas and
 subsequently exiting the site back via Lakeside Drive.
- A point source was input at the refuse area to represent a waste collection event (vehicle engine idle, bin tipping and dropping etc.).
- The refuse vehicle has been modelled to be moving a maximum speed of 5 km/hr.

It was assumed that a waste collection event would occur for 10 minutes within a 15-minute assessment period. It is expected that 1 waste collection truck entry/exit manoeuvre would be required and as such the vehicle movement line source was modelled to assume 1 event within the assessment period.

4.6.3 Patron Noise

Noise associated with patrons has been based on the technical paper 'Prediction of Noise from Small to Medium Sized Crowds' (Hayne et al, 2011). The paper was based on attended noise measurements conducted at a sample of premises to account for a range of patron numbers. The analysis determined that the Sound Power Level (LAeq) of a small-medium crowd could be predicted by the equation:

$$L_{WAeq} = 15logN + 64dB(A)$$

Where:

N is the number of patrons.

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Patrons are expected to congregate within the 'viewing courtyard' external to the brewery sampling room. An assumed patronage of 1 person per 2 square meters has been applied in the assessment. Table 12 presents the assumed patron numbers within each relevant area of the subject site.

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Table 12. Patron numbers within the subject site

| Location | Assumed patron numbers | Lw, dBA |
|-------------------|------------------------|---------|
| Viewing courtyard | 53 | 90 |

4.7 Results and Discussion

The predicted noise levels at the SRs are provided as follows. The results presented are the impacts at the most affected point of each SR. Noise levels are only shown for the closest SRs to the site, as they are considered to be the most affected. Should compliance be achieved at these locations, compliance is also predicted to be achieved at all other SRs within the wider area due to distance separation and shielding from buildings or structures.

4.7.1 All Operational Noise Sources

To provide the expected worse-case impacts, an assessment of all operational noise sources associated with the development was conducted. This assessment assumes all noise generating activities are occurring simultaneously (mechanical plant, truck loading, waste collection, viewing courtyard etc.), which may not occur in practice. Hence, the assessment of noise impacts is considered conservative.

The predicted noise levels at the nearest SRs are detailed in Table 13, with noise contour maps presented in Appendix D – Noise Contour Maps.

Table 13. Predicted noise levels – All operational noise sources - LAeq

| 0 111 5 4 5 6 | | Predicted nois | se levels in dBA (| (LAeq,15min) | Compliance |
|--|-------|----------------|--------------------|--------------|--------------------------|
| Sensitive Receptor Reference (Refer to Table 2) | Floor | Day | Evening | Night | Day / Evening / Night |
| 1 (Commercial) | GF | 60 | 49 | 49 | YES / YES / YES |
| 2 (Residential) | GF | 47 | 43 | 41 | YES / YES / YES |
| 2 (Residential) | F1 | 47 | 43 | 41 | YES / YES / YES |
| 2 (Residential) | F2 | 47 | 43 | 41 | YES / YES / YES |
| 2 (Residential) | F3 | 47 | 43 | 42 | YES / YES / YES |
| 2 (Residential) | F4 | 47 | 43 | 42 | YES / YES / YES |
| 2 (Residential) | F5 | 47 | 43 | 42 | YES / YES / YES |
| 2 (Residential) | F6 | 47 | 43 | 42 | YES / YES / YES |
| 2 (Residential) | F7 | 47 | 43 | 42 | YES / YES / YES |
| 2 (Residential) | F8 | 47 | 43 | 42 | YES / YES / YES |
| 2 (Residential) | F9 | 47 | 43 | 42 | YES / YES / YES |
| 2 (Residential) | F10 | 47 | 43 | 41 | YES / YES / YES |

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| | | Predicted nois | Compliance | | |
|--|-------|----------------|------------|-------|--------------------------|
| Sensitive Receptor Reference (Refer to Table 2) | Floor | Day | Evening | Night | Day / Evening / Night |
| 3 (Commercial) | GF | 43 | 41 | 36 | YES / YES / YES |
| 4 (Residential) | GF | 40 | 37 | 33 | YES / YES / YES |
| 5 (Residential) | GF | 40 | 35 | 34 | YES / YES / YES |
| Noise limit (Residence) LAeq,adj,15min, dBA | | 52 | 48 | 43 | |
| Noise limit (Commercial) LAeq,adj,15 | 68 | 68 | - | | |

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Compliance with the established noise criteria is predicted, provided the recommendations in Section 5 are implemented.

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5 Recommendations

To protect residential dwellings, health and amenity from operational noise associated with the proposed development, it is recommended that the following noise management measures and acoustic treatments are implemented.

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1. Mechanical Plant

No specific information regarding mechanical services could be provided at the time of assessment. Any future mechanical plant or services should be selected to ensure compliance with the established noise criteria in Section 3 of this report and any other relevant policies.

A preliminary assessment of mechanical plant noise has been conducted in this report. Based on the outcomes of the preliminary assessment, the following guidance should generally be adhered to:

- a) The rooftop plant deck located above the locker / lunch room / male PWD WC areas should be limited to an overall sound power level of 93 dBA.
- b) Should higher sound power levels be required, additional acoustic treatments including screens and/or louvres may be required.

Once additional information is known regarding the type of any fixed mechanical plant, we recommended an assessment is conducted by a suitably qualified acoustic consultant prior to installation to confirm noise impacts from future mechanical plant. Should non-compliance be predicted, additional acoustic treatments may be required.

2. Operational Requirements

The following operational requirements shall apply to the development:

- a) Commercial deliveries to the site should only occur during daytime hours (7:00AM 6:00PM).
- b) Waste collection shall be restricted to daytime hours (7:00AM 6:00PM) to minimise disturbance.

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6 Conclusion

An assessment was conducted to evaluate noise impacts from the operation of a proposed commercial development (brewery, distillery, sampling room and drive through bottle shop) to be located at 55 Lakeside Drive, Idalia QLD 4811.

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The assessment included the identification of nearby sensitive receivers and an evaluation of the existing ambient noise environment through ambient noise measurements. Potential noise sources and their associated emission levels were established, and predicted noise levels at the sensitive receptors were modelled using SoundPLAN noise prediction software. These predicted levels were then compared to the noise limits specified in Section 3.5 of this report.

Based on the assessment findings, noise mitigation recommendations have been outlined in Section 6. Provided these recommendations are implemented in full, the development is expected to achieve compliance with Townsville City Council acoustic requirements.

Should additional details become available regarding the type or operation of any fixed mechanical plant associated with the development, it is recommended that and additional assessment of the mechanical plant noise is conducted.

For further information or to discuss additional investigations, please contact Live It Acoustics at 1300 775 800.

Assessment and Report by

John Barker

BEng (Mechanical)

Acoustic Consultant

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Appendix A Nomenclature

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Appendix A – Nomenclature

| Term | Description |
|---|---|
| Acoustic environment | means the part of the environment of an area or place characterised by the total amount of noise that may be experienced there. |
| Acoustic quality objective | for an area or place, means the maximum level of noise that should be experienced in the acoustic environment of the area or place. |
| Ambient (or total) noise | Total encompassing sound in each situation at a given time usually composed of sound from many sources near and far. |
| Assessment background level (ABL) | Assessment Background Level (ABL) is a single figure background level for each assessment period (day, evening and night). It is the tenth percentile of the measured L90 statistical noise levels. |
| Assessment periods | The following time periods are prescribed in the EHP's <i>Noise Measurement Manual</i> to be used for long term background noise measurements: 7am to 6pm ('Day'); 6pm to 10pm ('Evening'); and 10pm to 7am ('Night'). |
| Background creep | Background creep occurs when noise levels creep higher and higher over time with the establishment of new development in or near an area. |
| Background noise level, (LA90,T) | The A-weighted sound pressure level of the residual noise (dB) exceeded for 90 per cent of a given time interval, T, measured using time weighting 'F' and quoted to the nearest whole number of decibels. |
| Residence | means a building or part of a building used or capable of being used as a residence. |
| Equivalent continuous A- weighted sound pressure level (LAeq,T) | The value of the A-weighted sound pressure level of a continuous steady sound that within a specified time interval, T, has the same mean-square sound pressure as a sound under consideration whose level varies with time. The equivalent continuous A-weighted sound pressure level is quoted to the nearest whole number of decibels. |
| Free field | A position where there are no reflecting surfaces, other than the ground, close enough to influence the sound pressure level. Taken as a minimum of 1.2 metres above ground level and 4m from the closest building façade. |
| Immission | The sound energy received at a receptor point. |
| Impulsive sound | Sound characterised by brief excursions of sound pressure (acoustic impulses) that significantly exceed the background sound pressure. The duration of a single impulsive sound is usually less than one second. |
| Sensitive Receptors | An area or place where noise is measured. A list of Sensitive Receptors is defined in <i>EPP (Noise)</i> 2019 Schedule 1. |
| Rating background level (RBL) | Rating Background Level (RBL) is the overall single-figure background level representing each assessment period (day/evening/night) over the whole monitoring period (as opposed to over each 24-hour period used for the ABL). The RBL (or minLA90,1hour) is the level used for assessment purposes. |
| Sleep disturbance | Defined objectively in several different ways ranging from the smallest detectable physiological response to some external stimulus whilst asleep to actual behavioural awakening. Sleep disturbance can also be described subjectively using some appropriate scale after the event. If there are any effects on mood, attitudes or performance of some task the next day, such variables could also be measured, both objectively and subjectively. |
| Sound pressure level (SPL) | Sound Pressure Level (SPL) in decibels is a logarithmic measure of the effective pressure of a sound relative to a reference level of 20 micro pascals (uPA) |
| Sound power level (SWL) | Sound Power Level (SWL) in decibels is ten times the logarithm of the ratio of the sound power to a sound power reference level of 1 pico Watt (pW). |
| Specific noise source | Component of the ambient noise (or total noise) that can be specifically identified by acoustical means and is associated with a specific source. |
| Steady noise | Noise that gives fluctuations over a range of not more than 3dB on a sound level meter set to frequency weighting 'A' and time weighting 'F.' |

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Appendix B

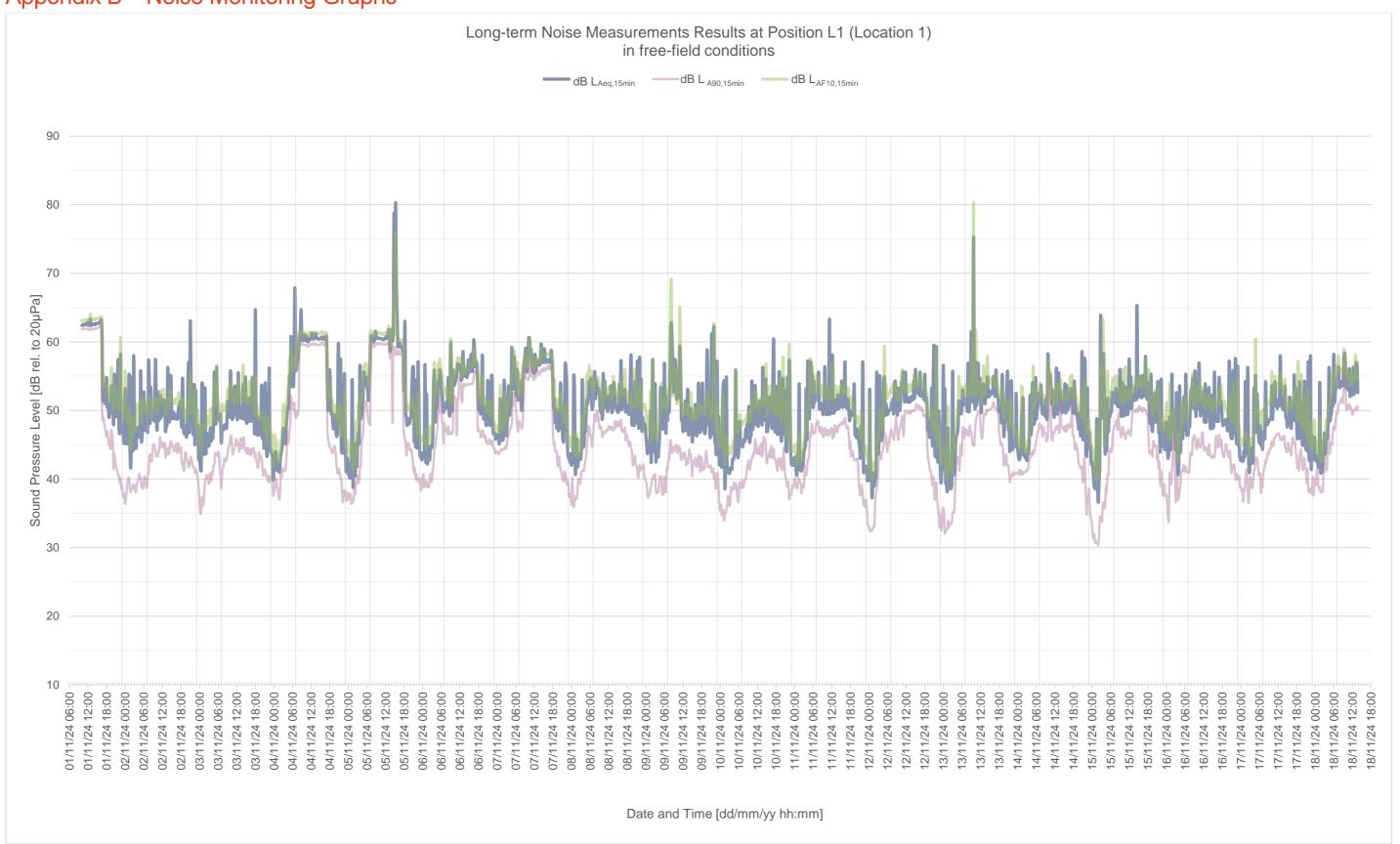
Noise Monitoring Graphs

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Appendix B – Noise Monitoring Graphs



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Post Office Brewing Pty Ltd 55 Lakeside Drive, Idalia QLD 4811 Noise Impact Assessment

Appendix C Design Drawings

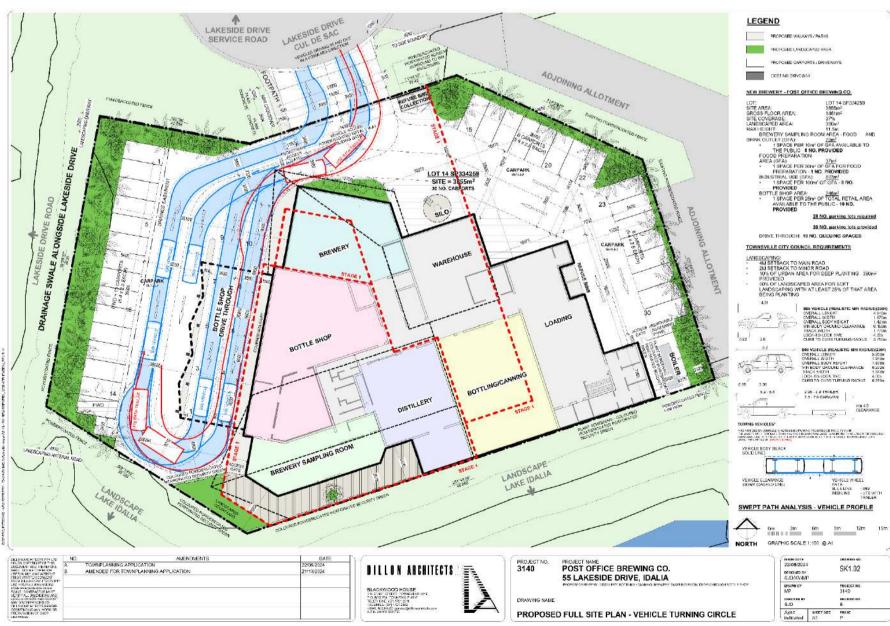
Reference: #1845d1-A

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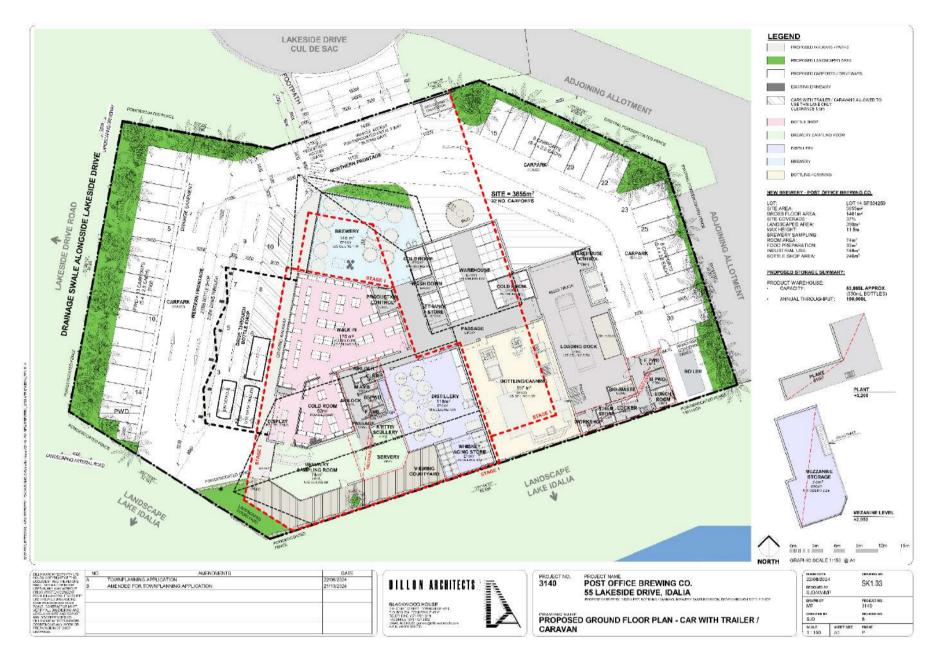
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Appendix C – Design Drawings





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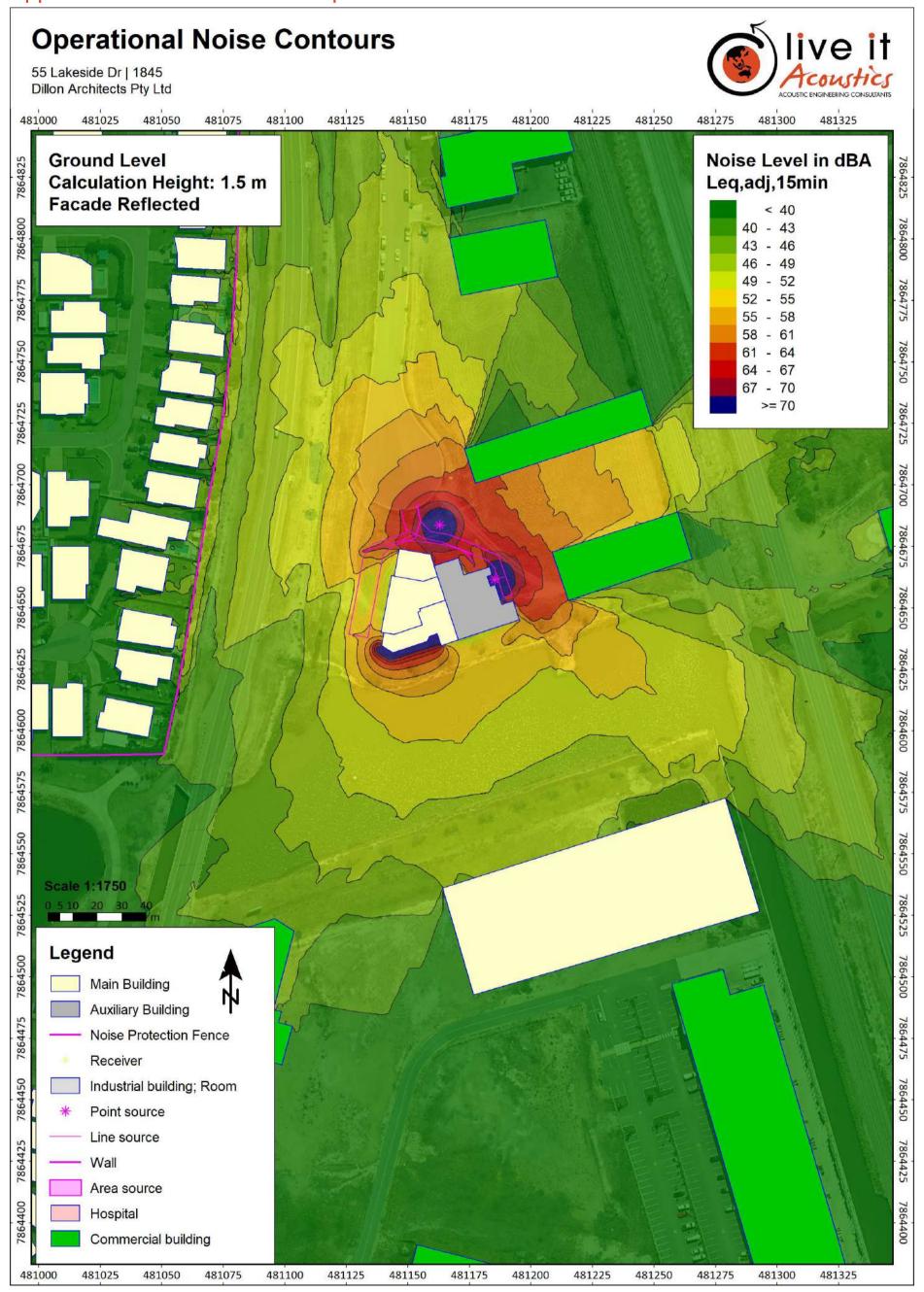
Appendix D Noise Contour Maps

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Appendix D – Noise Contour Maps



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DILLON ARCHITECTS !!!



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ATTACHMENT 4

Brewery, Distillery, Sampling Room, Drive-Through Bottle Shop

Material Change of Use (Impact Assessment)

Owner – LLKB INVESTMENTS PTY LTD Address – 55 Lakeside Drive, Idalia

December 2024

COMMENT ON ODOUR EMISSIONS

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1.0 Proposed development details

The Proposed Development is for Brewery, Distillery, Sampling Room and Drive-Through Bottle Shop.

1.1 Brewery

The Proposed Brewery will contain 9 x 6,000L fermentation tanks, Mash Tun, Lauter, Kettle and Whirlpool equipment, Grain mills and Cold Room. The waste produced by the Brewery will be organic waste, such as spent grains, yeast and hops, and wastewater.

1.2 Distillery

The Proposed Distillery will contain Micro-distillery equipment, Alcohol Blending Tanks, Alcohol Storage Tanks and a Water Holding Tank. The waste produced by the Distillery will be organic waste, such as spent botanicals (herbs, spices, juniper berries, citrus peel), and wastewater.

1.3 Bottling / Canning Facility

The Proposed On-site Bottling and Canning Facility will contain all required equipment including depalletiser, bottling and canning machinery, labeller, carton packer a palletiser. The waste produced by the Bottling / Canning will include cardboards, damaged bottles and cans. This waste does not produce any odour and will be stored separately to the organic waste. A Trade Waste Disposal Permit will be obtained prior to the commencement of operations for the Organic Waste.

1.4 Drive-Through Bottle Shop and Sampling Room

The Proposed Drive-Through Bottle Shop and Sampling Room are expected to generate general waste.

Table 1 Anticipated Annual Throughput for Brewery and Distillery

| Proposed development uses: | Brewery, Distillery |
|--|---------------------|
| Anticipated Annual Throughput of Brewery & Distillery: | >200,000 L |
| Anticipated Annual Throughput of Brewery | >160,000 L |
| Anticipated Annual Throughput of Distillery | >40,000 L |
| Estimated Annual Organic Waste: | 32,800 kg max |

2.0 Waste Management and Disposal

2.1 Brewery Waste Management

The Proposed Brewery will generate solid waste including spent grains, hops, and yeast, which are produced in large quantities (refer Table 2) and are repurposed as animal feed or compost. Liquid waste consists of wastewater generated during brewing, cleaning, and rinsing operations, containing organic matter, cleaning agents, and residual beer.

Table 2 Anticipated Annual Waste of Brewery

| | Monthly | Voorly | Yearly | |
|--------------------------------|------------|-------------|--------|--|
| | Wichiting | rearry | | |
| Anticipated Production of beer | 13,330 L | >160,000 L | | |
| Spent Grain (solid waste) | 2,660 kg * | 32,000 kg * | | |
| Wastewater | 66,650 L** | 800,000 L** | | |

^{*}Solid waste produced per 1L of beer is approx. 0.2kg of spent grains.

Spent grains, hops and yeast from brewing process will be collected directly from mash tun and fermenters and placed into specialized sealed bins. These will be transferred into large, food-grade covered containers designed to handle organic waste without leaking or contaminating the environment.

The wastewater will be treated before either discharged directly into the sewer or captured in water holding tanks for recycling as plumbing water.

2.2 Distillery Waste Management

The Proposed Distillery will generate solid waste including spent grains or fruit pomace, which are byproducts of fermentation and will be used as livestock feed or composted *(refer Table 3)*. Liquid waste consists of wastewater generated during distillation, cleaning, and cooling processes, which may contain organic material, residual alcohol, and chemicals from cleaning agents.

Table 3 Anticipated Annual Waste of Distillery

| Table 6 Altiolpated Alliadi Waste of Distillery | | | |
|---|-----------|------------|--|
| | Monthly | Yearly | |
| Anticipated Production of spirits | 3,330 L | >40,000 L | |
| Botanicals (solid waste) | 67 kg * | 800 kg * | |
| Wastewater | 2,500 L** | 30,000 L** | |

^{*}Solid waste produced per 1L of spirit is approx. 0.02kg of botanicals.

^{**}Wastewater produced per 1L of beer is approx. between 4 to 6 L of water.

^{**}Wastewater produced per 1L of spirit is approx. between 0.5 -1 L of water.

Spent botanicals from the distillation process (herbs, spices, juniper berries, citrus peel, etc.) will be collected directly from the pot stills into specialized sealed bins. These will be transferred into large, food-grade covered containers designed to handle organic waste without leaking or contaminating the environment.

The wastewater will be treated before either discharged directly into the sewer or captured in water holding tanks for recycling as plumbing water.

2.3 Brewery & Distillery Waste Management

Altogether, the annual anticipated organic waste for the Proposed Brewery and Distillery is 32,800 kg of spent grains and botanicals. The annual anticipated wastewater for Brewery and Distillery is 830,000 L of water. To summarize the anticipated throughput, refer to Table 4 below.

Table 4 Anticipated Annual Waste of Brewery and Distillery

| | Monthly | Yearly |
|--|----------|------------|
| Anticipated Production of Brewery and Distillery | 16,660 L | >200,000 L |
| Solid waste (spent grains, botanicals) | 2,730 kg | 32,800 kg |
| Wastewater | 69,150 L | 830,000 L |

After the collection of organic waste from the Brewery and the Distillery, the waste is stored in a designated Waste Storage area, which is a separate, enclosed room specifically designed for this purpose. This room is located adjacent to the Loading Area to facilitate smooth collection by local farmers. The storage area is sealed to control air quality, and waste is regularly removed to prevent odour and pests. This setup ensures that any potential odour from organic waste is contained and does not affect the surrounding environment or neighboring properties.

Once organic waste is stored, it will be picked up by local farmers for use as animal feed. Farmers use trucks with secure containers to transport the grains to their farms. The collection of organic waste will be organized regularly, typically once per week.

3.0 Odour Emissions Management

3.1 Management of possible Odour from the Brewery

Brewing processes produce very little odours during mashing and boiling phases. The primary source of these odours comes from boiling hops, which can release aromas. This process takes up to 1 hour and evaporate approximately 5% of its volume (predominantly water vapour). The steam is condensed into water using a vapour condenser and then either discharged through the drain or captured in a water holding tanks for recycling as plumbing water. In both scenarios, no odour issues will be evident outside the Brewery.

There will be zero atmospheric emissions from the Proposed Brewery.

Another potential source of odour is effluent disposal. As the wastewater will be either discharged directly into the sewer or captured in water holding tanks for recycling as plumbing water. In both scenarios, no odour issues will be evident outside the Brewery.

There will be zero odour emissions anticipated from the Proposed Brewery.

3.2 Management of possible Odour from the Distillery

In a distillery, the production of spirits involves distilling ethanol and botanicals, which can release odours. Odours are typically more herbal, citrusy, or floral due to the botanicals used, such as juniper or other aromatic herbs. The smell of ethanol vapours during distillation may be present. The steam will be condensed into water using a vapour condenser and then either discharged through the drain or captured in a water holding tank for recycling as plumbing water. In both scenarios, no odour issues will be evident outside the Distillery.

There will be zero atmospheric emissions from the Proposed Distillery.

Another potential source of odour is effluent disposal. As the wastewater will be either discharged directly into the sewer or captured in water holding tanks for recycling as plumbing water, no odour will be produced.

There will be zero odour emissions anticipated from the Proposed Distillery.

4.0 Conclusion

The Proposed Brewery and Distillery is expected to generate minimal odour emissions. However, the measures outlined above will effectively prevent any odours from escaping the Proposed Development, ensuring zero emissions and subsequently no impact on neighbouring properties.

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ATTACHMENT 5

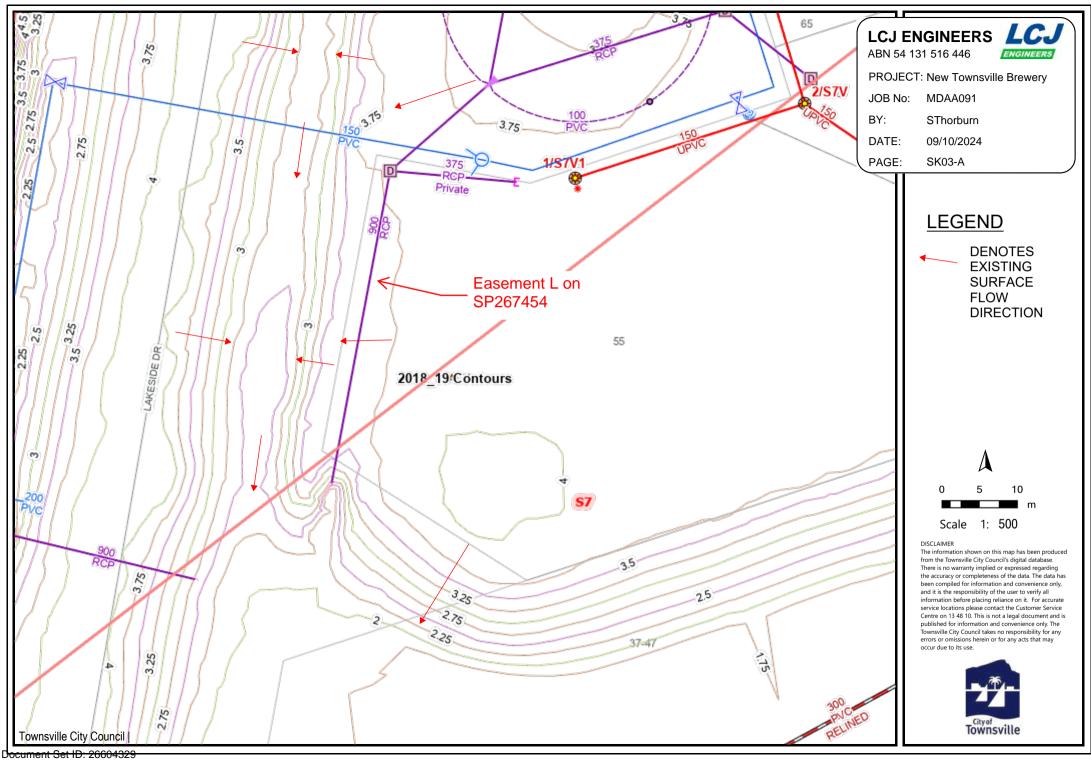
Brewery, Distillery, Sampling Room, Drive-Through Bottle Shop

Material Change of Use (Impact Assessment)

Owner – LLKB INVESTMENTS PTY LTD Address – 55 Lakeside Drive, Idalia

December 2024

MAINTAINING OVERLAND FLOW – ADDITIONAL INFORMATION



Version: 1, Version Date: 13/12/2024