

Metro Outer Joint Development Assessment Panel Agenda

Meeting Date and Time: Friday, 3 June 2022; 9:30am

Meeting Number:MOJDAP/178Meeting Venue:Electronic Means

To connect to the meeting via your computer - https://us06web.zoom.us/j/87163956665

To connect to the meeting via teleconference dial the following phone number - 08 7150 1149

Insert Meeting ID followed by the hash (#) key when prompted - 871 6395 6665

This DAP meeting will be conducted by electronic means (Zoom) open to the public rather than requiring attendance in person.

1 Table of Contents

1.	Opening of Meeting, Welcome and Acknowledgement	2
2.	Apologies	2
3.	Members on Leave of Absence	3
4.	Noting of Minutes	3
5.	Declarations of Due Consideration	3
6.	Disclosure of Interests	3
7.	Deputations and Presentations	3
8.	Form 1 – Responsible Authority Reports – DAP Applications	3
	8.1 Lot 9005 Fifty Road, Baldivis	3
	8.2 Lots 2 & 3 Kwinana Beach Road, Kwinana Beach	3
9.	Form 2 – Responsible Authority Reports – DAP Amendment or Cancellation of Approval	3
	Nil	3
10.	State Administrative Tribunal Applications and Supreme Court Appeal	s4
11.	General Business	4
12.	Meeting Closure	4



Attendance

DAP Members

Mr Ian Birch (Presiding Member)
Mr Brian Curtis (A/Deputy Presiding Member)
Mr Justin Page (A/Third Specialist Member)

Item 8.1

Cr Mark Jones (Local Government Member, City of Rockingham) Cr Lorna Buchan (Local Government Member, City of Rockingham)

Item 8.2

Cr Matthew Rowse (Local Government Member, City of City of Kwinana)

Officers in attendance

Item 8.1

Mr David Banovic (City of Rockingham)
Ms Casey Gillespie (City of Rockingham)

Item 8.2

Mr Jayden Pope (City of Kwinana) Ms Asha Logan (City of Kwinana) Mr Paul Neilson (City of Kwinana)

Minute Secretary

Ms Megan Ventris (DAP Secretariat)

Applicants and Submitters

Item 8.1

Mr Ross Underwood (Planning Solutions)

Item 8.2

Mr Richard Law (Coogee Chemicals)

Members of the Public / Media

Nil.

1. Opening of Meeting, Welcome and Acknowledgement

The Presiding Member declares the meeting open and acknowledges the traditional owners and pay respects to Elders past and present of the land on which the meeting is being held.

This meeting is being conducted by electronic means (Zoom) open to the public. Members are reminded to announce their name and title prior to speaking.

2. Apologies

Ms Sheryl Chaffer (Deputy Presiding Member) Mr Jason Hick (Third Specialist Member)



3. Members on Leave of Absence

Nil.

4. Noting of Minutes

Signed minutes of previous meetings are available on the DAP website.

5. Declarations of Due Consideration

Any member who is not familiar with the substance of any report or other information provided for consideration at the DAP meeting must declare that fact before the meeting considers the matter.

6. Disclosure of Interests

Nil.

7. Deputations and Presentations

The City of Rockingham and City of Kwinana may be provided with the opportunity to respond to questions of the panel, as invited by the Presiding Member.

8. Form 1 – Responsible Authority Reports – DAP Applications

8.1 Lot 9005 Fifty Road, Baldivis

Development Description:
Applicant:
Owner:
Responsible Authority:
DAP File No:
Proposed Tavern
Planning Solutions
Piperpoint Pty Ltd
City of Rockingham
DAP/21/02140

8.2 Lots 2 & 3 Kwinana Beach Road, Kwinana Beach

Development Description: Fuel Tanks Terminal Coogee Chemicals Coogee Chemicals

Owner: Coogee Chemicals

Terminals West Pty Ltd

Responsible Authority: City of Kwinana DAP File No: DAP/22/02189

9. Form 2 – Responsible Authority Reports – DAP Amendment or Cancellation of Approval

Nil.



10. State Administrative Tribunal Applications and Supreme Court Appeals

Current SAT Applications						
File No. & SAT DR No.	LG Name	Property Location	Application Description	Date Lodged		
DAP/21/2047 DR257/2021	City of Swan	Lots 136 (26) & 3235 (34) Asturian Drive and Lots 137 (238) & 138 (230) Henley Street, Henley Brook	Proposed education facility	03/12/2021		
DAP/18/01543 DR 75/2022	City of Joondalup	Lot 649 (98) O'Mara Boulevard, Iluka	Commercial development	02/05/2022		

11. General Business

In accordance with Section 7.3 of the DAP Standing Orders 2020 only the Presiding Member may publicly comment on the operations or determinations of a DAP and other DAP members should not be approached to make comment.

12. Meeting Closure

FIFTY ROAD, (LOT 9005) BALDIVIS - PROPOSED TAVERN

Form 1 - Responsible Authority Report

(Regulation 12)

DAP Name:	Metro Outer Joint Development Assessment Panel		
Local Government Area:	City of Rockingham		
Applicant:	Planning Solutions Pty Ltd		
Owner:	Piperpoint Pty Ltd		
Value of Development:	\$3.75 million		
	☐ Mandatory (Regulation 5)		
Responsible Authority:	City of Rockingham		
Authorising Officer:	Mr Peter Ricci, Acting Director Planning and Development Services		
LG Reference:	DD020.2021.00000262.001		
DAP File No:	DAP/21/02140		
Application Received Date:	14 December 2021		
Report Due Date:	25 May 2022		
Application Statutory Process Timeframe:	+90 Days with Applicant consent		
Attachment(s):	1. Initial Plans (2021)		
	2. Revised Plans (2022)		
	3. Schedule of Submissions		
	Design Review Panel Meeting Notes		
	5. Design Review Panel - City Comments		
	on the Revised Proposal		
La dia Bassa di La Adada	6. Development Application		
Is the Responsible Authority Recommendation the same as the	☑ Yes Complete Responsible Authority☐ N/A Recommendation section		
Officer Recommendation?	□ No Complete Responsible Authority and Officer Recommendation sections		

Responsible Authority Recommendation

That the Metro Outer Joint Development Assessment Panel resolves to:

Approve DAP Application reference DAP/21/02140 and accompanying plans in accordance with Clause 68 of Schedule 2 (Deemed Provisions) of the *Planning and Development (Local Planning Schemes) Regulations 2015*, and the provisions of the City of Rockingham Local Planning Scheme No. 2, subject to the following conditions:

Conditions

1. Pursuant to clause 26 of the Metropolitan Region Scheme, this approval is deemed to be an approval under clause 24(1) of the Metropolitan Region Scheme.

- 2. This decision constitutes planning approval only and is valid for a period of 4 years from the date of approval. If the subject development is not substantially commenced within the specified period, the approval shall lapse and be of no further effect.
- 3. Prior to applying for a Building Permit, a Stormwater Management Plan must be prepared by a suitably qualified engineering showing how stormwater will be contained on-site and those plans must be submitted to the City of Rockingham for its approval. All stormwater generated by the development must be managed in accordance with Planning Policy 3.4.3 Urban Water Management to the satisfaction of the City of Rockingham. The approved plans must be implemented and all works must be maintained for the duration of the development.
- 4. A Dust, Noise and Vibration Construction Management Plan is to be submitted and approved by the City of Rockingham prior to the commencement of works. Dust management is to be in accordance with the Department of Environment and Conservation Guideline: A guideline for managing the impacts of dust and associated contaminants from land development sites, contaminated sites remediation and other related activities.

5. The carpark must:

- (i) provide a minimum of 134 car parking spaces;
- (ii) be designed, constructed, sealed, kerbed, drained and marked in accordance with User Class 3 of Australian/New Zealand Standard AS/NZS 2890.1:2004, Parking facilities, Part 1: Off-street car parking prior to applying for a Building Permit;
- (iii) provide 4 universal car parking space(s) dedicated to people with disabilities, which are designed, constructed, sealed, kerbed, drained and marked in accordance with Australian/New Zealand Standard AS/NZS 2890.6:2009, Parking facilities, Part 6: Off-street parking for people with disabilities and which are linked to the main entrance of the development by a continuous accessible path of travel designed and constructed in accordance with Australian Standard AS 1428.1—2009, Design for access and mobility, Part 1: General Requirements for access—New building work;
- (iv) have lighting installed, prior to the occupation of the development, to the satisfaction of the City of Rockingham; and
- (v) confine all illumination to the land in accordance with the requirements of Australian Standard AS 4282-1997, Control of the obtrusive effects of outdoor lighting, at all times.
- 6. A total of 18 short-term bicycle parking spaces must be designed in accordance with AS2890.3-1993, Parking facilities, Part 3: Bicycle parking facilities, and located within the development to the satisfaction of the City of Rockingham, prior to commencement of development.

- 7. Prior to a Building Permit application, written confirmation from a suitably qualified HVAC mechanical engineer that the proposed mechanical ventilation systems will comply with relevant indoor air quality standards (AS 1668.2) and the ventilation capacity and flow has been designed to accommodate the patron loading and activities within the building with doors and windows closed. Detailed requirements for the system are to be provided to the Acoustic Consultant to ensure suitable acoustic treatments for the system are considered and indicated on the Building Permit application or clearance of the condition, whichever occurs first.
- 8. Prior to applying for a Building Permit, a revised Acoustic Report prepared by a suitably qualified Acoustic Consultant and demonstrating compliance with the Environmental Protection (Noise) Regulations 1997, must be submitted to and approved by the City of Rockingham. The Acoustic Report shall, at a minimum but not limited to, address the following:
 - (i) Clearly outline the final specification and construction methods, including any materials and treatments, for all building components of the development;
 - (ii) Include details of any proposed acoustic wall requirements, including heights from finished ground levels, locations and materiality;
 - (iii) Detail mechanical plant elements and any attenuation measures required;
 - (iv) Detail any mitigations or management controls for car parking areas, loading, servicing and delivery; and
 - (v) Detail the parameters used for the modelling which considers the likely adjoining future housing typologies to achieve compliance, noting that land use and development on adjoining lots cannot be limited by virtue of the Tavern use.
- 9. The Building Permit application must be accompanied by written confirmation from a suitably qualified Acoustic Consultant that the plans have been reviewed and confirmed they incorporate the requirements of the relevant acoustic report as required by Condition 8 specified above.
- 10. Prior to the occupation of the development, written confirmation to the satisfaction of the City of Rockingham shall be provided confirming that all requirements of the approved Acoustic Report have been incorporated into the development.
- 11. An operational Noise Management Plan (NMP) shall be prepared to the satisfaction of the City of Rockingham prior to occupation, demonstrating how noise will be managed at the entire premises, including the operation of the bifold doors, alfresco and car park areas, and considering patron numbers, operational times and seating configurations as referred to in Sections 5 and 6 of the Acoustic Report (Reference 21096644-01B). The approved NMP shall thereafter be implemented for the duration of the development.
- 12. Prior to applying for a Building Permit, all service areas and service related hardware, including antennae, satellite dishes and air-conditioning units, must be designed to be located away from public view and/or screened, and this design must be provided to, and approved by, the City of Rockingham.

- 13. Prior to the occupation of the development, a final illumination report must be prepared which demonstrates to the satisfaction of the City of Rockingham, that the completed development complies with the requirements of Australian Standard AS4282-1997, control of the obtrusive effects of outdoor lighting.
- 14. A Landscaping Plan must be prepared and include the following detail, to the satisfaction of the City, prior to applying for a Building Permit:
 - (i) The location, number and type of existing and proposed trees and shrubs, indicating calculations for the landscaping area and the provision of shade trees at a minimum rate of one tree per four proposed on-site car parking bays;
 - (ii) Any lawns to be established and areas to be mulched;
 - (iii) Those areas to be reticulated or irrigated;
 - (iv) The paving material used for footpaths must be carried across driveways to the car parking areas in order to maintain visual continuity of the pedestrian network and aid pedestrian legibility throughout the site;
 - (v) The location, number and type of hardstand landscape features such as lighting, fencing (including any acoustic fencing), bicycle parking, bollards, seating and the like; and
 - (vi) Verge areas.

The landscaping (including all verge landscaping) must be completed prior to the occupation of the development, and must be maintained at all times to the satisfaction of the City of Rockingham.

- 15. Prior to applying for a Building Permit, the Bushfire Management Plan prepared by Ecological Australia, dated 1 October 2021 must be updated to the satisfaction of the City of Rockingham to be consistent with the approved architectural plans, and to include the approved landscaping plan required in Condition 14 above.
- 16. Prior to applying for a Building Permit, a Waste Management Plan must be prepared and include the following detail to the satisfaction of the City of Rockingham:
 - (i) the location of bin storage areas and bin collection areas;
 - (ii) the number, volume and type of bins, and the type of waste to be placed in the bins;
 - (iii) management of the bins and the bin storage areas, including cleaning, rotation and moving bins to and from the bin collection areas; and
 - (iv) frequency and timing of bin collections outside of peak period operations of the development.

All works must be carried out in accordance with the Waste Management Plan and maintained at all times, for the duration of development.

- 17. Prior to applying for a Building Permit, a schedule of the colours and textures of the building materials, must be provided to the satisfaction of the City of Rockingham. The development must be finished in accordance with the schedule provided and approved by the City of Rockingham, prior to occupation of the development and maintained for the duration of the use.
- 18. The ramp connecting the Tavern alfresco area with the adjacent Public Open Space reserve does not form a part of this approval.
- 19. Prior to applying for a Building Permit, the Applicant must demonstrate to the satisfaction of the City of Rockingham that ground floor glazing fronting Yellowstone Road has a minimum visible light transmission rate of at least 79% and a maximum visible reflectivity rate of 9% in order to ensure that a commercial, interactive frontage is available to the development.
- 20. Entries and window frontages facing Yellowstone Road must not be covered, closed or screened off (including by means of dark tint, shutters, curtains, blinds, roller doors or similar), to ensure that a commercial, interactive frontage is available to the development.

Advice Notes

- 1. The development must comply with the Food Act 2008, the Food Safety Standards and Chapter 3 of the Australian New Zealand Food Standards Code (Australia Only); the applicant and owner should liaise with the City's Health Services in this regard.
- 2. A Building Permit must be obtained for the proposed works prior to commencement of site works. The applicant and owner should liaise with the City's Building Services in this regard.
- 3. The development must comply with the Environmental Protection (Noise) Regulations 1997; contact the City's Health Services for information on confirming requirements.
- 4. All works in the road reserve, including construction of a crossover, planting of street trees, and other streetscape works and works to the road carriageway must be to the specifications of the City of Rockingham; the applicant should liaise with the City of Rockingham's Engineering Services in this regard.
- 5. The applicant is advised that in respect of Condition 3, a Stormwater Management Plan will require compliance with Planning Policy 3.4.3 Urban Water Management. The applicant is encouraged to discuss the specific policy requirements with the City prior to the submission of the Building Permit application.
- 6. The development must comply with the Health (Public Building) Regulations 1992; the applicant and owner should liaise with the City's Health Services in this regard.
- 7. The development must comply with the Food Act 2008, the Food Safety Standards and Chapter 3 of the Australian New Zealand Food Standards Code (Australia Only); the applicant and owner should liaise with the City's Health Services in this regard.

- 8. A Sign Permit must be obtained for any advertising associated with the development, including signage painted on the building; the applicant and owner should liaise with the City's Building Services in this regard.
- 9. Regarding Condition 11, the applicant is advised to develop the Noise Management Plan in consultation with a suitably qualified acoustic consultant.

Details: outline of development application

Region Scheme	Metropolitan Region Scheme		
Region Scheme - Zone/Reserve	Urban		
Local Planning Scheme	City of Rockingham Town Planning Scheme No.2		
Local Planning Scheme - Zone/Reserve	Development zone		
Structure Plan/Precinct Plan	Spires Phase 2 Structure Plan		
Structure Plan/Precinct Plan - Land Use Designation	Special Use - Tavern		
Lot Size:	1.74 hectares		
Existing Land Use:	vacant		
State Heritage Register	No		
Local Heritage	N/A☐ Heritage List☐ Heritage Area		
Design Review	□ N/A		
Design review			
Bushfire Prone Area	☑ Local Design Review Panel☐ State Design Review Panel		

Proposal:

The proposed Tavern development, including a drive-through liquor store, includes the following:

- A building that is based on the aesthetic of a 'stable' design;
- Bar, kitchen, amenities and 514m² of internal service area within the Tavern;
- 153m² undercover alfresco area abutting the (future) POS;
- 280m² Liquor Store component;
- Two-lane drive through service for the Liquor Store; and
- 140 on-site car parking bays.

The following trading hours and patronage is understood to be proposed:

- 6am-12am Monday to Saturday;
- 10am-12am Sundays; and
- Maximum number of Tavern patrons: 834, with seating for up to 730 people.

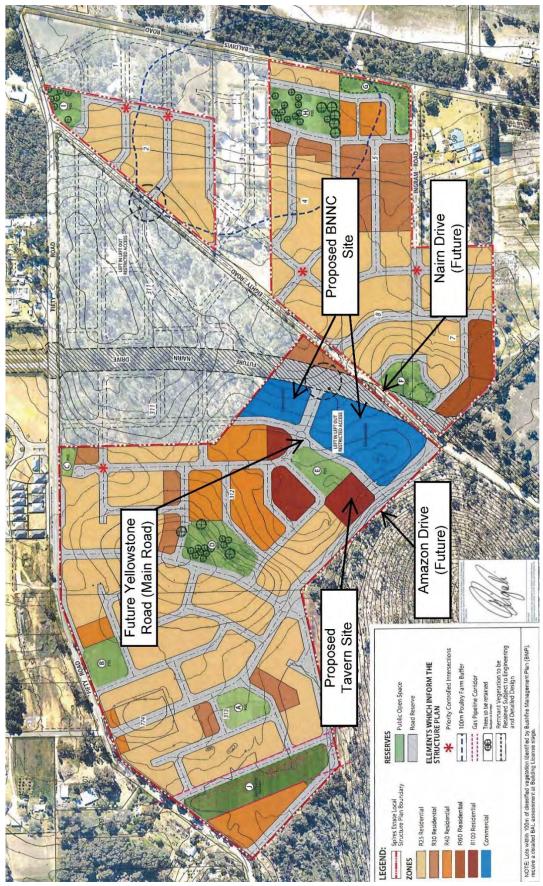
Background:

Currently described as Lot 9005, the subject land is in the process of being subdivided and developed into a residential estate, in accordance with the approved Spires (Phase 2) Structure Plan (SP2SP).

The land has been extensively cleared of vegetation and bulk earthworks are progressing.

In September 2021, the MOJDAP granted Development Approval for a Neighbourhood Shopping Centre, comprising a 'Shopping Centre' and a 'Commercial Centre' component, on two future Commercial Lots which constitute the planned Baldivis North Neighbourhood Centre (BNNC), as depicted on Figure 1. (current at the time of lodgement of the Development Application).

The BNNC is located immediately opposite the proposed Tavern site, across future Yellowstone Road (the centre 'Main Street') to the south-east. The approved Development Plans for the BNNC include an entry statement on the northern corner of future Amazon Drive and Yellowstone Road. The entry statement is situated within the boundaries of the proposed Tavern site.



1. The Spires (Phase 2) Structure Plan Map (2021)

Site and Locality

The proposed Tavern development will adjoin:

- The north-eastern side of the future extension of Amazon Drive:
- The north-western side of future Yellowstone Road;
- The south-western side of a future POS;
- The south-eastern side of future Residential R25 lots, which a proposed Structure Plan amendment seeks to change to Residential R100, details of which are discussed further below in the background section of this Report.

Nairn Drive, which is reserved as an 'Other Regional Road' (ORR) under the Metropolitan Region Scheme (MRS), will be located approximately 140m south-east of the Tavern site when constructed.

Opposite the site across Amazon Drive (future) to the south-west is Lot 800, which is a Bush Forever Site reserved as 'Parks and Recreation'.

To the west and east of Lot 9005 are recently established residential estates.

Spires (Phase 2) Structure Plan Amendment (SP2SP):

At the time of lodgement of the subject Development Application, a proposed Amendment to the SP2SP that affects Lot 9005 and adjoining land to the north-west of the future intersection of Yellowstone Road and Amazon Drive was under consideration. The Amendment proposed to:

- Rezone land from R25 to R40 and R100 in the vicinity of the BNNC;
- Rezone land from R100 to 'Commercial' to facilitate the development of a 'Tavern' adjacent to the planned POS.

On 24 August 2021, Council resolved to recommend to the Western Australian Planning Commission (WAPC) that the Amendment should not be approved until such time as the Applicant addresses various modifications, including:

- "1. The proposed commercial site be zoned Special Use on the Local Structure Plan Map.
- 2. Part One Implementation Section of the Local Structure Plan be modified to include the following land use permissibility's under section 4.1 for the 'Special Use' site:

The following uses are permitted, subject to advertising (A):

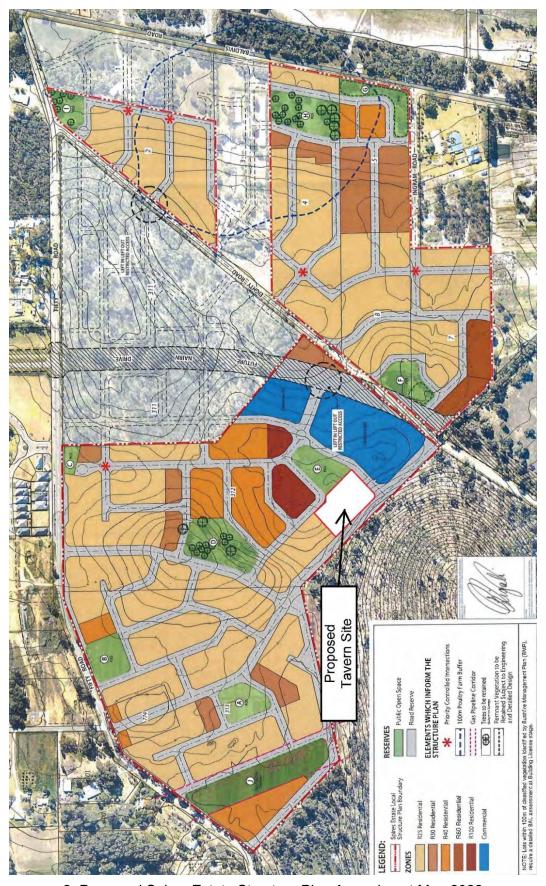
- Tavern
- Restaurant/café
- Reception Centre
- Brewery.

The following uses are permitted providing they are incidental to the primary use (IP):

- Liquor Store Small
- Betting agency."

In order to protect the intent of the BNNC, the City recommended the 'Tavern' site be re-classified as a 'Special use' site rather than 'Commercial' to remove the potential for it to be developed for further commercial/retail uses that could impact the delivery of the BNNC.

The WAPC determined the Amendment on 19 April 2022, which designates the 'Tavern' site as 'Special Use' as described above.



2. Proposed Spires Estate Structure Plan Amendment Map 2022

Current Development Application

On 1 October 2021, an application seeking Development Approval was lodged for a proposed Tavern on portion of Lot 9005 for determination by the MOJDAP. The initial site plan is shown in the Figure below.

No pre-lodgement discussions or meetings occurred with the City prior to lodgement.

The application included:

- Planning Report;
- Architectural Plans;
- Transport Impact Assessment;
- Bushfire Management Plan;
- Environmental Noise Assessment;
- Waste Management Plan; and
- Public Interest Assessment.



3. Proposed Initial Site Plan (2021)

On 7 December 2021, the Applicant submitted further information, as requested, in order for the City to 'accept' the Development Application. The information comprised of a Parking Control Management Plan and updated technical reports.

On 18 January 2021, the City issued a request for further information (RFI) to the Applicant. As part of the correspondence, the City confirmed the assessment timeframes for reporting and advised timeframe limitations would require the Applicant to agree to an extension of time (EoT), to allow the assessment to consider any response to the RFI.

The Applicant was further advised that the City determined to have the proposal considered by its Design Review Panel (DRP).

On 3 February 2022, a DRP meeting was convened, which the Applicant participated in. The recommendation of the DRP Panel was that "the design is supported subject to appropriate siting of the building adjacent to Yellowstone Road, an effective interface with the abutting POS and materiality being carried through to the build".

On 14 and 15 February 2022, the Applicant submitted additional information and amended plans in an attempt to address DRP's comments, including:

- Amended Architectural Plans:
- Amended Transport Impact Assessment;
- Amended Waste Management Plan;
- Amended Environmental Noise Assessment; and
- Landscape Concept Plan.

On 21 February 2022, the City raised several concerns regarding the development including the scale of the Tavern, land use classification, timing of the pending SP2SP amendment, noise impacts, car parking shortfall and the DRP outcomes which the City considered were not sufficiently addressed by the Applicant.

On 23 February 2022, the Applicant agreed to the EoT to 27 April 2022.

On 31 March 2022, the Applicant met with the City to discuss a potential redesign in a further attempt to better address the following concerns raised by the City:

- On-site car parking shortfall;
- Siting of the development; and
- Outstanding DRP matters.

The City agreed to a meeting on the basis that the Applicant acknowledged that a redesign would not allow for the submission of a Responsible Authority Report by 27 April 2022.

On 11 April 2022, revised Plans and associated information was submitted, including:

- Letter from the Applicant;
- Amended Architectural Plans;
- Acoustic Technical Note; and
- Revised Transport Impact Assessment.

The following sections of this Report are based upon the Plans and information received on 11 April 2022.

It is noted, the amended design (2022) has increased the Tavern site area from 4,736m² to 6,502m², by inclusion of four (4) future residential lots to the west to accommodate a greater number of car parking bays. The amended design also reduces the floor area of the bottle shop component and relocates the building to the east, to frame the future Yellowstone Road frontage.



4. Revised Site Plan (2022)



5. Revised Site Plan (including proposed internal areas) (2022)

Legislation and Policy:

Legislation

Planning and Development Act 2005 Metropolitan Region Scheme City of Rockingham Town Planning Scheme No.2 Planning and Development (Local Planning Schemes) Regulations 2015 Environmental Protection (Noise) Regulations 1997

State Government Policies

State Planning Policy 3.7 - Planning in Bushfire Prone Areas State Planning Policy 4.2 – Activity centres for Perth and Peel State Planning Policy 7.0 - Design of the Built Environment

Structure Plans/Activity Centre Plans

Spires Phase 2 Structure Plan

Local Policies

Planning Policy 3.4.3 - Urban Water Management Planning Policy 3.3.14 - Bicycle Parking and End-of-Trip Facilities Planning Policy 3.3.19 - Licensed Premises

Consultation:

Public Consultation

Issue Raised	Officer comments			
Scale	The City considers the proposed patronage is generally more akin to an activity centre location, such as the Rockingham Strategic Metropolitan Centre, rather than in a Neighbourhood Shopping Centre context. The scale and location of the Tavern is further discussed in the Planning Assessment section of this Report.			
Traffic	An updated Transport Assessment has been undertaken as part of the proposed SP2SP Amendment. This updated Transport Assessment documents the anticipated future traffic flows with the inclusion of a Tavern development, as proposed by the Amendment. The report indicates that the proposed Tavern is anticipated to increase traffic flows by approximately 1400 vehicles per day, however, this would still be within the capacity of the planned surrounding road network. The City is satisfied that the planned road network can accommodate the anticipated increase and operate satisfactorily under the forecast future traffic flows.			
Car Parking	The revised 2022 design for the Tavern provides for a total of 140 on-site car parking spaces, and complies with the TPS2 requirements.			

Issue Raised	Officer comments
Noise	City Officers are of the opinion that noise modelling in the Applicant's submitted Acoustic Report is limited and likely, underestimated. Thus, it has not been demonstrated that the proposal can comply at all times with the <i>Environmental Protection (Noise) Regulations</i> 1997.
	Noise impacts are discussed further below in the Planning Assessment section of this Report.
Security	The City notes the concern raised, however, operational management of the venue and responsible service of alcohol is the operator's responsibility pursuant to any Liquor Licence requirements under the <i>Liquor Control Act 1988</i> .

Referrals/consultation with Government/Service Agencies

Not applicable.

Design Review Panel Advice (DRP)

Pursuant to Clause 6.1.1 of TPS2, the Council has appointed a DRP for the purpose of considering, and advising Council with respect to certain applications. Given the nature and scope of the subject proposal, it was required to be referred to the City's DRP.

The 2021 proposal was considered by the City's DRP on 3 February 2022. The DRP conducted a 'Design Quality Evaluation' on the proposal against the 10 Design Principles outlined in SPP7.0, the outcome of which is recorded in the DRP Meeting Notes, attached to this Report.

The concept presented by the Applicant stated the design is 'inspired by the aesthetic of the 'stable'; a building in which horses are sheltered and fed, grounding the design back to the history of the Baldivis region. A balance of a hardy, industrial form and warm, tactile finishes and detailing to the interior tavern fitout."

The City's DRP considered that the original design has merit subject to the appropriate re-siting of the building adjacent to Yellowstone Road (rather than being located in the centrally on the proposed site), achieving an effective interface with the abutting POS and the materiality being carried through to the build.

The Planning Report prepared by the Applicant provided statements, which seek to explain how the proposal addresses the 10 Design Principles outlined in SPP7.0. City Officers agreed with the DRP that the original proposal met only four (4) of the 10 principles. Six (6) principles were considered to require further clarification or changes to the plans being:

- Landscape Quality;
- Functionality and Build Quality;
- Sustainability;
- Amenity;
- Legibility; and
- Safety

The DRP's review of the 2021 proposal and the City's review of the 2022 revised design scheme against these six (6) principles is attached to this Report. The City considers the 2022 design is considered to address the concerns of the DRP, as:

- The building has been re-sited to address future Yellowstone Road, being the neighbourhood centre 'main street';
- It promotes a pedestrian movement network consistent with the intent of the BNNC; and
- An acceptable future interface with the abutting POS has been considered, noting that the interface is contingent on the timing of the POS being delivered.

The City is satisfied that the revised layout in the 2022 design has resolved the DRP matters on the 2021 proposal. In the event the MOJDAP resolve to approve the development, conditions of Development Approval will ensure the intent is carried through to the development and operational phases.

Swan Valley Planning

Not Applicable

Planning Assessment:

The proposal has been assessed against all relevant legislative requirements of the Scheme, State and Local Planning policies, and the Spires Phase 2 Structure Plan outlined in the Legislation and Policy section of this report. The following matters have been identified as key outstanding considerations for the determination of this application:

- 1. Location; and
- 2. Noise

The PP3.3.19 aims to protect the safety and amenity of existing and future residents and business proprietors against alcohol related problems such as anti-social behaviour, violence, property damage, harm and promote the responsible sale and consumption of alcohol.

The objectives of the PP3.3.19 seek to assist Council in its consideration of applications for Development Approval which involve a liquor license; identify appropriate locations for different types of licensed premises; protect the safety and amenity of existing and future residents and business proprietors against anti-social behaviour; and minimise personal harm or ill health caused to people, or any group, due to excessive consumption of liquor.

The following table details these areas of assessment:

Provision	Requirement	Proposal	Assessment
Location	Applications will generally not be supported if the proposal is likely to have a significant potential impact upon the amenity of an area or affected	In the context of the recently approved Structure Plan Amendment, a Tavern land use is permissible on the site, within	The SP2SP has been approved by the WAPC on 19 April 2022. The amendment establishes the suitability of the land use only. The amendment does not limit or define the scale or size of the

	neighbouring properties. A significant potential impact includes circumstances in which if the application were granted: (i) undue offence, annoyance, disturbance or inconvenience to persons who reside or work in the vicinity, or to persons in or travelling to or from an existing or proposed place of public worship, hospital, child care premises or school, would be likely to occur; or (ii) the amenity, quiet or good order of the locality in which the premises or the proposed premises are, or are to be, situated would in some other manner be lessened. Licensed premises should generally have an active street front	the proposed location.	development. The City acknowledges that the scale of the proposal is likely to result in future residential amenity impacts, particularly in respect to noise. This is further discussed in the following section of this Table. To limit any likely impacts upon future residential receptors, conditions of Development Approval should be imposed, where appropriate, to manage amenity impacts as part of ongoing operational phases of the development.
Noise	To address noise impacts from a proposed licensed premises, the City may require that an applicant submit an acoustic report, prepared by a suitably qualified acoustic consultant (as determined by the City), demonstrating that the noise likely to be emitted from the licensed premises will comply with the	The Applicant provided an Environmental Noise Assessment based on the 2021 proposal design. Only an Acoustic Technical Note has been submitted based on the amended design dated 11 April 2022, of which this	The City reviewed the Environmental Noise Assessment submitted with the 2021 proposal and concluded that the modelling was limited and that compliance with the Environmental Protection (Noise) Regulations 1997 could not be determined. The City did not accept the Report for the following reasons: • Modelling only considered single storey residential development on the

Environmental Protection (Noise) Regulations 1997. The report should indicate the likely noise nuisance and what sound attenuation measures will be needed to control noise emissions from the premises in accordance with the requirements of the Environmental Protection (Noise) Regulations 1997.

assessment is based.

- future adjoining lots only;
- Exceedances would occur with the bifold doors to the alfresco area open on Sunday and Public Holidays and after 7pm on any night;
- The proposed mitigation measures were not considered to be practical or operationally reasonable;
- Break out noise had not been considered for the operations after 10pm and was modelled with the doors closed, assuming patrons and staff would need to enter and exit through Entry 1 to use the alfresco area.

The Report also indicated that consideration in regards to Tavern building elements (including glazing, walls, entry requirements, ceilings, roofs and mechanical plant) would be required, however, the details to what these mitigations and attenuations are, is not known to be able to satisfy the assessment. To support the 2022 revised design, an Acoustic Technical Note was provided, aligning the proposal with the previously submitted **Environmental Noise** Assessment. The City is unable to determine if the 2022 revised design can maintain compliance at all times with the Noise Regulations. As such, any condition of Development

Approval should require submission of a detailed Acoustic Report that addresses: The final specification and construction methods, including any materials and treatments, for all building components of the development; Details of any acoustic wall requirements; Details of the mechanical plant elements and any attenuation measures required; Details of any mitigations or management controls for car parking areas, loading, servicing and delivery; and Details of the parameters used for the modelling which considers the adjoining future development to achieve compliance, noting that land use and development on adjoining lots cannot be limited by virtue of the Tavern use.

Conclusion:

The Spires Estate is an emerging urban area, comprised of a residential base supported by a local neighbourhood centre establishing a 'main street' along future Yellowstone Road. The Spires Estate Structure Plan establishes the land use classification permitting the proposed Tavern development on the subject portion of Lot 9005.

The 2021 Tavern proposal raised a number of initial concerns, particularly in respect of car parking shortfall, noise impacts, design intent and inconsistency with the Spires Estate local neighbourhood centre and structure plans. Through detailed design review processes and negotiation, the revised 2022 Tavern proposal has provided for an acceptable design response to the matters raised by the City and DRP.

Whilst the 2022 design has addressed a number issues with the 2021 proposal, the proposal requires some further refinements, which can be managed as part of the detailed design process associated with the Building Permit. Also, the following technical reports and plans require amendment to reflect the revised 2022 design:

Waste Management Plan;

- Bushfire Management Plan; and
- Landscape Plan.

With respect to noise, the Applicant's Environmental Noise Assessment is based on the 2021 design which was found to be limited in its modelling, and the City is unable to determine that compliance with the *Environmental Protection (Noise) Regulations* 1997 can be maintained at all times. The City also does not accept the accompanying Acoustic Technical Note premised on the original Environmental Noise Assessment. Notwithstanding, there is confidence the revised 2022 design is more likely to alleviate previously identified noise concerns due to its increased building separation to future residential receptors, acknowledging additional car movement activity within the associated car park. Hence, the Environmental Noise Assessment should be updated and submitted to the City, based on the revised 2022 design that:

- Clearly outlines the final specification and construction methods, including any materials and treatments, for all building components of the development;
- Includes details of any proposed acoustic wall requirements, including heights from finished ground levels, locations and materiality;
- Details the mechanical plant elements and any attenuation measures required;
- Details any mitigations or management controls for car parking areas, loading, servicing and delivery; and
- Details the parameters used for the noise modelling which considers the adjoining future single and two storey typologies to achieve compliance. Any noise modelling exceedance may result in the need for a revised design proposal to be considered for approval.

Whilst the land use of Tavern for the site is established by virtue of the Spires Estate Structure Plan, there is no guidance as to the preferred scale and intensity of the use. The likely amenity related impacts of a Tavern within a residential area is recognised, however, it is noted the immediate locality is urban and once developed, it will provide for a mix of commercial, retail and residential activities. The City considers that through conditions of Development Approval, the scale and intensity of the development can be managed to limit any adverse impact on adjoining future residential receptors to the west.

Having due regard to the relevant planning considerations, including public submissions raising amenity concerns, this proposal is considered to be generally consistent with the applicable planning framework and conditional approval is therefore recommended.

Appendix 2: Development Plans

The Whitehorse Tavern

Lot 446 North Baldivis WA

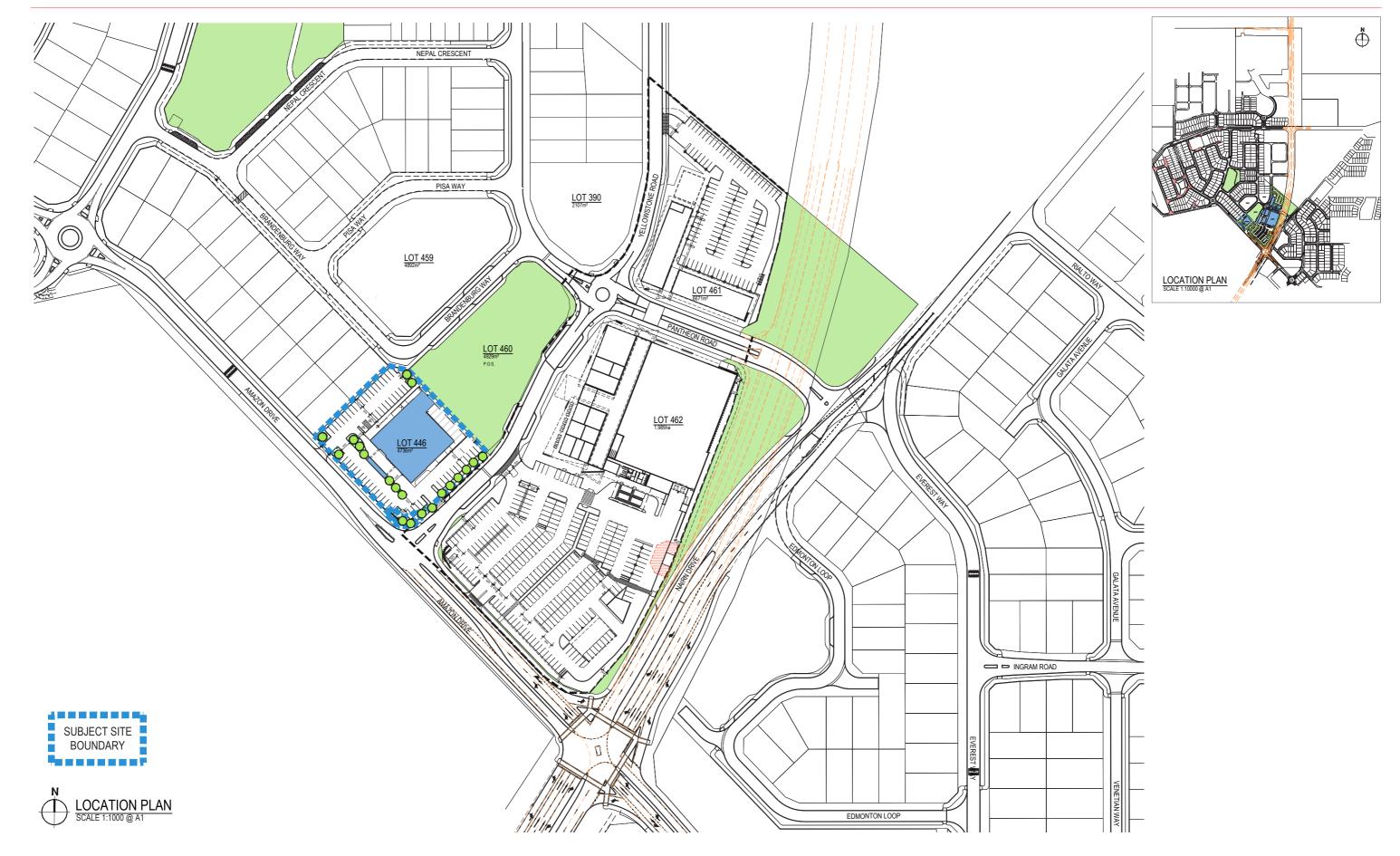




Subdivision Plan - 1:2000 @ A3

The Whitehorse Tavern





Lot Boundaries and Typography - 1:2000 @ A3

The Whitehorse Tavern





Floor Plan - 1:400 @ A3

The Whitehorse Tavern







Male patrons (306)			
No. of closet pans required	3	No. of closet pans provided	4
No. of urinals required	6	No. of urinals provided	5
No. of washbasins required	3	No. of washbasins provided	4

Female patrons (306)				
No. of closet pans required	7	No. of closet pans provided	8	
No. of urinals required	N/A	No. of urinals provided	N/A	
No. of washbasins required	3	No. of washbasins provided	4	

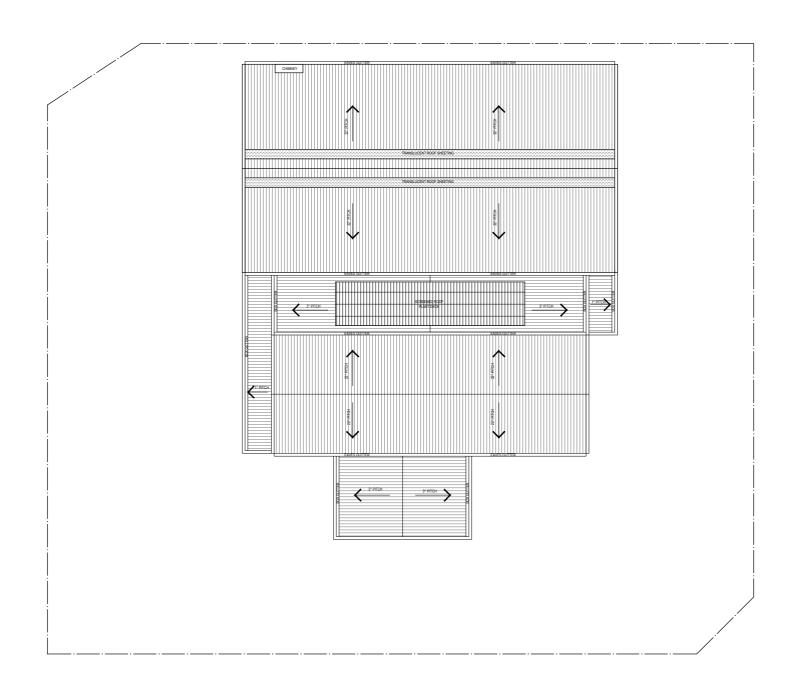
Male employees (20)			
No. of closet pans required	1	No. of closet pans provided	2
No. of urinals required	1	No. of urinals provided	0
No. of washbasins required	1	No. of washbasins provided	2

Female employees (20)				
No. of closet pans required	2	No. of closet pans provided	2	
No. of urinals required	N/A	No. of urinals provided	N/A	
No. of washbasins required	1	No. of washbasins provided	2	







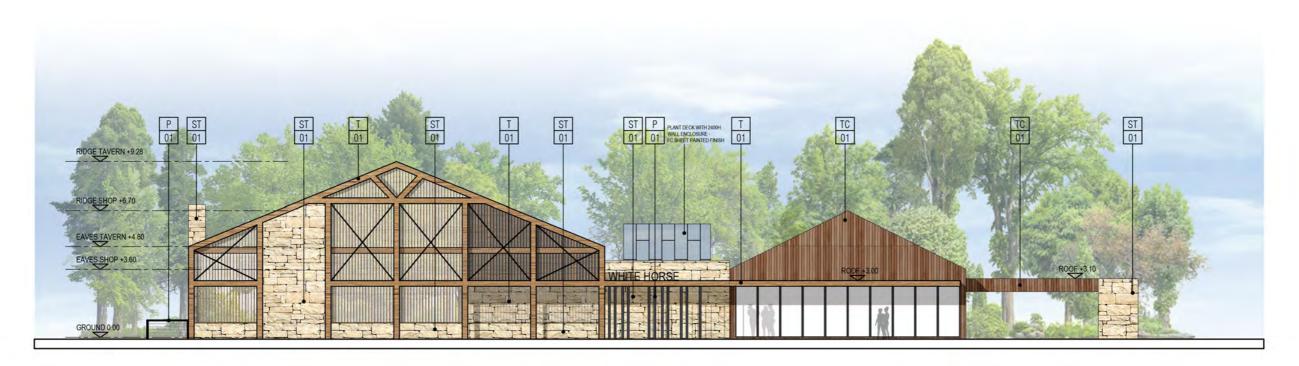


YELLOWSTONE ROAD

AMAZON DRIVE







NORTH WEST ELEVATION







NORTH EAST ELEVATION







Key Idea

The Whitehorse Tavern











The design concept is inspired by the aesthetic of the 'stable'; a building in which horses are sheltered and fed, grounding the design back to the history of the Baldivis region. A balance of a hardy, industrial form and warm, tactile finishes and detailing to the interior tavern fitout.

















The Whitehorse Tavern

Lot 9005 Nairn Drive, Baldivis WA





The Whitehorse Tavern





The Whitehorse Tavern







The design concept is inspired by the aesthetic of the 'stable'; a building in which horses are sheltered and fed, grounding the design back to the history of the Baldivis region. A balance of a hardy, industrial form and warm, tactile finishes and detailing to the interior tavern fitout.













Sanitary Facilities Calculation:

Male patrons (306)			
No. of closet pans required	3	No. of closet pans provided	4
No. of urinals required	6	No. of urinals provided	5
No. of washbasins required	3	No. of washbasins provided	4

Female patrons (306)			
No. of closet pans 7 required		No. of closet pans provided	8
No. of urinals required	N/A	No. of urinals provided	N/A
No. of washbasins required	3	No. of washbasins provided	4

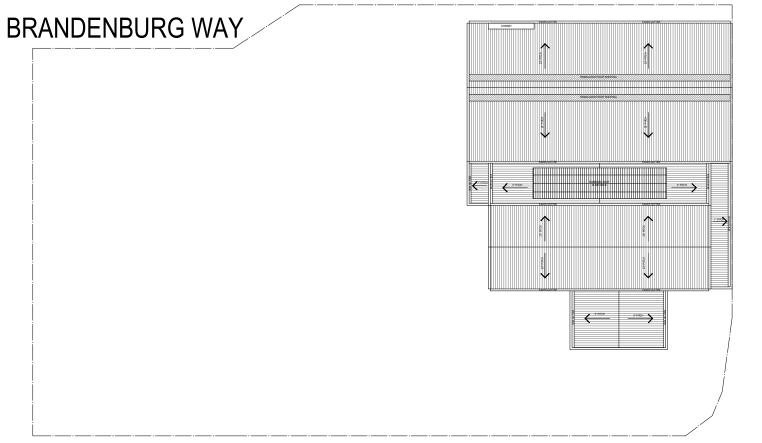
Male employees (20)			
No. of closet pans required	1	No. of closet pans provided	2
No. of urinals required	1	No. of urinals provided	0
No. of washbasins required	1	No. of washbasins provided	2

Female employees (20)			
No. of closet pans required	2	No. of closet pans provided	2
No. of urinals N/A required		No. of urinals provided	N/A
No. of washbasins required	1	No. of washbasins provided	2





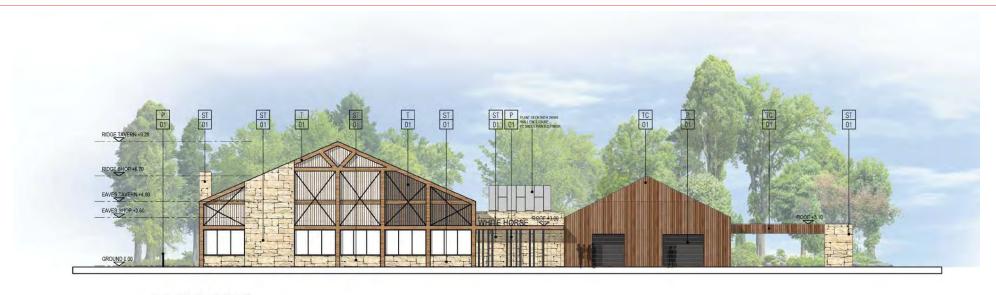




YELLOWSTONE ROAD

AMAZON DRIVE





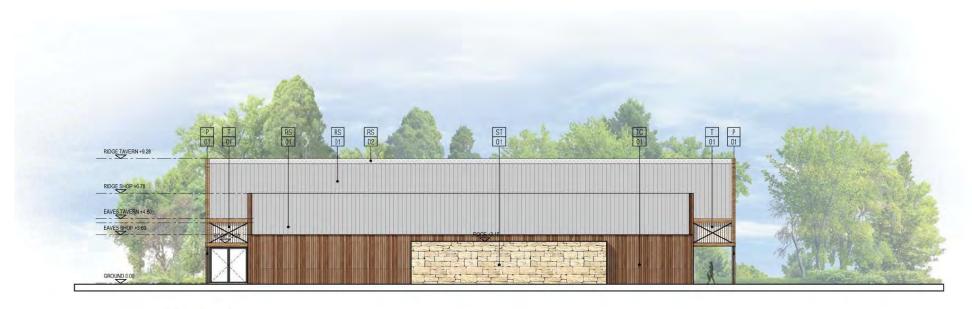








NORTH EAST ELEVATION















	PUI	BLIC SCHEDULE OF SUBMISSIONS
Name	Address	Comment
1. Mr Marc Scherer	1 Harbour Court SAFETY BAY WA 6169 marconjar@big pond.com	Great for more family Dining Venues and variety
2. Mr Brad Heggs	6 Swanbourne Avenue SECRET HARBOUR WA 6173 bradheggs@gm ail.com	Sounds like a great initiative!
3. Mrs Vicki Bell	4 Liberty Way BALDIVIS WA 6171 bellsinasia@hot mail.com	Submission 1 The new proposed Tavern has our full support. It is much awaited and a dining and drinking offer is very much needed on this Northern side of Baldivis, to cater for the growing family demographic. This proposal cover a good range of indoor, outdoor, dining and takeaway offer, with avery reasonable amount of parking. Please note our full family support. Submission 2 When discussing this proposal with many of our estate residents, many are confused by the plan /map mailed out, with no street names clearly marked and that the heading is referring to Lot 9005 "FIFTY RD", leaving residents confused if this is on Fifty Rd and then after explaining and talking them through the plan send, majority are surprised it is not where/what the proposal was referring to. A better description would have been beneficial to residemaking an informed decision. I am in favour of the proposal.
4. Mrs Fyfe Annita	8 Rushmore Loop BALDIVIS WA 6171 fyfe.annita@gm ail.com.com	Definitely FOR. Will be an asset to the area.
5. Ms Tegan S	44 Santorini Parkway BALDIVIS WA 6171 (No email address provided)	Seems like a great idea, however being a resident of area 4, I am very stressed about the noise situation. It is a very high dense residential area. I don't believe the tavern should be running until 12am. They should be restricted to open/close times. Ideal example would be Monday - Friday 8am to 9pm Saturday 8am- 11pm Sunday 9am- 9pm. In terms of traffic, we live in such a beautiful quiet area with lots of foot traffic with young kids. I am Stressed that it will bring a lot of car traffic through the west side of the estate.
6. Miss Shannon Molloy	26 Kingaroy Drive BALDIVIS WA 6171 shannon.l.mollo y@gmail.com	Baldivis needs another pub/tavern. The population of baldivis is growing and only going to grow so it makes sense that we should get another tavern.
7. Mr Terrence Creamer	77 Norseman Approach BALDIVIS WA 6171 8543846@gmai L.com	Yes, I think this would be a worth while addition to Baldivis, and that the proposal is in keeping with the area. I would like to see more green spaces / trees included with the development to try and address any heat from the tarmac that is being added to support parking

	PUBLIC SCHEDULE OF SUBMISSIONS			
Name	Address	Comment		
8. Ms Pollyanne Fisher	51 Ingarfield Green BALDIVIS WA 6171 pollyannefisher @rocketmail.co m	Yes y		
9. Ms Natalie Smyth	32 Everest Way BALDIVIS WA 6171 natsmyth@iinet. net.au	We support this proposal.		
10. Ms Sharon Irvine	17 Parkland Drive WARNBRO WA 6169 skyshaz74@gm ail.com	I don't think 67 car bays is enough for a tavern with the seat capacity of 800+ there is usually 2 people Per car that would go to the pub and if the car park is full with 2 people per car that would only be 134 people in the tavern I think the tavern would be a massive hit in Baldivis Needs more parking.		
11. Mr Jordan Wigham	26 Kingaroy Drive BALDIVIS WA 6171 wigham92@hot mail.com	Yes would be very very good for Baldivis.		
12. Mrs Sara Polglase	18 Portofino Avenue BALDIVIS WA 6171 polglase01@iin et.net.au	Happy for a tavern to be built.		
13. Mr Mark Bell	markjbell71@ou tlook.com	I wish to advise of my support to the Proposed Whitehorse Tavern in Spires Estate Lot 9005 Fifty Road. I am in support of the parking bays numbers, size of the Tavern for internal and external seating, cross road access points. I further support the usage in conjunction with the overall vision of the precinct as a neighbourhood offer of Tavern supermarket along side service offers. The North side if Baldivis is in need of further retail and dining precinct to support the needs of our growing families, with more blocks yet to be build, developed and released in the adjacent estates. For the size of Baldivis is is astounding and disappointing that we have such a limited entertainment, dining and local neighbourhood offers. Please note my support for this Tavern in Spires Estate.		
14. Mr Daniel & Donna Caradonna	27 Rushmoore Loop BALDIVIS WA 6171 danielanddonna 91@hotmail.co m	We live on spires and we fully support and approve of the tavern going ahead, would be nice to have a decent one in the area big thumbs up for us thank you.		

	PUE	BLIC SCHEDULE OF SUBMISSIONS
Name	Address	Comment
15. Mr Austin Tucker	58 Santorini Parkway BALDIVIS WA 6171 Austin@lindent ech.com.au	My Partner and I are very much in support (58 santorini parkway, Baldivis)
16. Mrs Dannielle Southern	41 Cossack Street BALDIVIS WA 6171 (no email address provided)	I decline the proposal. As a local home buyer I see this as a nuisance to our community. I used to live just as close to the kite in secret harbour. There was constantly fights up and down the streets and people using the roads as thoroughfares to get out of the estate trying to avoid the main roads.
17. Mrs Gail Hayden	22 Tallon Loop BALDIVIS WA 6171 gailh1406@iclo ud.com	Yes I think it's a great idea, but would like to see more car parking and especially more Acrod parking.
18. Mr Matthew Swinburne	7 Tribute Vista BALDIVIS WA 6171 matt.swinburne @outlook.com	A beautiful design which pays tribute to the old baldivis and a much needed venue in Baldivis. I hope this proposal is accepted.
19. Ms Gemma Cairns	2 Pompeii Road BALDIVIS WA 6171 gemma.sarah@ hotmail.com	I think it is needed in the area. Nice to have somewhere other than the handful of places we have around at the moment.
20. Ms Hina Vert	25 Molonglo Crescent BALDIVIS WA 6171 hnvert@yahoo. com.au	Would really like to see this tavern built in Baldivis. It's definitely needed as the entertainment level in Baldivis is quite dull and non existent. This would bring great employment opportunities for the locals. I'm for it!
21. Mr Lincoln McDermott	Unit 8, 2 Louvre Way BALDIVIS WA 6171 heaveho29@g mail.com	Support this but have concerns with security, don't want it to become another Gate in Success. Would be great to have a decent pub though.
22. Mrs Tamara Baird	15 Huggins Way BALDIVIS WA 6171 tamara.baird@r ockingham.wa.g ov.au	As a Baldivis Community Member and a local around the Fifty Rd Area i am all for a local tavern, as long as they take Into consideration noise levels, car parking and traffic flow, and rubbish if theres a bottle shop connected to it (too many people throw their roadies out the window) if they come up with a family friendly beer garden style pub similar to kings road brewery out munijong way then absolutely i am for it - if its a swinging pig dive hole then forget it
23. Ms Laura Hambley	116 Medina Avenue MEDINA WA 6167 Ihambley22@icl oud.com	Hell yeah!!

	PUBLIC SCHEDULE OF SUBMISSIONS			
Name	Address	Comment		
24. Mr Matthew Baker	36 Santorini Parkway BALDIVIS WA 6171 macbaker15@s ky.com	Whilst we look forward to a local tavern the proposed size is excessive, 800 person venue in the middle of a residential area is far to large. A smaller version of the proposed tavern would be more acceptable and suitable for a residential areas. The noise assessment that has been issued as part of the application has far to many assumptions and variants to properly understand the impact that the tavern will bring, but it is going to be noisey, smelly and with opening hours of 6am-midnight every day of the week again is excessive and this needs to be looked at in the middle of a residential area, as well as the light pollution to a residential area. The number of vehicles that will be using the local roads will increase and again in a residential area where children are playing is not acceptable. A smaller design would be more appropriate for a residential area, at the current size it would be the largest tavern in Baldivis, in the middle of a residential area. The proposed drive through bottle shop is not needed, there are countless bottle shops in the surrounding area or within a very short drive, another one is again excessive and with proposed times being open all night the noise, vehicle movement and pollution caused by idling vehicles in the middle of a residential area is not going to be good for residents health and wellbeing. The opening times need to be considered as currently being open to midnight every day is going to be a serious issue for all local residents with customers leaving late at night and delivery trucks arriving early in the morning all of which have an impact on local residents. Our main objections are: Excessive noise, reduction in air quality from the establishment and the traffic, increase in traffic on local residential roads, opening hours far too long that does not give residents any break from the noise and pollution , light pollution to the surrounding area, danger to residents especially children from increased traffic. We hope the planning application can be resubmitted with		
25. Mr Brett Mayers	11 Venetian Way BALDIVIS WA 6171 brett.mayers@f usioncomms.co m.au	I am all for it especially if it's a family type atmosphere with a outdoor eating type area and good beer specials to combat the chase which has to much power in the community thus the reasons they don't have any decent specials		
26. Mr Neil Rodber	44 Beckingham Parkway BALDIVIS WA 6171 neil.rodber@out look.com	This is absolutely essential to "North Baldivis". There is absolutely nothing of anything "entertainment" in this area. It would also be great if there were some cafes, restaurants in this area as well as across Baldivis in which everything is at Stockland Shopping Centre and a few at Baldivis Square. Apparently Baldivis is the largest suburb in Australia and totally lacks anything which brings socialism. Approve this and lots of the same to make this a successful area to be proud of.		
27. Ms Megan Pullar & Mr Daniel Westono	42 Santorini Parkway BALDIVIS WA 6171 meganpullar25 @gmail.com	We would like to raise our concerns and queries in regards to the proposed Tavern on Fifty Road, Baldivis. As we live at 42 Santorini Parkway, the Tavern is a 1 minute walk from our house. When moving into our block we were told that there may be a restaurant or café proposed for across the road. Being close to the beautiful bush land, and with the lack of nice restaurants in the area, (that aren't booked out every weekend), this would have been the perfect space for this. Instead we have another venue that is similar to the breweries and pubs that are already in Baldivis.		

	F	PUBLIC SCHEDULE OF SUBMISSIONS
Name	Address	Comment
No.27 – cont		Is this really what the future of Baldivis looks like? This venue is bigger than any other venue or brewery in the area. King Roads Brewery has a capacity limit of 500 people, with 300 people seated. The proposed Tavern has a capacity of 834 people with 730 people seated. Most venues of this magnitude are not close to residential housing- we really did struggle to find a venue with this capacity limit. This leads us to the following questions and concerns in relation to the proposed Tavern:
		1. Noise � From the plans proposed, the venue looks very open. How does the City of Rockingham plan on preventing noise travelling from an open plan venue, to residential properties? Will live music be playing until midnight? If builders have to start work in a residential area at 7am from Monday to Saturday and finish at 7pm, then why should a Tavern be able to operate so close to residential houses
		from 6am- midnight? �� There is also a concern that the noise will echo throughout the bush area. How can the city of Rockingham reassure us that this won't happen and increase the noise further? �� The noise and air pollution from the heavy traffic each day from 6am to midnight in a family orientated area. �� Residents will be disturbed from noise leaving the venue- this may go until 1am in the morning as people will mostly likely have to wait for Taxis and Ubers or walk home.
		2. Safety of Residents • How does the City of Rockingham plan on keeping its residents safe from 800 people leaving a venue at midnight and passing through neighbourhoods without breaching the peace and causing harm to properties? How are they going to monitor the noise from the high amount of traffic that is coming from the Tavern and prevent this noise extending to 1am in the morning?
		hazards should there be any drunk and disorderly behaviour that may occur from the Tavern? Will the Tavern be insured for a drunk patron causing a bush fire and burning down our homes? • There is no police station in Baldivis, is this going to align with the opening of a Police Station? • There are already joy riders in the area who love to speed through the area late at night - will the City of Rockingham implement speed bumps into Amazon Drive to slow down traffic, as well as on Nairn Drive and amend the speed limit. • Will the City of Rockingham, increase the amount of times the area is cleaned from the increased footfall in our area? The area is going to suffer from littering.
		3. Parking Spaces �� 67 on-site car spaces. If the venue reaches full capacity where are the other 500 people going to park their cars? Where is the overflow carpark? Is there going to be preventative measures put in place to stop visitors parking outside our house? In regards to the drive through bottle shop our reasons for being against a bottle shop in this area are listed below: �� There is a Bottlemart on Old Mandurah Road which is a 5 minute drive from my house. The traffic from this botte shop does not need to pass through a residential area to get to the bottle shop and shuts at a reasonable time. �� � A drive through bottle shop open until midnight will attract
		customers from different parts of Perth - from what I can see not many open until midnight. This will increase more traffic in the area on top of the patrons already attending the Tavern. • There are plenty of bottle shops in the area and I don't understand how the proposed drive thru is going to increase the popularity of Baldivis and make it a desirable suburb for people to move to. It is also not going to be beneficial to any of the residents, as there are already bottle shops in the area. • Will people buy carry outs from the Bottleshop, that have come from the Tavern, and continue to drink

walking home? � Noise and air pollution coming from cars that are idling, is not ideal for an area that is family orientated with young
children.

PUBLIC SCHEDULE OF SUBMISSIONS			
Name	Address	Comment	
No.27 – cont		Ultimately we oppose to the proposal of the Tavern as it stands. We look forward to your reply on how these issues will be addressed, should you approve the proposal. We can only hope that you give this beautiful area and bush land the pride it deserves.	
28. Mrs Janice Harwood Late submission received 14/1/22	22 Ukich Place BALDIVIS WA 6171 Think- big@iinet.net.au	Looks great and definitely be another great addition to our area.	

City of Rockingham

Design Review Panel Meeting Notes

Notes of the Design Review Panel held on Thursday, 3 February 2022

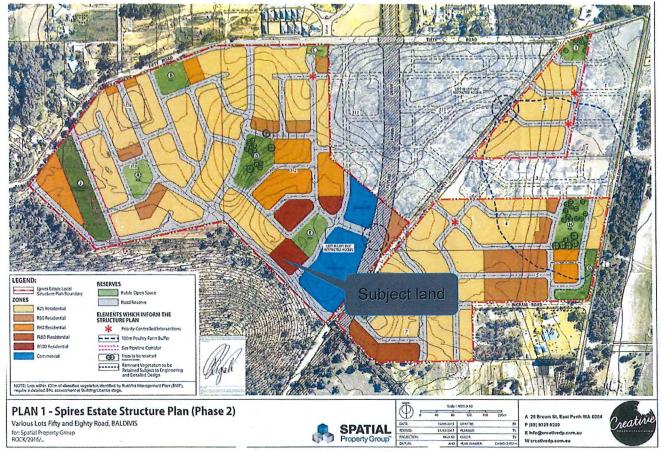
Panel Members:	Mr Sam Klopper Mr Trent Woods Mr Sid Thoo		
City Officers:	ty Officers: Mr Peter Ricci, A/Director Planning and Development Services Mrs Casey Gillespie, Senior Planning Officer		
Proponent:	Mr Ross Underwood - Planning Solutions		
Declarations of Interest:	Nil		
Agenda Item			
Proposed Development	Proposed Tavern and Liquor Store		
Property Address	Lot 9005 Fifty Road, Baldivis		
 Proposal The proposal includes the following elements: A barn style inspired design scheme; Indoor service area of 535m2 comprising a bar and restaurant Expected patron numbers of up to 834 with seating for 730 pate External undercover alfresco dining area of 188m2 with an 80 capacity; A Liquor Store with a two lane drive thru facility to the south of development; 67 on-site car parking spaces, including two accessible bays, very carpark accessed from both future Yellowstone Road and Ama Drive; and 2.4m high masonry fence along the northwest edge. 			
Background (as contained in the Agenda)	The subject land is currently vacant. The site is located within Stage 10 of the Spires Estate (Refer Figure 1). The current Spires Estate Structure Plan (SESP) designates the site as 'Residential (R100)' and was endorsed by the Western Australian Planning Commission (WAPC) on 12 March 2014. An amendment to the SESP was lodged on 26 August 2021 and is pending approval by the WAPC, where the site has been recommended to be zoned Special Use for a 'Tavern'. The amendment also allows for incidental 'Liquor Store (Small)' use. This JDAP application was initially lodged on the 1st October 2021, but accepted by the City on 7 December 2021. No consultation was undertaken with the City prior to lodgement.		







1. Location Plan



2. Current Structure Plan



3. Perspective Image Yellowstone Road (Main Street)



4. Perspective Image - Interface with Public Open Space



5. Perspective Image - Alfresco Dining Area Interface With Public Open Space



6. Main Street LDP

Proponent deputation to the Panel

Greg Ewart - DMG Australia

- For context, DMg have been involved in the shopping centre development adjoining on Yellowstone Road also and the landowner is the same.
- Proposed Tavern has a connection to the abutting Public Open Space and the main street pedestrian movement of Yellowstone Road, as an intended "Neighbourhood hub".
- Shopping Centre development will begin mid-2022.
- The proposal is based on an Agricultural typology and market garden theme with respect to the name and style of the development.
- It is proposed to reference large scale agricultural buildings with a rural/industrial bend envisaged.
- The north west buffer to the adjoining residential areas is proposed to be addressed with an acoustic fence
- Proposed to use natural ventilation throughout with some mechanical, as addressed in the acoustic reports.

A modified site plan was presented noting that, for the purpose of the DRP, the plans circulated prior to the meeting would form the primary basis of the advice. The applicant was invited to speak to the modified plan.

- The modified plan reflects a 'flipped' design for the bottle shop and drive-thru area.
- Back-of- house area is proposed to face the rear of the site, as opposed to Yellowstone Road.
- All loading and deliveries will occur within the drive-thru.
- The retaining wall and hand rail at the alfresco and POS interface has been considered.
- Confirmed that the POS proposal are only concepts at this stage and the retaining wall edge will overlook a swale.

Officer presentation to the Panel

Mrs Casey Gillespie provided an overview of the planning assessment of the proposed development.

	Supported
	Pending further attention
Danisa Drivatala	Not supported
Design Principles	
	Good design responds to and enhances the distinctive characteristics of a local area, contributing to a sense of place.
Principle 1 Context and Character	 The proposed design aesthetic appears to respond to the historical context and former land use of the Baldivis region. Further consideration could be given to how the "stable" typology is interpreted and executed in the design. Wayfinding and signage detail will be important to maintain the design integrity of the building. The building was described as "elegant, beautiful and polite".
	Good design recognises that together, landscape and buildings cooperate as an integrated and sustainable system, within a broader ecological context.
Principle 2 Landscape Quality	 The proposed building has been designed to respond to the adjacent POS and is commendable, however, the overall landscape design for the site would benefit from further consideration and development. Recommend engaging the services of a suitably experienced landscape architect. Recommend that the proposed plant species be native and/or suited to the local climate/biodiversity. Consider integrating more medium size plantings and/or landscape structures to help break up large areas of hard landscaping and provide more variation between low-level planting and tree canopies. Consider integrating elements such as street furniture and/or planters particularly around the liquor store in lieu of bollards and other more "obvious" security requirements. Consider integrating other shading structures and/or covered walkways (such as to the liquor store entry) to complement shading and protection from trees. The use of swales to address stormwater runoff from carpark should be contemplated. The timing of the POS development should precede the building to ensure that the integration is achieved from the out-set.
	Good design ensures that the massing and height of development is appropriate to its setting and successfully negotiates between existing built form and the intended future character of the local area.
Principle 3 Built Form and Scale	 The proposed scale and built form seem appropriate for the site and intended use, acting as an important "bridging" element between commercial and residential land uses within the estate. The "middle" portion of the building containing the service areas may benefit from further design development (see comments under Principle 4 regarding integration of roof plant deck).

Principle 3 Built Form and Scale (cont)	It may assist to provide some context or estate elevations confirming how the overall building form compares to the adjacent proposed commercial and residential areas.
	Good design meets the needs of users efficiently and effectively, balancing functional requirements to perform well and deliver optimum benefit over the full life-cycle.
Principle 4 Functionality and Build Quality	 The development is generally considered to be functional from usability perspective. Need to carefully consider how exposed timber finishes will be managed and maintained over the life of the building e.g. will they be highly protected/sealed or allowed to age naturally? If considering the use of composite timber products, the finish of such products may have an undesirable impact on the aesthetics of the overall design (see also Principle 10 Aesthetics). Reconsider the placement of the bin store, tavern storage and storage area. While the placement of these elements is likely proposed due to separation from the residential land uses, they are directly adjacent one of the key vehicle entry points leading to the tavern and drive through liquor store. It is generally advisable to have a separate access/egress and circulation route for service and delivery vehicles. The current floor plan does not appear to give due consideration to the placement and location of building services such as electrical, and/or hydraulic plant rooms. Ensure the eventual location of these services does not have an adverse impact on the overall design of the building and site. While a mechanical plant roof deck is indicated to the middle portion of the building, this could be designed to better integrate with the overall form of the building.
	Good design optimises the sustainability of the built environment, delivering positive environmental, social and economic outcomes.
Principle 5 Sustainability	 The proposed material schedule identifies the roof colour as 'Colorbond Monument'. It is strongly recommended that a dark roof colour is avoided - dark roof colours substantially increase the cooling load of the building in summer and contribute adversely to the urban heat island effect. Dark roofs also compromise the efficiency of renewable energy systems such as solar PV. Additionally, any roof colour with a solar absorbance greater than 0.4 will require a performance solution approach under the NCC. Recommend against the use of a continuous strip of polycarbonate roof sheeting as part of the main tavern roof. While improving access to natural daylight to the interior is important, this style of rooflight will also allow excessive incident solar radiation into the interior, increasing the building's cooling load in summer. Consider reducing the extent of skylights and/or external shade/louvre/screen over the skylights to provide solar control. Consider the inclusion of ceiling fans to dining areas to enhance natural ventilation and provide passive cooling. Reconsider design of northern overhang to allow more winter sun whilst providing protection from summer sun - consider sun studies and daylight factor calculations.

Principle 5 Sustainability (cont)	 The proposed tavern building appears to have a highly permeable building envelope – the large interior volumes can also make it difficult to keep warm in winter without excessive use of artificial heating. Consider how the building envelope and interior spaces can be enclosed and/or partitioned to create smaller volumes. Also, consider how the proposed palette of materials will achieve recommended R-values for the external walls. There is a large area of roof facing north-east that would be an ideal opportunity to incorporate a solar PV renewable energy system. If sized appropriately and/or integrated with battery storage, this could help to significantly reduce the operational energy loads for the tavern and/or liquor store. See also <i>Principle 6 Amenity</i>.
Principle 6 <i>Amenity</i>	Good design optimises internal and external amenity for occupants, visitors and neighbours, providing environments that are comfortable, productive and healthy.
	 The spaces within the building seem to adequately work together The relationship with the broader Town Centre is noted but could be improved through better siting of the building. As part of the carpark design, consider providing taxi/rideshare drop off zones, along with and EV charging facilities for selected bays. This could be considered as an offset in lieu of the reduced car bays currently proposed on the site.
	 Also consider the provision of bicycle parking and related amenities and how pedestrian movement can be prioritised throughout the site.
Principle 7 Legibility	Good design results in buildings and places that are legible, with clear connections and easily identifiable elements to help people find their way around.
	 While the 'shopfront' portion of the north-west elevation is clearly visible in terms of approach and entry, the approach and entry to the tavern is less coherent and clearly defined. The south-east elevation has similar issues. Further design development of these elevations is recommended to address the legibility of the tavern entrances. Also refer to the building siting comments from <i>Principle 6 Amenia</i>. See also <i>Principle 8 Safety</i>.
Principle 8 Safety	Good design optimises safety and security, minimising the risk of personal harm and supporting safe behaviour and use.
	 Consider some design changes to the north-west, south-east and south-west elevations to enhance opportunities for passive surveillance of the site and surrounds from the interior of the tavern and liquor store. Currently there are large areas of opaque facades and/or solid walls that potentially obstruct views from the building, which could contribute to problems such as anti-social behaviour. Consider how external lighting will be designed and implemented to facilitate safe pedestrian and vehicular movement through and around the site.

Dein sinks 0	Good design responds to local community needs as well as the wider social context, providing environments that support a diverse range of people and facilitate social interaction.
Principle 9 Community	The proposed design and development appear to have the potential to make a positive contribution to the overall Spires Estate, assuming that issues and concerns raised can be adequately addressed.
	Good design is the product of a skilled, judicious design process that results in attractive and inviting buildings and places that engage the senses.
Principle 10 Aesthetics	 Careful design and detailing of the junctions and connections between the timber structure, stonework and external cladding will be important to ensure the overall design aesthetic will be successfully executed. See also comments under <i>Principle 4 Functionality and Build Quality</i>.
Summary (Key Issues)	Materiality – big scale rustic timbers, no finishes proposed. Brick and steel, cladding and tin shed typologies and materials not supported. Some clarity and commitment required from the applicant with regard to the Tavern development and the interfaces it relies upon in terms of staging/timing of the shopping centre development and the public open space designs. Treatment of the interface to the public open space is critical to supporting the proposal and the pedestrian movement intent
Panel Recommendation	The design is supported subject to the appropriate siting of the building adjacent to Yellowstone Road, an effective interface with the abutting POS and the materiality being carried through to the build.
Meeting Close	10.45am
Chair Signature	La .
Date	10 February 2022

ATTACHMENT 4

<u>DRP REVIEW OF ORGINAL PORPOSAL AND CITY COMMENTS ON REVISED</u> PROPOSED RECEIVED 11 APRIL 2022

Design Review Panel Comments – Original Proposal

City's Comments - Revised proposal

Principle 2 - Landscape Quality

Good design recognises that together landscape and buildings operate as an integrated and sustainable system, within a broader ecological context.

- The proposed building has been designed to respond to the adjacent POS and is commendable, however, the overall landscape design for the site would benefit from further consideration and development. Recommend engaging the services of a suitably experienced landscape architect.
- Recommend that the proposed plant species be native and/or suited to the local climate/biodiversity.
- Consider integrating more medium size plantings and/or landscape structures to help break up large areas of hard landscaping and provide more variation between low-level planting and tree canopies.
- Consider integrating elements such as street furniture and/or planters particularly around the liquor store in lieu of bollards and other more "obvious" security requirements.
- Consider integrating other shading structures and/or covered walkways (such as to the liquor store entry) to complement shading and protection from trees.
- The use of swales to address stormwater runoff from carpark should be contemplated.
- The timing of the POS development should precede the building to ensure that the integration is achieved from the out-set.

- Acknowledged, however, the landscape plan presented is based on the original design, not the amended design this assessment is based. The landscape plan provides an intent for the landscape design. A condition of Development Approval would require submission of a detailed landscaping plan.
- Plant selection, locations and densities can be addressed through conditions of a Development Approval requiring submission of a detailed Landscape Plan.
- These features are not shown on any detail or plans provided, and as such a complete assessment of this statement can only be assumed. A condition of Development Approval would require submission of detailed landscape plans inclusive of hard and soft landscape features to be used.
- A covered passageway has been provided to the liquor store and tavern entry.
- A Stormwater Management Plan will be required as a condition of Development Approval to satisfy the City's requirements.
- The Applicant has not addressed the matter of timing for the proposed development in the context of the LDP for the Neighbourhood Centre and main street, shopping centre and commercial development to the east, and the adjoining POS. Notwithstanding this, it is noted that the land owner of this site, the POS and LDP is also the developer. As such, integration between the areas of the Estate will be achieved through future subdivision approvals.

Principle 4 - Functionality and Build Quality

Good design meets the needs of users efficiently and effectively, balancing functional requirements to deliver optimum benefit and performing well over the full lifecycle.

- Need to carefully consider how exposed timber finishes will be managed and maintained over the life of the building e.g. will they be highly protected/sealed or allowed to age naturally? If considering the use of composite timber products, the finish of such products may have an undesirable impact on the aesthetics of the overall design.
- Reconsider the placement of the bin store, tavern storage and storage area.
 While the placement of these elements is likely proposed due to separation from the residential land uses, they are directly adjacent one of the key vehicle entry points leading to the tavern and drive through liquor store.
- It is generally advisable to have a separate access/egress and circulation route for service and delivery vehicles.

- The current floor plan does not appear
 to give due consideration to the
 placement and location of building
 services such as electrical, and/or
 hydraulic plant rooms. Ensure the
 eventual location of these services does
 not have an adverse impact on the
 overall design of the building and site.
- While a mechanical plant roof deck is indicated to the middle portion of the building, this could be designed to better integrate with the overall form of the building.

- The City acknowledges the design intent through materiality as envisaged by the Applicant. However, to ensure the design outcome of the completed development is realised, the materials used in the development can be in confirmed at the design stage prior to issue of a building permit through the conditions of any Development Approval.
- The bin store and storage has been relocated so they are not fronting Yellowstone Road.
- The City notes that the revised layout proposes service vehicle access to be taken from Amazon Drive only. However, the City raises concern that the proposed location for the service area within the drive-thru area will increase traffic safety risks (i.e. reversing movements, encroaching into opposing traffic lane, turning movements require the whole width of the vehicle crossover, etc.). Vehicle queues may subsequently overflow onto Amazon Drive as commercial vehicles servicing the site will need to stop within the drive-thru area. To manage this, a condition of any Development Approval should require servicing of the site to be undertaken outside of the peak operating hours of the Tavern and Drive thru.
- The City considers that the scale of the proposed development warrants due consideration of these matters as part of the design to be able to understand any design impacts or changes to these areas (namely the roof area) will have on the intended design outcome. A condition of Development Approval should require submission of details and elevations of the location and housing of mechanical plant prior to the issue of a Building Permit.
- Matters of how the building will be heated and cooled has been raised in conjunction with the Acoustic reporting. The reporting is inconclusive in this regard as the type of mechanical ventilation to be used is unknown. The

- City therefore cannot confirm that the proposal complies with the requirements of the Noise Regulations. This was also raised with the Applicant through a formal request for further information, where consideration to how the development will be ventilated should be considered based on the scale of the building.
- Due to the scale of the development, it is anticipated that the mechanical ventilation required will be of a large scale. The type, scale, number and location will influence the design outcome. The assessment of this component of the development against the design principles cannot be completed at this time. A condition of Development Approval should require the submission of details and elevation plans of the type, location and housing of mechanical plant to be assessed prior to the issue of a Building Permit.

Principle 5 - Sustainability

Good design optimises the sustainability of the built environment, delivering positive environmental, social, and economic outcomes.

- The proposed material schedule identifies the roof colour as 'Colorbond Monument'. It is strongly recommended that a dark roof colour is avoided dark roof colours substantially increase the cooling load of the building in summer and contribute adversely to the urban heat island effect. Dark roofs also compromise the efficiency of renewable energy systems such as solar PV. Additionally, any roof colour with a solar absorbance greater than 0.4 will require a performance solution approach under the NCC.
- Recommend against the use of a continuous strip of polycarbonate roof sheeting as part of the main tavern roof.
 While improving access to natural daylight to the interior is important, this style of rooflight will also allow excessive incident solar radiation into the interior, increasing the building's cooling load in summer.
- Consider reducing the extent of skylights and/or external shade/louvre/screen over the skylights to provide solar control.
- Consider the inclusion of ceiling fans to dining areas to enhance natural ventilation and provide passive cooling.
- Reconsider design of northern overhang to allow more winter sun whilst providing

- No further details of the roofing have been provided to be able to confirm the assessment against this design principle. A condition of any Development Approval would be subject to the materials and colours of the development being confirmed.
- Light diffusing baffles, light shelves or banners are proposed to be incorporated to diffuse daylight through the ridge of the tavern roof. This ridge element is also intended to assist with natural ventilation. No further details of this design element have been provided to be able to confirm the assessment against this design principle. A condition of any Development Approval would be subject to this detail being confirmed.
- Due to the scale of the development, it is anticipated that the mechanical ventilation required will be of a large scale. The type, scale, number and location will influence the design outcome and acoustic reporting. The assessment of this component of the

- protection from summer sun consider sun studies and daylight factor calculations.
- The proposed tavern building appears to have a highly permeable building envelope – the large interior volumes can also make it difficult to keep warm in winter without excessive use of artificial heating. Consider how the building envelope and interior spaces can be enclosed and/or partitioned to create smaller volumes.
- Also, consider how the proposed palette of materials will achieve recommended R-values for the external walls.
- There is a large area of roof facing north-east that would be an ideal opportunity to incorporate a solar PV renewable energy system. If sized appropriately and/or integrated with battery storage, this could help to significantly reduce the operational energy loads for the tavern and/or liquor store.

development against the design principles cannot be completed at this time. A condition of any Development Approval should include the submission of details to address the ventilation of the development.

 There is no certainty that the design will incorporate measures to balance sustainability with the intended design outcome. The limited detail or suggestion offers only an intent.

Principle 6 - Amenity

Good design optimises internal and external amenity for occupants, visitors, and neighbours, contributing to living and working environments that are comfortable and productive.

- The relationship with the broader Town Centre is noted but could be improved through better siting of the building.
- As part of the carpark design, consider providing taxi/rideshare drop off zones, along with and EV charging facilities for selected bays. This could be considered as an offset in lieu of the reduced car bays currently proposed on the site.
- Also consider the provision of bicycle parking and related amenities and how pedestrian movement can be prioritised throughout the site.
- The siting of the building to address the DRP comments was considered by the Applicant in the redesign presented on 11 April 2022. The building has been shifted further toward the future Yellowstone Road frontage offering a direct connection to the main street (Yellowstone Road).
- The Applicant has not confirmed provision of EV bays. This is outside of the scope of any TPS2 requirements.
- Provision of bicycle parking is required under LLP. This can be included as a condition of Development Approval.

Principle 7 - Legibility

Good design results in buildings and places that are legible, with clear connections and memorable elements to help people find their way around.

- While the 'shopfront' portion of the north-west elevation is clearly visible in terms of approach and entry, the approach and entry to the tavern is less coherent and clearly defined. The south-east elevation has similar issues. Further design development of these
- The revised siting of the development provides a more legible and active street front presented to Yellowstone Road for the Tavern and the Liquor Store. Footpath connections to the main street and throughout the

- elevations is recommended to address the legibility of the tavern entrances.
- Also refer to the building siting comments from *Principle 6 Amenity*.

development will improve pedestrian connectivity.

Principle 8 - Safety

Good design optimises safety and security, minimising the risk of personal harm and supporting safe behaviour and use.

- Consider some design changes to the north-west, south-east and south-west elevations to enhance opportunities for passive surveillance of the site and surrounds from the interior of the tavern and liquor store. Currently there are large areas of opaque facades and/or solid walls that potentially obstruct views from the building, which could contribute to problems such as antisocial behaviour.
- Consider how external lighting will be designed and implemented to facilitate safe pedestrian and vehicular movement through and around the site.
- Glazing extent has been increased to north-west and south-east elevations to provide passive surveillance from the interior of the tavern and liquor store.
- These features are not shown on any detail or plans provided, and as such a complete assessment of this statement can only be assumed. A condition of Approval would require submission of detailed Landscape Plan detailing the hard and soft landscape features to be used.

CoR Ref: 20.2021.262 PS ref: 7687

6 December 2021

Chief Executive Officer City of Rockingham Civic Boulevard **ROCKINGHAM WA 6168**

Dear Sir/Madam,

LOT 9005 NAIRN DRIVE, BALDIVIS APPLICATION FOR APPROVAL TO COMMENCE DEVELOPMENT SUBMISSION OF ADDITIONAL INFORMATION

Planning Solutions acts on behalf of Baltavern Pty Ltd, the proponent of the proposed development of a tavern on Lot 9005 Nairn Drive, Baldivis.

We refer to our submission of the development application on 1 October 2021, and the City's response requiring further information to be provided before the City is prepared to accept the application for assessment.

With regard to the above, please find enclosed an updated development application report, including copies of the certificate of title and deposited plan, development plans, and technical appendices. The updated development application report has been modified as follows:

- 1. The development plans have been amended to increase the size of the internal service area of the tavern by 102m2, expanding the seating area towards the north within the footprint of the original undercover alfresco area, and reducing the size of the undercover alfresco area by 162m2. The roof of the building has also been modified to provide an enclosure for plant.
- 2. The Acoustic Assessment has been amended to reflect the modifications to the development plans, demonstrating compliance with the Environmental Protection (Noise) Regulations 1997 can be achieved, including consideration of alfresco noise and drive-through.
- 3. A Parking Control and Management Plan has been prepared in support of the application.

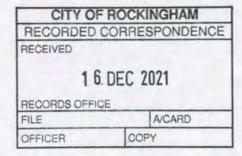
We respectfully request the City confirms by 13 December 2021 that the application is now accepted for assessment.

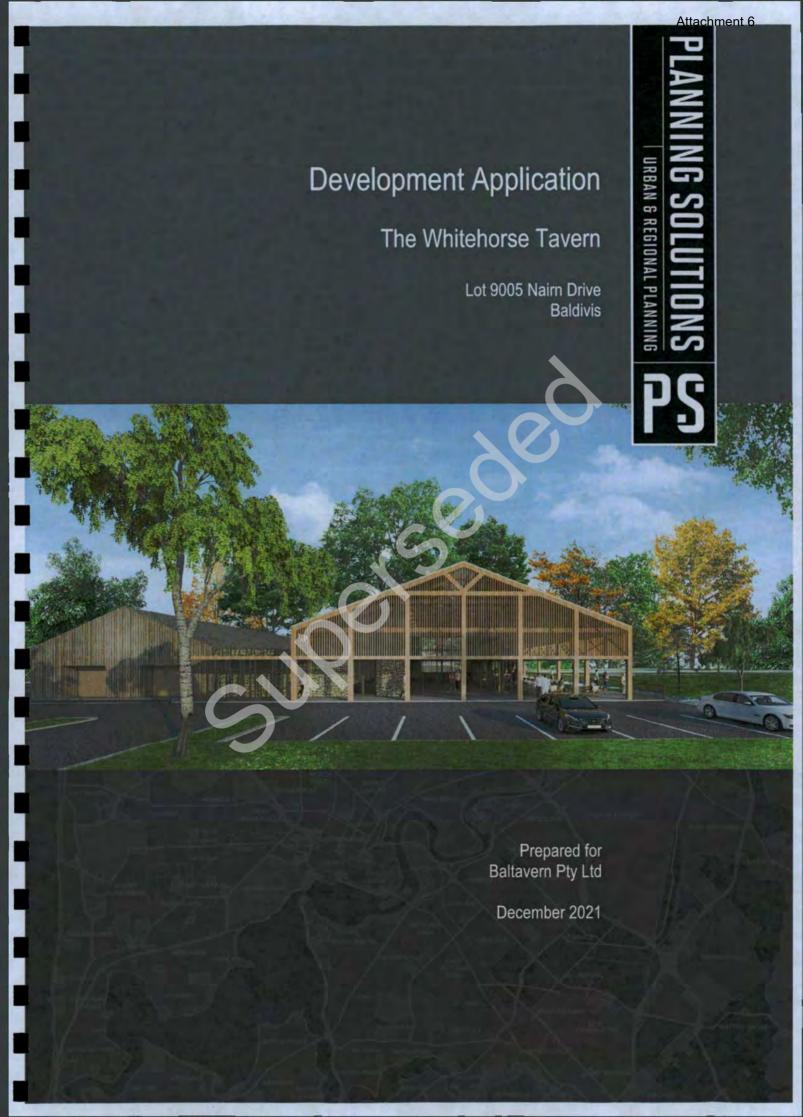
Should you have any queries or require further clarification in regard to the proposal, please do not hesitate to contact the writer.

Yours faithfully,

ROSS UNDERWOOD ASSOCIATE

211206 7687 DA cover letter (Rev 2).docx





Copyright Statement 2021

© Planning Solutions (Aust) Pty Ltd

All rights reserved. Other than for the purposes of and subject to the conditions prescribed under the *Copyright Act* 1968 (Cth), no part of this report may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic or otherwise, without the prior written permission of Planning Solutions (Aust) Pty Ltd.

No express or implied warranties are made by Planning Solutions (Aust) Pty Ltd regarding the information and analysis contained in this report. In particular, but without limiting the preceding exclusion, Planning Solutions (Aust) Pty Ltd will not verify, and will not assume responsibility for, the accuracy and completeness of information provided to us.

This report has been prepared with particular attention to our Client's instructions and the relevant features of the subject site. Planning Solutions (Aust) Pty Ltd accepts no liability whatsoever for:

- 1. a third party's use of, or reliance upon, this report;
- 2. use of, or reliance upon, this report in relation to any land other than the subject site; or
- 3. the Client's implementation, or application, of the strategies recommended in this report.

Direct all inquiries to:

Planning Solutions Level 1, 251 St Georges Terrace Perth WA 6000

All correspondence to: GPO Box 2709 Cloisters Square PO 6850

Phone: 08 9227 7970 Fax: 08 9227 7971

Email: admin@planningsolutions.com.au
Web: www.planningsolutions.com.au

Project Details

Job number	7687	
Client	Baltavern Pty Ltd	
Prepared by	Planning Solutions	
Consultant Team	Town Planning Architecture Traffic Engineering Bushfire Acoustics Waste Management Liquor Licence	Planning Solutions DMG Architecture Transcore Ecological Lloyd George Acoustics Talis Jessica Patterson Legal

Document Control

Revision number	File name	Document date	
Rev 0	210930 7687 DA report.docx	30 September 2021	
Rev 1	211206 7687 DA report (Rev 1).docx	6 December 2021	

Contents

1.1	Preliminary	
1.2	Background	
2	Site Details	6
2.1	Legal Description	6
2.2	Regional Context	7
2.3	Local Context, Land Use & Topography	
3	Proposed Development	8
3.1	Development overview	
3.2	Supporting documentation	8
3.2.1	Traffic and access	8
3.2.2	Parking control and management	9
3.2.3	Bushfire	9
3.2.4	Acoustic considerations	9
3.2.5	Waste Management	10
3.2.6	Liquor licence	10
4	Statutory planning framework	11
4.1	Metropolitan Region Scheme	11
4.2	State Planning Framework	11
4.2.1	State Planning Policy 3.7 Planning in Bushfire Prone Areas	11
4.2.2	State Planning Policy 4.2 – Activity Centres for Perth and Peel	
4.2.3	State Planning Policy 7 Design and the Built Environment	
4.3	City of Rockingham Town Planning Scheme No. 2	14
4.3.1	Zoning	14
4.3.2	Land use classification and permissibility	15
4.3.3	Development Requirements	15
4.3.4	Matters to be considered	16
4.4	Structure Plans	
4.4.1	Spires Estate Local Structure Plan	19
4.5	Local planning policies	23
4.5.1	Planning Policy 3.3.14 Bicycle Parking and End-of-Trip Facilities	
4.5.2	Planning Policy 3.3.19 Licensed Premises	24
5	Conclusion	25

Appendices

Appendix	1:	Certificate of	Little and	Deposited Plan

- Appendix 2: Development Plans
- Appendix 3: Transport Impact Assessment
 Appendix 4: Parking Control and Management Plan
- Appendix 5: Bushfire Management Plan
- Appendix 6: Environmental Noise Assessment Appendix 7: Waste Management Plan
- Appendix 8: Public Interest Assessment

1 Preliminary

1.1 Introduction

Planning Solutions acts on behalf of Baltavern Pty Ltd, part of the Carcione Group of Companies, the proponent of the proposed tavern and drive-through liquor store on a portion of Lot 9005 Nairn Drive, Baldivis (subject site). The development has the project name 'The Whitehorse Tavern'.

The following report has been prepared in support of the development application for the tavern.

The report addresses the relevant elements in support of the development application, including:

- Site details.
- Proposed development.
- · Statutory planning framework.
- Justification against the applicable planning framework.

The proposed development will contribute a commercial hospitality offering to North Baldivis, the general locality, and surrounding communities.

The proposed development features a high-quality site-specific design so as to contribute to an enhanced future character of the Spires Private Estate and provide a positive built form outcome for the area. Further, the proposed development will result in a substantial community benefit through the generation of local employment opportunities and enhanced opportunities for community entertainment and activation.

The proposal warrants approval from the Metro Outer Joint Development Assessment Panel (DAP) based on its individual merit and general consistency with the planning framework.

1.2 Background

The proposed development site is located in the Spires Private Estate. The area is a residential estate centred around the intersection of Nairn Drive and Amazon Drive, Baldivis with an ultimate dwelling yield of approximately 2,000 dwellings.

In 2017 Spatial Property Group and the Carcione Group of Companies, began the process of planning a neighbourhood activity centre. The planned activity centre is at the northern corner of the intersection of future roads Nairn Drive and Amazon Drive.

Subdivision approval was granted in 2018 for the creation of the neighbourhood activity centre site and surrounding streets.

In March 2021 a local development plan was approved by the City of Rockingham (City) for the neighbourhood activity centre site.

A development application was subsequently lodged for the development of the neighbourhood shopping centre (comprising a 'shopping centre' south of Pantheon Road and a 'commercial centre' north of Pantheon Road) and an entry statement on the north corner of Amazon Drive and Yellowstone Road, which was approved by the DAP at its meeting held on 30 September 2021.



At its ordinary meeting held on 24 August 2021, the Council considered a proposal by Spatial Property Group to amend the Spires Private Estate's structure plan by expanding the area designated for 'Commercial' to include the site the subject of the development application in this following report. The Council supported the proposal subject to a number of recommended modifications and resolved to lodge its report with the Western Australian Planning Commission (WAPC) for determination. Refer **section 4.4.1** of this report for further detail in respect of the structure plan.

2 Site Details

2.1 Legal Description

The subject site is legally described as "Lot 9005 on Deposited Plan 416296", being the whole of the land contained within Certificate of Title Volume 2985 and Folio 536. The subject site has a total area of 14.74ha.

There is a sewer easement on the Certificate of Title which does not affect the development.

Refer to Appendix 1 for a copy of the Certificate of Title and Deposited Plan applicable to the subject site.

The proposed development is situated on a portion of the subject site, in its the southern end, with an area of approximately 4,736m² (development site).

Refer Figure 1 for an aerial photograph depicting the subject site and the development site.



Figure 1: Aerial photograph



2.2 Regional Context

The development site is located within the municipality of the City of Rockingham in the suburb of Baldivis, approximately 40km south of the Perth city centre, approximately 6km east of the Rockingham city centre, and approximately 2km north of the Baldivis town centre.

Baldivis Road and Safety Bay Road are in close proximity to the development site. Those roads connect the development site to the Kwinana Freeway, and the Perth and Peel Regions.

2.3 Local Context, Land Use & Topography

The development site is located in the suburb of Baldivis, surrounded by newly developed residential land uses and undeveloped bushland areas.

The development site is located in the Spires Estate.

The development site adjoins the future Amazon Drive to the southwest and future Yellowstone Road to the southeast. At its northern corner the development site adjoins future Brandenburg Way. A future parkland is located to the northeast, and future residential properties to the northwest.

Opposite future Amazon Drive is bushland comprising the Rockingham Lakes Regional Park (Tamworth Hill).

The development site is predominantly cleared land. The development site is generally flat, with recent subdivisional works having been undertaken to service the site and cut/fill the site in readiness for development.

Refer **Figure 2** for a context plan showing the location of the development site with reference to the future subdivisional road network, and the location of the approved neighbourhood shopping centre ('shopping centre' and 'commercial centre') to the east of the development site.

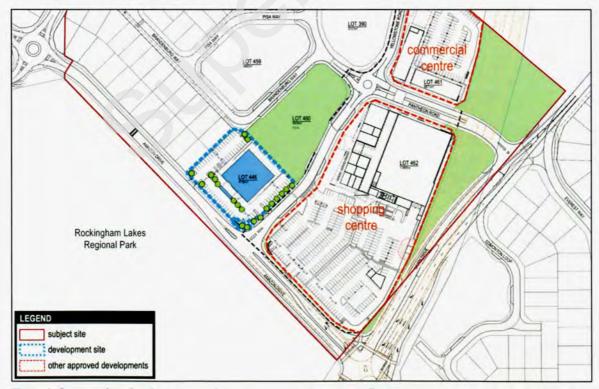


Figure 2: Context plan showing proposed developments in the surrounding area

3 Proposed Development

3.1 Development overview

The application is for the development of a single-level tavern with a drive-through liquor store with the following elements:

- Bar, kitchen, washing, cooling, freezer, dry store, storage, staff toilet, and bin store areas.
- Internal service area of 532m².
- 188m² undercover alfresco area with an 80-person capacity, orientated northeast towards the adjacent future public open space, accessed from the internal service area through bifold doors.
- · Toilets for patrons.
- 268m² liquor store shop to the southern portion of the tavern, including cool room and storage, and with a two-lane drive through for customers in motor vehicles.
- 67 car parking bays including two accessible bays, with the carpark accessed from two proposed crossovers at Yellowstone Road and Amazon Drive. No vehicle access is proposed to/from Brandenburg Way.
- 9 bicycle racks capable of parking 18 bicycles.
- Landscaping fronting Brandenburg Way, Amazon Drive, and Yellowstone Road.
- 2.4m high masonry fence along the northwest edge of the development site.

The building's external walls are clad with a mixture of timber and natural stone. The building's angled roof is constructed with painted Colorbond roof sheeting with exposed timber trusses and beams with polycarbonate sheeting inlaid in gabled sections of the roof, with polycarbonate roof sheeting over the alfresco area. The building has a ridge height of 9.28m above finished ground level.

No signage is proposed. Future signage, if required (i.e. where not exempt) will be applied for separately.

An entry statement on the corner of Amazon Drive and Yellowstone Road is separate to and does not form part of this application.

Refer to Appendix 2 for a copy of the development plans.

Hours of operation and patronage of the tavern are as follows:

- Tavern trading hours (06:00am 12:00am) Monday to Saturday.
- Liquor store trading hours (10:00am 12:00am) Sunday.
- · Expected number of patrons (834) with seating for 730 patrons.

3.2 Supporting documentation

3.2.1 Traffic and access

The proposed tavern has been subject to a detailed transport analysis, in the form of a Transport Impact Assessment (TIA) prepared by Transcore. A summary of the TIA's conclusions are as follows:

 The traffic analysis undertaken in the report shows the traffic generation of the proposed tavern is relatively low and would not have any significant impact on the surrounding road network.



- Turn path analysis indicates 8.8m service vehicles access and egress the site satisfactorily. Turn path
 analysis also confirms satisfactory traffic circulation of a passenger car and trailer using the bottle shop
 drive thru facility.
- The SIDRA network results indicative satisfactory operations of the intersection of Yellowstone Road / Amazon Drive in order to assess their operations in 2031 scenario for PM peak hour.

In summary, the TIA confirms the proposal is satisfactory from a traffic and access perspective, and the traffic generation associated with the proposed development will have an insignificant impact on the surrounding road network.

Refer Appendix 3 for a copy of the TIA.

3.2.2 Parking control and management

A Parking Control and Management Plan (**PCMP**) has been prepared by Transcore in support of the development application to demonstrate how the proposed on-site and off-site car parking will be provided and managed, considering the peak parking demands of the approved neighbourhood shopping centre and the proposed tavern.

The PCMP proposes an agreement is entered into over the neighbourhood shopping centre to allow for shared access and parking between the tavern and the shopping centre, to allow tavern patrons to park in the shopping centre carpark.

A peak parking demand analysis was undertaken for the various uses (neighbourhood shopping centre and proposed tavern). It confirms that with a shared parking arrangement with the neighbourhood shopping centre, and considering the peak operating times for each use, there will be a surplus of car parking bays across the sites at all times, including peak times on Fridays and Saturdays.

Refer Appendix 4 for a copy of the PCMP.

3.2.3 Bushfire

The development site is located within a designated bushfire prone area in accordance with the Department of Fire and Emergency Services Map of Bushfire Prone Areas, and as a result a Bushfire Management Plan (**BMP**) has been prepared by Ecological Australia.

The BMP includes a proposed works program. It concludes the bushfire protection requirements provide an adequate standard of bushfire protection for the proposed development.

Refer Appendix 5 for a copy of the BMP.

3.2.4 Acoustic considerations

An Environmental Noise Assessment of the proposed development has been undertaken by Lloyd George Acoustics. The Assessment considers the noise generation associated with the proposed development in the context of surrounding properties and noise sensitive premises.

The Assessment recommends the following:

- Tavern building elements meeting certain minimum standards to mitigate noise transmission.
- Measures to be undertaken with respect to mechanical plant
- Waste collection occurring between 7am and 7pm Monday to Saturday and 9am to 7pm on Sundays and public holidays.
- Signs being erected encouraging patrons to leave quietly



- A noise management plan being prepared for tavern operations
- Audible reversing alarms being turned off for delivery vehicles
- Non-refrigerated delivery trucks to turn off engines while unloading
- Notifications being placed on the titles of residential lots in close proximity to the tavern advising of the
 potential for noise from the tavern and encouraging increased construction standards to ensure
 satisfactory internal amenity.
- A more detailed environmental noise assessment report is prepared as a condition of the building permit considering final equipment selection, operating hours, operational noise management measures, etc.

Refer Appendix 6 for a copy of the Environmental Noise Assessment.

3.2.5 Waste Management

A Waste Management Plan (WMP) has been prepared by Talis in support of the proposed development. It confirms bin storage areas have been adequately designed for:

- Tavern:
 - Five 1,100L refuse bins, collected four times each week; and
 - One 1,100L recycling bins, collected four times each week.
- Liquor store:
 - One 240L refuse bins, collected four times each week; and
 - One 240L recycling bins, collected four times each week.
- A private contractor will service the proposed development onsite, utilising a rear loader waste collection vehicle accessing the service areas within the car parks.
- The private contractor's waste collection vehicle will enter and exit the carpark in forward gear. Waste
 collection vehicles will not service the site before 7.00am or after 7.00pm Monday to Saturday, or before
 9.00am or after 7.00pm on Sundays and Public Holidays.
- A venue manager will oversee the relevant aspects of waste management for the development site.

Refer Appendix 7 for a copy of the WMP.

3.2.6 Liquor licence

A copy of the final draft of the Public Interest Assessment supporting the licence application, which includes full details of the tavern proposal including how the business is to be operated and managed, is included with the development application at **Appendix 8**. The Public Interest Assessment is the foundation of the liquor licence application.

4 Statutory planning framework

4.1 Metropolitan Region Scheme

The development site is zoned 'Urban' under the Metropolitan Region Scheme. The proposed development is consistent with the Urban zoning of the land.

4.2 State Planning Framework

4.2.1 State Planning Policy 3.7 Planning in Bushfire Prone Areas

A portion of the development site is within an area identified as 'bushfire prone' under the Department of Fire and Emergency Services bushfire prone mapping system. The relevant provisions and requirements of *State Planning Policy 3.7 – Planning in Bushfire Prone Areas* (**SPP3.7**) therefore apply to the proposal.

A BMP has been prepared in support of the proposed development. It concludes the development meets the aim and objectives of SPP3.7 and associated guidelines and is recommended for approval.

Refer Appendix 4 for a copy of the BMP.

4.2.2 State Planning Policy 4.2 - Activity Centres for Perth and Peel

State Planning Policy No. 4.2 – Activity Centres for Perth and Peel (SPP4.2) specifies broad planning requirements for the planning and development of new activity centres and the redevelopment of existing centres in Perth and Peel.

The proposed development is located adjacent to a 'Neighbourhood Centre' in the Activity Centres Hierarchy of SPP4.2. As outlined within Table 3 of SPP4.2 "Neighbourhood centres provide for daily and weekly household shopping needs, community facilities and a small range of other convenience services.

The proposal will support the proposed neighbourhood activity centre at an appropriate scale to accommodate for the needs of the local community through the provision of entertainment and dining options to the residents of North Baldivis and the surrounding catchment area.

Clause 5.1.2 (1) of SPP4.2 contains provisions for neighbourhood and local centres, these include:

Neighbourhood centres are important local community focal points that help to provide for the main daily to weekly household shopping and community needs. They are also a focus for medium density housing.

The proposed development provides a modern, attractive tavern that will encourage integration of the surrounding community and aims to provide context for a range of future development that capitalises on proximity to local services, along with providing a focal point for the local community.

Accordingly, it is considered the proposed development is compliant with the intent of SPP4.2.

4.2.3 State Planning Policy 7 Design and the Built Environment

State Planning Policy No. 7 – Design of the Built Environment (SPP 7) became operational on 24 May 2019. It is the lead policy which elevates the importance of design quality, and sets out the principles, processes and considerations which apply to the design of the built environment in Western Australia, across all levels of planning and development.

SPP7 establishes a set of ten 'Design Principles', providing a consistent framework to guide the design, review and decision-making process for planning proposals. Refer **Table 1** below for an assessment against the ten design principles of SPP7.

Table 1: Assessment against Schedule 1 - Design Principles of SPP 7

Des	ign element	Design outcome		
1.	Context and character Good design responds to and enhances the distinctive characteristics of a local area, contributing to a sense of place.	The project is designed to provide the emerging community with a distinct focal point for socialising, dining and entertainment suited to the broad demographic of the immediate precinct and surrounding established residential suburbs.		
		The project is sited north of a new neighbourhood centre estate which will complement the future residential and commercial characteristics by way of attractive design and landscaping.		
		It also responds to the proposed public open space, which adjoins the northern boundary of the tavern. An alfresco area is to be located adjacent to the open space ensuring and pleasant outlook and opportunity for engagement and interface with the open space.		
2.	Landscape quality Good design recognises that together landscape and buildings operate as an integrated and sustainable system,	Areas are fully accessible and designed to encourage social interaction and activity to create an engaging and attractive development at the centre of the community.		
	within a broader ecological context.	Large and medium trees have been selected to provide shade through denser canopy foliage to reduce microclimate heat and provide protection and thermal comfort in warm weather as well as high visual amenity through enhanced green streetscapes and walkways.		
3.	Built form and scale Good design provides development with massing and height that is appropriate to	Building scale and form deliberately reflects the predominant single storey form of the existing and proposed character of the locality.		
	its setting and successfully negotiates between existing built form and the intended future character of the local area.	Street level materials are selected to complement the contemporary forms of the existing and future character of the locality.		
4.	Functionality and build quality Good design meets the needs of users efficiently and effectively, balancing functional requirements to deliver	Good build quality has been achieved through the careful selection of robust materials, finishes, elements and systems that are easy to maintain and weather well over time.		
	optimum benefit and performing well over the full lifecycle.	Service areas are accommodated discreetly and are located away from main thoroughfares and are integrated into the main building design through the use of similar materials for externally located enclosures. Service zones & loading areas are concealed within the main building fabric.		

Design element

5. Sustainability

Good design optimises the sustainability of the built environment, delivering positive environmental, social, and economic outcomes.

Design outcome

The layout of the site emphasises the principles of passive solar deign with the open spaces shaded on the north western side. The proposed development is naturally ventilated and orientated to allow for maximum natural light to illuminate the main pedestrian thoroughfares through the tavern.

The microclimate of the location is also taken into consideration by the careful placement of screens at entry points affected by the prevailing south westerly winds in the cooler months. Roof spaces have provision for the addition of solar panels.

Travel by foot or bicycle to and from the development for patrons and employees is encouraged from adjacent residential areas through provision of bike parking and walkable infrastructure. This reduces vehicle traffic and associated emissions.

The design provides activation to street frontages through placement of major openings allowing for maximum natural light contributing to attractive dining and working environments.

The development includes acoustic treatments to mitigate the effect of noise impacting future residential areas near to the development site.

The layout of the buildings and access pathways through the site have been considered to provide connections to existing road and path networks of the existing and proposed surrounding developments. This provides easy movement and clearly recognisable routes to and through the site for pedestrians, cars, and bicycles.

Key entry points to each access point of the development have been designed with a prominent vertical element as a means of identifying key corners and intersections.

The design concept is inspired by the aesthetic of the 'stable'; a building in which horses are sheltered and fed, grounding the design back to the history of the Baldivis region.

The open design and articulated building arrangement provides passive surveillance of adjacent street reserves by means of active or habitable frontage.

Carpark areas are kept open to provide clear sightlines with high visibility from key frontages and high pedestrian traffic zones to each area of the carpark. High level lighting is provided in accordance with CPTED principles.

The design provides a modern and attractive entertainment venue that will encourage active participation and social interaction opportunities for the surrounding community of the surrounding area and the immediate local precinct. This reinforces the sense of belonging and familiarity essential in fostering active and healthy community connections.

Public spaces are well designed, open, and welcoming and freely available for all to enjoy. The proposed tavern promotes visual and physical connections between spaces enhance pedestrian permeability. Generous alfresco areas open out to generous public open space areas to the public open space.

6. Amenity

Good design optimises internal and external amenity for occupants, visitors, and neighbours, contributing to living and working environments that are comfortable and productive.

Legibility

Good design results in buildings and places that are legible, with clear connections and memorable elements to help people find their way around.

8. Safety

Good design optimises safety and security, minimising the risk of personal harm and supporting safe behaviour and use.

9. Community

Good design responds to local community needs as well as the wider social context, providing buildings and spaces that support a diverse range of people and facilitate social interaction.



Design element		Design outcome	
10.	Aesthetics Good design is the product of a skilled, judicious design process that results in attractive and inviting buildings and places that engage the senses.	The design concept is inspired by the aesthetic of the 'stable'; a building in which horses are sheltered and fed, grounding the design back to the history of the Baldivis region and the rural heritage of the area. A balance of a hardy, industrial form and warm, tactile finishes and detailing to the interior tavern fitout.	

As detailed above, the proposed design addresses SPP7 and warrants approval.

4.3 City of Rockingham Town Planning Scheme No. 2

The City of Rockingham Town Planning Scheme No.2 (**TPS2**) applies to the development site. The provisions of TPS2 are supplemented by the provisions in Schedule 2 (**Deemed Provisions**) of the *Planning and Development* (*Local Planning Schemes*) *Regulations 2015*. Where a deemed provision is inconsistent with a provision of TPS2, the deemed provision prevails.

4.3.1 Zoning

The development site is zoned 'Development' under TPS2. The site is also located within 'Development Area No. 22' (DA22) on the TPS2 Map. Refer Figure 3.

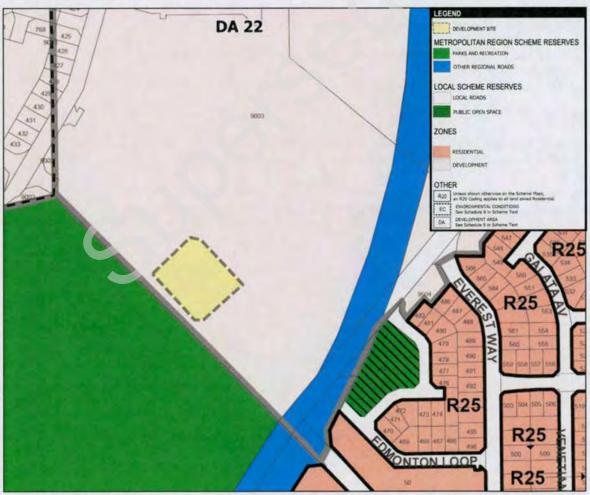


Figure 3: Zoning under TPS2

Pursuant to clause 4.2.2 of TPS2, the purposes of the 'Development' zone are:

- (a) To identify areas requiring comprehensive planning prior to subdivision and development.
- (b) To coordinate subdivision, land use and development in areas requiring comprehensive planning.

The provisions of DA22 also require an approved structure plan shall apply to the land in order to guide subdivision and development.

The structure plan is addressed in further detail in section 4.4.1 of this report.

4.3.2 Land use classification and permissibility

The proposal involves the use and development of a tavern with ancillary drive-through liquor store and associated car parking on the development site.

Pursuant to *Table 1 - Zoning Table* of TPS2, land use permissibility for all land uses within the 'Development' zone is stated as:

Subject to Clause 27 of the deemed provisions, use class permissibility shall be determined in accordance with the provisions of the relevant Structure Plan.

Clause 27(1) of the deemed provisions provides a structure plan is not binding. Accordingly, TPS2 does not prescribe land use permissibility on the subject site, and the proposed use (and in fact any use) is capable of approval on the subject site having due regard to the provisions of a structure plan.

Refer section 4.4.1 of this report for consideration of the applicable structure plan.

4.3.3 Development Requirements

Car parking

Clause 4.15 and Table 2 of TPS2 set out the relevant requirements for car parking. Refer **Table 2** for an assessment against the car parking requirements of TPS2.

Table 2: Car parking assessment

Use	Requirement	Particular	Required	Provided
Tavern (with incidental liquor store)	1 bay for every 5m² of bar and public areas, including lounges, beer gardens and restaurants	720m²	144	67 on-site 3 on-street * Total 70

*Note: On-street spaces are included and count towards the required parking provision pursuant to E7 R40 of the WAPC operational policy Liveable Neighbourhoods.

Therefore, applying the TPS2 parking ratios the proposal has a shortfall of 74 car parking bays.

Clause 77Q of the Deemed Provisions of TPS2 allows the City to impose a shared parking arrangement condition where on-site parking requirements are not met.

The development application is accompanied by a PCMP (refer **Appendix 4**) to demonstrate how the proposed on-site and off-site vehicle parking will be provided and managed, considering the peak parking demands of the respective uses within the adjacent approved neighbourhood shopping centre. The PCMP considers shared parking will be required on the neighbourhood shopping centre site to provide sufficient parking for the tavern, and that with a shared parking arrangement there will not be a shortfall of car parking at any one time based on the peak hours of operation of the various uses on the sites.



Accordingly, there should be a condition of approval imposed under clause 77Q of the Deemed Provisions similar Condition 20 imposed by the DAP on the approval for the neighbourhood shopping centre, which was:

Prior to the commencement of the development, a reciprocal parking and access agreement is required to allow for access and parking of vehicles on the shopping centre land and the commercial centre land, to the satisfaction of the City of Rockingham.

Amenity

Clause 4.18.1 of TPS2 requires no land is to be used in such a manner as to permit the escape of noise (or other nuisances) in such extent as to create a nuisance to any inhabitant of the neighbourhood. The nearest inhabitant is located approximately 180m to the northwest of the subject site. An environmental noise assessment has been prepared demonstrating the proposed tavern will not adversely impact existing noise sensitive premises in the locality. Refer **Appendix 6** for a copy of the environmental noise assessment.

Clause 4.18.2 of TPS2 is directed at mitigating development which disfigures the locality or blights the appearance of neighbouring properties. Refer **section 4.2.3** of this report for a response to the aesthetics design principle of SPP7.

Licensed premises

Clause 4.22.1 of TPS2 requires development applications for licensed premises to be accompanied by liquor licensing application papers and detail in respect of management measures and proposed licence conditions.

A copy of the final draft of the Public Interest Assessment supporting the licence application, which includes full details of the tavern proposal including how the business is to be operated and managed, is included with the development application at **Appendix 8**. The Public Interest Assessment is the foundation of the liquor licence application.

4.3.4 Matters to be considered

Clause 67(2) of the Deemed Provisions sets out the matters to be considered in the assessment of the development application. These are addressed in Table 3.

Table 3: Matters to be considered

nis report.
application comprehensively ng framework in an orderly and TPS2 or other proposed local nstruments have been identified.
nis report.
ental protection policy has been
the Western Australian Planning n identified.
ne State has been identified.
ng strategy has been identified.
1

Mat	ter to I	pe considered	Res	oonse
(g)	any I	ocal planning policy for the Scheme area;	Refe	r section 4.6 of this report.
(h)		structure plan or local development plan that relates e development;	Refer section 4.4.1 of this report for consideration of the applicable structure plan.	
(i)	any report of the review of the local planning scheme that has been published under the Planning and Development (Local Planning Schemes) Regulations 2015;		Not	applicable.
(i)	objec	e case of land reserved under this Scheme, the ctives for the reserve and the additional and itted uses identified in this Scheme for the reserve;	Not	applicable.
(k)		uilt heritage conservation of any place that is of ral significance	Not	applicable.
(1)		ffect of the proposal on the cultural heritage ficance of the area in which the development is ed;	Not	applicable.
(m)		ompatibility of the development with its setting, ding — the compatibility of the development with the desired future character of its setting; and the relationship of the development to development on adjoining land or on other land in the locality including, but not limited to, the likely effect of the height, bulk, scale, orientation and appearance of the development;	(i) (ii)	The subject site is located in a new growth residential area; the proposed development will form part of the future character of the area. The scale, appearance and orientation of the proposal is consistent with the City's desired outcomes for the development and its future role as an entertainment venue. The development has been designed to integrate with the adjacent Public Open Space, while also providing a focal point and community hub. The Environmental Noise Assessment Report prepared by Lloyd George Acoustics recommends measures to be taken to reduce the impact of noise from the tavern onto existing and future residential areas. It also recommends future residential development incorporate notifications on title and increased construction standards in order to ensure a satisfactory internal acoustic amenity. Refer Appendix 6 for a copy of the Environmental Noise Assessment.
(n)	the a (i) (ii) (iii)	environmental impacts of the development; the character of the locality; social impacts of the development;	(i) (ii)	The development does not introduce anything which would be detrimental to the environment. The subject site is located in a new growth residential area. The proposed development will help to establish the character of area by providing much need social and entertainment hub for the residents of North Baldivis. Social impacts associated with the development are addressed through consulting reporting and through the provision of management plans. Conversely, the proposal will positively contribute to the locality, through the creation of an engaging development as well as the creation of jobs and the provision of essential services to support the local community.

Matter to be considered

- the likely effect of the development on the natural environment or water resources and any means that are proposed to protect or to mitigate impacts on the natural environment or the water resource
- whether adequate provision has been made for the landscaping of the land to which the application relates and whether any trees or other vegetation on the land should be preserved;
- the suitability of the land for the development taking into account the possible risk of flooding, tidal inundation, subsidence, landslip, bushfire, soil erosion, land degradation or any other risk
- the suitability of the land for the development taking into account the possible risk to human health or safety
- the adequacy of
 - the proposed means of access to and egress from the site; and
 - arrangements for the loading, unloading, manoeuvring and parking of vehicles;

- the amount of traffic likely to be generated by the development, particularly in relation to the capacity of the road system in the locality and the probable effect on traffic flow and safety:
- the availability and adequacy for the development of the following
 - public transport services; (i)
 - (ii) public utility services;
 - (iii) storage, management, and collection of waste;
 - (iv) access for pedestrians and cyclists (including end of trip storage, toilet and shower facilities);
 - access by older people and people with disability;

Response

The development does not introduce anything which would be detrimental to the environment or water resources

Indicative landscaping in the form of street trees has been provided fronting Yellowstone Road, Amazon Drive, and the western elevation.

A detailed landscaping plan can be provided as a condition of development approval.

Refer section 4.2.1 of this report for consideration of the relevant State Planning Policy relating to bushfire planning.

No risk to human health has been identified.

- A TIA has been prepared for the development which demonstrates the proposed access arrangements are adequate. Refer Appendix 3 for a copy of the TIA.
- The TIA identifies the suitability of the proposed access arrangements for service vehicles. The WMP concludes standard 8.8m waste

collection vehicles can be accommodated by within both the northern and southern sites. Refer Appendix 6 for the WMP

Car parking is addressed in section 4.3.3 of this report. Refer also the PCMP at Appendix 4 which considers the requirement for car parking and proposed shared parking arrangement.

A TIA has been prepared which demonstrates the existing and future road network can cater for the traffic generated by the proposed development, and the vehicle access arrangements will operate safety. Refer the TIA at Appendix 3.

- The closest existing bus route to the subject site is Bus Route No. 568, located adjacent to the site, along Eighty Road. Future Nairn Drive will contain a bus route, with a timed interchange at the neighbourhood centre site.
- The subject site has access to all necessary utilities.
- Provision has been made for the storage and collection of waste. Refer the WMP included at Appendix 7.
- Access for pedestrians and cyclists has been provided via the shared-use access points, welllocated bicycle parking, and landscape provisions to ensure continuity and legibility of the movement network.

Matt	er to be considered	Response
		(v) The development includes accessible car parking bays for use by visitors to the subject site. All pedestrian paths and building entrances have been designed to facilitate universal access.
(v)	the potential loss of any community service or benefit resulting from the development other than potential loss that may result from economic competition between new and existing businesses;	The proposed development will not result in the loss of community service. Contrary, the proposed development will provide important, much needed, community / hospitality service to the area.
(w)	the history of the site where the development is to be located;	Refer section 1.2 of this report.
(x)	the impact of the development on the community as a whole notwithstanding the impact of the development on particular individuals;	It is noted the proposed development will provide additional employment opportunities for residents in the locality. The proposed development will contribute to the delivery of important commercial entertainment services. The proposal provides an attractive setting for business and social interactions, along with encouraging a range of land uses that will attract visitors to the locality. In this respect, there is a positive social outcome
		resulting from this development.
(y)	any submissions received on the application;	The application will be advertised for public comment. A formal market survey was undertaken for the Public Interest Assessment which involved 305 people from a 3km radius surrounding the development site, plus a public questionnaire / survey which was completed by 60 people, most of which live within 1km of the development site. The majority opinion of the people who participated was that they strongly support the tavern licence application. Refer Appendix 8 for details of the market survey and questionnaire.
(za)	the comments or submissions received from any authority consulted under clause 66;	To be addressed during assessment.
(zb)	any other planning consideration the local government considers appropriate.	Refer section 4.4.1 for consideration of a proposed amendment to a structure plan, which is a seriously entertained planning proposal for which due regard is to be given.

4.4 Structure Plans

4.4.1 Spires Estate Local Structure Plan

Current Structure Plan

The development site is subject to the provisions of the Spires Estate Local Structure Plan (**Structure Plan**), which was originally prepared in 2014. A series of minor amendments to the Structure Plan were progressed between 2014 and 2017.

The development site is designated Residential with an applicable density of R100 under the current approved Structure Plan.

Clause 27(1) of the Deemed Provisions provides that:

A decision-maker for an application for development approval or subdivision approval in an area that is covered by a structure plan that has been approved by the Commission is to have due regard to, but is not bound by, the structure plan when deciding the application. [Emphasis added]

In the matter of Scutti -v- City of Wanneroo [2017] WASC 70, the Supreme Court at [46] provided the following explanation for the meaning of 'due regard' (as it appears in the above clause):

ASP6 is a plan for the co-ordination of future subdivision and zoning of the land to which it relates. In determining any application for development approval on land to which ASP6 relates the City must have due regard to the relevant provisions of ASP6, that is the City must give proper, genuine and realistic consideration to those provisions which consideration is adequate in all the circumstances. However, the City is not bound by the structure plan. The City may, in considering an application for development approval, depart from the structure plan if it is consistent with proper and orderly planning. [Emphasis added]

In other words, the decision-maker is not bound by the land use description in the current Structure Plan and can approve a development which departs from that land use. In doing so, the decision-maker is to consider whether it should depart from it. The decision-maker can also consider a 'seriously entertained' planning proposal. In this respect, there is an amendment to the Structure Plan that has been prepared and is undergoing assessment (refer below).

Proposed Amendment No.5 to Structure Plan

In 2021 an application was submitted to the City on behalf of Spatial Property Group to amend the Structure Plan by redesignating the development site for Commercial and altering the density of land designated Residential to the northwest of the development site. Refer **Figure 4** for a plan comparing the approved Structure Plan to the proposed Structure Plan as amended (Amendment No.5).



Figure 4: Comparison of current Structure Plan and Amendment No.5

At its ordinary meeting held on 24 August 2021, the Council resolved to lodge a report with the WAPC recommending the Structure Plan is modified prior to its approval. The Council's recommended modifications included:

The proposed commercial site be zoned Special Use on the Local Structure Plan Map.

 Part One - Implementation Section of the Local Structure Plan be modified to include the following land use permissibility's under section 4.1 for the 'Special Use' site:

The following uses are permitted, subject to advertising (A):

- Tavern
- Restaurant/café
- Reception Centre
- Brewery

The following uses are permitted providing they are incidental to the primary use (IP):

- Liquor Store Small
- Betting agency
- Update the list of criteria under Section 5 Local Development Plans of Part One to include the requirement to prepare an LDP over land zoned 'Special Use' and include the following design criteria to be addressed:
 - Built form:
 - Interface and relationship with the public realm;
 - Landscaping;
 - Setbacks:
 - Building orientation;
 - Pedestrian circulation;
 - Access;
 - Car parking;
 - Noise; and
 - Waste and servicing.
- Introduce a Section 4.3 'Special Use' and listing the following:

The following reports are to be prepared and submitted with a development application over the 'Special Use' site:

- (a) A detailed acoustic assessment be prepared to mitigate any noise generated from the permitted activities and demonstrating compliance with the Environmental Protection (Noise) Regulations.
- (b) A Waste Management Plan be prepared as part of a Development Application for the proposed Tavern, detailing the location, size and number of bin stores proposed.

 Address technical comments relating to traffic as identified within the City's assessment and contained within the Schedule of Modifications.

At the time of writing, the WAPC had not determined Amendment No.5 to the Structure Plan. It is, however, a seriously entertained planning proposal being a proposed planning instrument advertised for public comment with no objection received. It has been supported by the local government subject to recommended modifications which do not significantly alter the intent of the proposal. There is a high degree of likelihood the Amendment No.5 will be approved by the WAPC in a form that would support a tavern and ancillary drive through liquor store being approved on the development site. For this reason, significant weight should be given to Amendment No.5 in the assessment of the development application.

Council's recommendation 3 seeks a local development plan (**LDP**) to be prepared for the development site. It is considered, however, that a LDP is not a necessary prerequisite for a development application on the subject site. This is because:

- The LDP would apply to a single site only. It does not, for example, coordinate development over multiple sites.
- This development application report addresses the same matters referred to in point 3 of the Council's recommendation.
- Clause 56(2) of the Deemed Provisions provides a development application can be approved
 notwithstanding there has been no LDP prepared, provided the proposed development does not conflict
 with the principles of orderly and proper planning and would not prejudice the overall development
 potential of the area. In this regard, this application report comprehensively addresses the planning
 framework in an orderly and proper manner, and approval of the tavern does not prejudice development
 potential of the surrounding area as the proponent (Spatial Property Group) remains in ownership of the
 land adjoining the tavern site and no other landowners would be impacted by the development.

In respect of the design criteria in recommendation 3, the proposed development suitably responds to the criteria. Refer **Table 4**.

Table 4: Council's design criteria for the development site

Council's design criteria	Response
Built form	The proposed single-level building is centrally located within the subject site, providing a setback of more than 10m to lot and round boundaries. The development is also setback from the adjoining public open space but with an open-sided roofed alfresco area designed to provide an interface whist reducing bulk to the open space.
Interface and relationship with the public realm	The proposed development has an interface to two streets and public open space, to three of its four elevation. The northeast elevation to the public open space has been intentionally designed with the tavern's alfresco area. This not only takes advantage of the northern aspect with plentiful sunlight in the morning and middle of the day, but it also promotes an activate interface with an opportunity for potential linkages (subject to final design of the public open space). It maximises passive surveillance of the open space. The tavern entry is from the alfresco area on the Yellowstone Road side. This together
	with public car parking and crossover provides an interface with some activity through the comings and goings of patrons. It also provides a suitable aspect to the neighbourhood shopping centre proposed on the eastern side of Yellowstone Road. The side of the drive-through for the liquor store faces Amazon Drive, with the liquor store's pedestrian entry located on the left-hand side of the Amazon Drive elevation. The design response reflects Amazon Drive's function as a local distributor road predominantly providing vehicle access to and from the tavern, with the drive-through and carpark a response to that.
Landscaping	The carpark and front setback areas will be landscaped with shade trees and low-scale planting to maximise sightlines between the tavern and the street. It is expected a detailed landscape plan will be required and supplied as a condition of approval.
Setbacks	Proposed setbacks reflect the built form criteria.
Building orientation	Building orientation reflects interface and public realm relationship criteria.
Pedestrian circulation	Pedestrians will be able to access to and from the site using vehicle accessways, as low-speed shared spaces.
Access	Refer the TIA included at Appendix 3 of this application for detail on access arrangements.
Car parking	Refer section 4.3.3 of this report for consideration of car parking.

Council's design criteria	Response		
Noise	Refer to the environmental noise assessment included at Appendix 6 of this report. It includes measures to be implemented to reduce noise emanating from the tavern, highlights that as the tavern building enters detailed design, noise emissions must be considered in further detail considering final equipment selections and operational noise management measures.		
Waste and servicing	Refer Appendix 7 for a waste management plan setting out details of waste storage and collection, and Appendix 3 for the TIA outlining access by service vehicles.		

The Council's recommendation 4 would require a detailed acoustic assessment and a waste management plan to be submitted with a development application. These assessments have been prepared and are included with the development application; refer **Appendix 5** for a copy of the acoustic assessment and **Appendix 6** for a copy of the waste management plan.

In respect of the Council's recommendation 7, the development application is accompanied by a TIA which addresses traffic matters. Refer **Appendix 3**.

4.5 Local planning policies

4.5.1 Planning Policy 3.3.14 Bicycle Parking and End-of-Trip Facilities

The City's *Planning Policy 3.3.14 – Bicycle Parking and End-of-trip Facilities* (**PP3.3.14**) sets out the bicycle parking requirements for commercial land uses. The requirements are set out in **Table 7** and **Table 8**.

In respect to the tenancies proposed for multiple uses the bicycle parking has been assessed based on indicative tenancy arrangements and staff numbers.

Table 5: Bicycle parking requirements of PP3.3.14

Use		Туре	Calculation	Particular	Required	Provided
Food and Premises	Drink	Short-term	0.1 spaces per five seats	730 seats	14.6 (15)	18 spaces
		Long-term	0.1 spaces per staff	25 staff	2.5 (3)	

The total provision of bicycle parking complies with PP3.3.14.

Table 6: End-of-trip requirements of PP3.3.14

Requirement	Particular	Required	Provided	
One shower following the first five (5) long-term parking spaces, plus an additional shower for each four (4) bicycle parking spaces thereafter	3 long-term spaces	none required		
One change room or direct access to a communal change room per shower	none	none	none	
One clothing locker for each long-term bicycle parking space	3 long-term spaces	3 lockers	6 lockers	



The end of trip facilities comply with PP3.3.14.

4.5.2 Planning Policy 3.3.19 Licensed Premises

The City's *Planning Policy 3.3.19 Licensed Premises* (LPP 3.3.19) purpose is to provide guidance for the assessment and determination of liquor licence Applications within the City.

The objectives of LPP 3.3.19 are to:

- (a) Provide a framework for the assessment and determination of Liquor Licence Applications, including the issuing Section 39 and 40 certificates under the Liquor Control Act 1988.
- (b) Assist the Council in its consideration of applications for Development Approval which involve a liquor licence:
- (c) Identify appropriate locations for different types of licensed premises;
- (d) Protect the safety and amenity of existing and future residents and business proprietors against antisocial behaviour; and
- (e) Minimise personal harm or ill health caused to people, or any group, due to excessive consumption of liquor.

The proposed development will be appropriately located in proximity to a new neighbourhood centre and will result in an attractive community hub for the locality, encouraging social interaction and a sense of community. The proposal is supported by co-consultant reporting which demonstrates the proposal is suitable by way of accessibility, noise, and traffic as to not cause harm, ill health and to protect the safety and amenity of existing and future residences.

LPP 3.3.19 requires all development applications be accompanied by the following:

- A full set of the liquor licensing application papers;
- A full set of the floor, site and elevation plans of the premises;
- Full details as to what conditions are sought to be imposed on the licence;
- Details on how the proposed business to be licensed is to be managed; and
- Any other plan or information that the Council may reasonably require to enable the application to be determined.

A copy of the final draft of the Public Interest Assessment supporting the licence application, which includes full details of the tavern proposal including how the business is to be operated and managed, is included with the development application at **Appendix 8**. The Public Interest Assessment is the foundation of the liquor licence application.

5 Conclusion

The application seeks approval for a tavern on the development site. The proposed development is appropriately located and warrants approval for the following reasons:

- The proposed development will result in a substantial community benefit through the provision of entertainment and the generation of significant local employment opportunities.
- The proposed tavern together with the separately-approved shopping centre and public open space combine to form an attractive community hub for the locality, encouraging social interaction and a sense of community.
- The proposed land uses are capable of approval under TPS2 and has been demonstrated to be appropriate in the context of the development.
- The development generally complies with the local planning framework.
- The various technical reporting prepared in support of the development confirms the proposal is acceptable from a traffic impact, parking, and acoustic amenity perspective.
- The proposed development is designed to a high standard and will result in a positive built form outcome
 for the site and future community of North Baldivis in which it is located.

Having regard for the above, in considering the applicable planning framework, the proposed development warrants approval from the DAP.

Appendix 1: Certificate of Title and Deposited Plan

WESTERN



AUSTRALIA

REGISTER NUMBER 9005/DP416296 DATE DUPLICATE ISSUED DUPLICATE

EDITION 4/8/2020 1

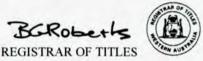
> VOLUME 2985

FOLIO 536

RECORD OF CERTIFICATE OF TITLE

UNDER THE TRANSFER OF LAND ACT 1893

The person described in the first schedule is the registered proprietor of an estate in fee simple in the land described below subject to the reservations, conditions and depth limit contained in the original grant (if a grant issued) and to the limitations, interests, encumbrances and notifications shown in the second schedule.



LAND DESCRIPTION:

LOT 9005 ON DEPOSITED PLAN 416296

REGISTERED PROPRIETOR:

(FIRST SCHEDULE)

PIPERPOINT PTY LTD OF 11 FIRST AVENUE APPLECROSS WA 6153

(AF O440539) REGISTERED 28/7/2020

LIMITATIONS, INTERESTS, ENCUMBRANCES AND NOTIFICATIONS:

(SECOND SCHEDULE)

1. EASEMENT BURDEN CREATED UNDER SECTION 167 P. & D. ACT FOR SEWERAGE PURPOSES TO WATER CORPORATION - SEE DEPOSITED PLAN 416296 AS CREATED ON DEPOSITED PLAN 400943

Warning:

A current search of the sketch of the land should be obtained where detail of position, dimensions or area of the lot is required.

* Any entries preceded by an asterisk may not appear on the current edition of the duplicate certificate of title.

Lot as described in the land description may be a lot or location.

---END OF CERTIFICATE OF TITLE-----

STATEMENTS:

The statements set out below are not intended to be nor should they be relied on as substitutes for inspection of the land and the relevant documents or for local government, legal, surveying or other professional advice.

SKETCH OF LAND: PREVIOUS TITLE:

DP416296

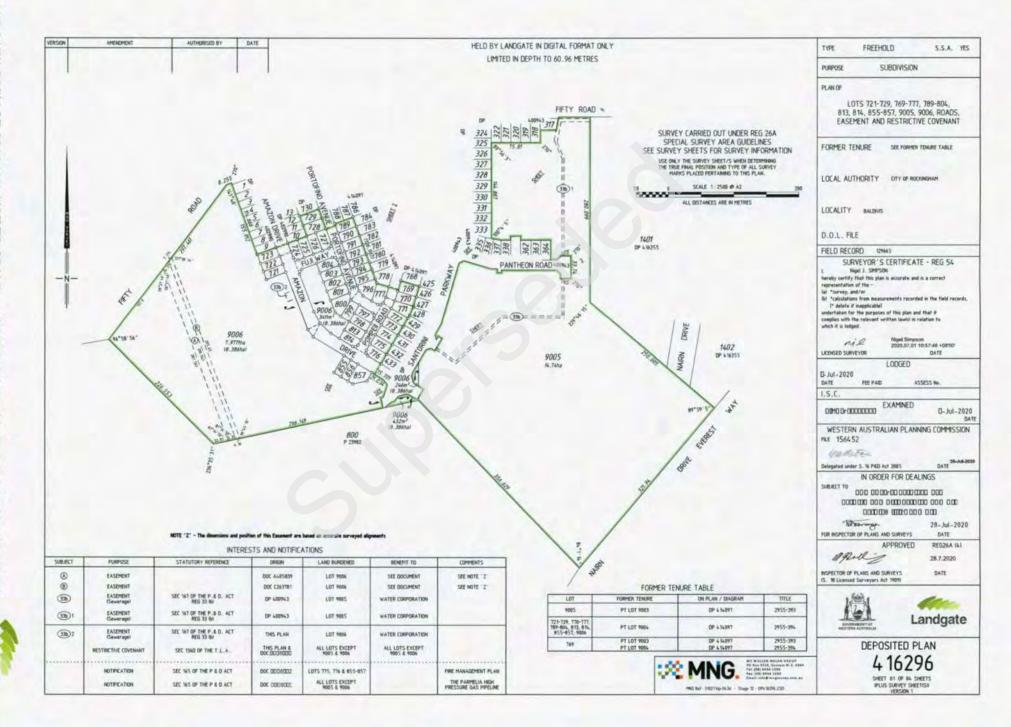
2955-393

PROPERTY STREET ADDRESS:

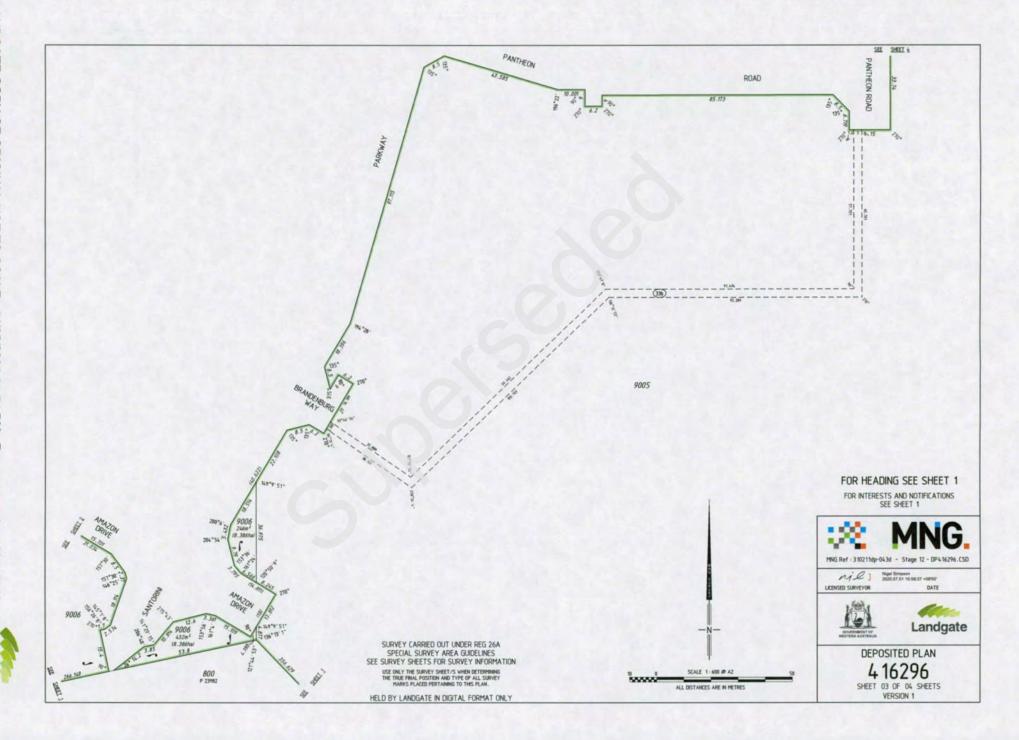
NO STREET ADDRESS INFORMATION AVAILABLE.

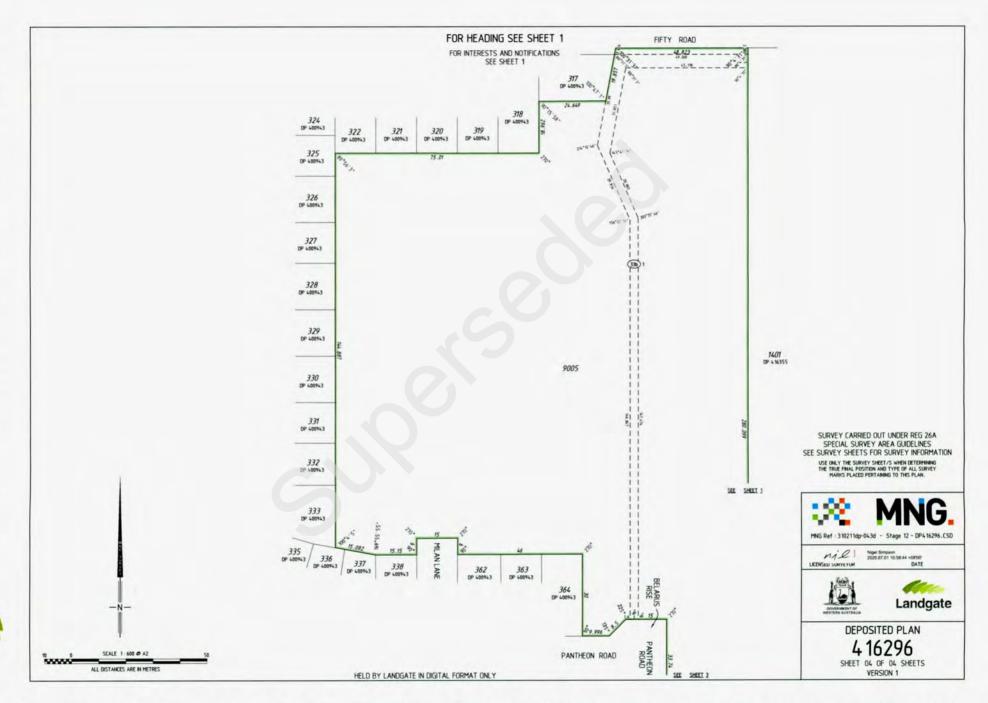
LOCAL GOVERNMENT AUTHORITY:

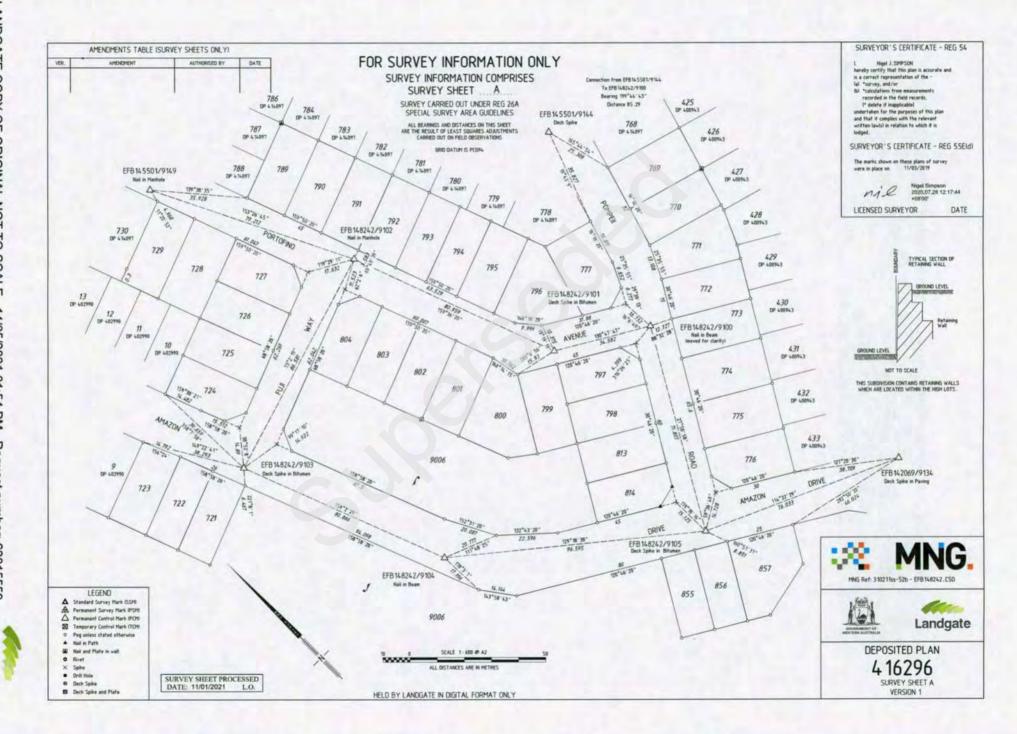
CITY OF ROCKINGHAM











Appendix 2: Development Plans

The Whitehorse Tavern

Lot 446 North Baldivis WA





Subdivision Plan - 1:2000 @ A3





Lot Boundaries and Typography - 1:2000 @ A3

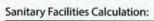




Floor Plan - 1:400 @ A3







	Male pa	itrons (306)	
No. of closet pans required	3	No. of closet pans provided	4
No. of urinals required	6	No. of urinals provided	5
No. of washbasins required	3	No. of washbasins provided	4

F	emale pa	atrons (306)	
No. of closet pans required	7	No. of closet pans provided	8
No. of urinals required	N/A	No. of urinals provided	N/A
No. of washbasins required	3	No. of washbasins provided	4

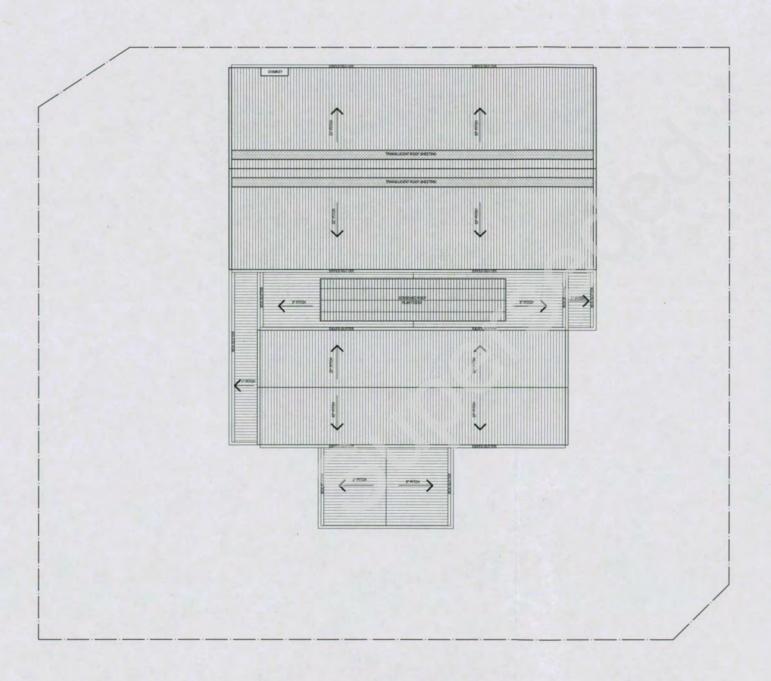
N	lale em	ployees (20)		
No. of closet pans required	1	No. of closet pans provided	2	
No. of urinals required	1	No. of urinals provided	0	
No. of washbasins required	1	No. of washbasins provided	2	

Fe	male em	ployees (20)		
No. of closet pans required	2	No. of closet pans provided	2	
No. of urinals required	N/A	No. of urinals provided	N/A	
No. of washbasins required	1	No. of washbasins provided	2	









YELLOWSTONE ROAD

AMAZON DRIVE



Elevations - 1:200 @ A3





NORTH WEST ELEVATION



Elevations - 1:200 @ A3





NORTH EAST ELEVATION



Materials Palette Legend

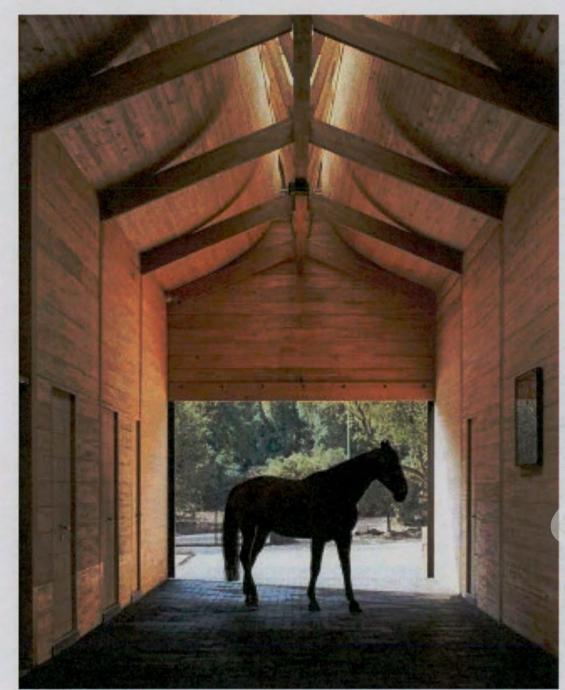




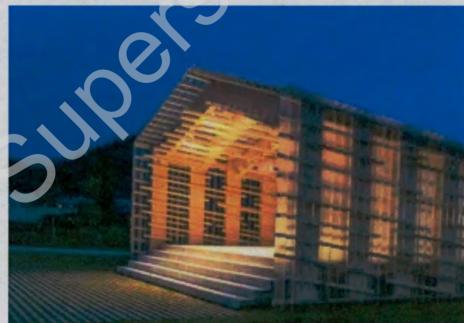
Key Idea

The Whitehorse Tavern











The design concept is inspired by the aesthetic of the 'stable'; a building in which horses are sheltered and fed, grounding the design back to the history of the Baldivis region. A balance of a hardy, industrial form and warm, tactile finishes and detailing to the interior tavern fitout.

















Appendix 3: Transport Impact Assessment



transport planning traffic engineering modelling

Proposed Tavern, Amazon Drive, Baldivis

Lot 446 North Baldivis

Transport Impact Assessment PREPARED FOR: **Carcione Nominees** September 2021

Document history and status

Author	Revision	Approved by	Date approved	Revision type
M Rasouli	r01	B Bordbar	16/09/2021	Draft
M Rasouli	r01a	B Bordbar	22/09/2021	Final
M Rasouli	r01a	B Bordbar	22/09/2021	Minor adjustments

File name: t21.227.mr.r01b

Author: Mohammad Rasouli

Project manager: Mohammad Rasouli

Client: Carcione Nominees

Project: Lot 446 North Baldivis

Document revision: r01b

Project number: t21.227

TABLE OF CONTENTS

1	INTRODUCTION	6
2	EXISTING SITUATION	8
2.1	1 Existing Land Use	8
2.2	2 Existing Road Network	8
2.3	3 Existing Traffic Volumes	10
2.4	4 Crash Data	10
2.5	5 PUBLIC TRANSPORT	10
2.6	PEDESTRIAN AND CYCLIST FACILITIES	11
3	PROPOSED DEVELOPMENT	12
3.1	1 PROPOSED SITE USE	12
3.2	PROPOSED ACCESS FOR ALL MODES.	12
4	CHANGES TO THE SURROUNDING ROAD NETWORK	14
5	INTEGRATION WITH SURROUNDING AREA	15
6	TRAFFIC ASSESSMENT	16
6.1	1 ASSESSMENT PERIOD	16
6.2	TRIP GENERATION AND DISTRIBUTION.	16
	6.2.1 EXISTING TRIP GENERATION	
	6.2.2 PROPOSED DEVELOPMENT TRAFFIC GENERATION	16
6.3	3 TRAFFIC DISTRIBUTION	19
6,4		
6.5		
6.6		
6.7		
6.8	8 TRAFFIC NOISE AND VIBRATION	25
7	PROVISION FOR HEAVY VEHICLES	26
8	PARKING	27
9	PUBLIC TRANSPORT ACCESS	28
10	PEDESTRIAN AND CYCLIST ACCESS	29
11	CONCLUSIONS	30

APPENDIX A: PROPOSED DEVELOPMENT PLAN

APPENDIX B: SIDRA ANALYSIS

APPENDIX C: TURN PATH ANALYSIS

REPORT FIGURES

Figure 1: Spires LSP with Proposed Amendment	7
Figure 2: Existing land use (April 2021)	8
Figure 3: Existing Nairn Dr / Eighty Rd / Amazon Dr intersection	9
Figure 4: Existing public transport	10
Figure 5: Perth Bike Map	11
Figure 6: Proposed development crossovers	13
Figure 7: Spires Estate Structure Plan	14
Figure 8: Weekday PM peak hour traffic generated by the proposed development	19
Figure 9: 2031 total weekday PM peak hour traffic	20
Figure 10: Network model – SIDRA layout	22
Figure 11: 2031 weekday PM peak hour network analysis – queue storage ratio	24

REPORT TABLES

Table 1: Proposed Land use	12
Table 2: Trip generation of the proposed development	18
Table 3: Passing and non-passing component of the trip generation	18

1 Introduction

This Transport Impact Assessment (TIA) has been prepared by Transcore on behalf of Carcione Nominees. The subject of this report is the proposed tavern and bottle shop to be located at Lot 446 North Baldivis.

Transcore on behalf of Carcione Nominees Pty Ltd prepared a Transport Impact Assessment (TIA) report in June 2012 and a final version in April 2014 for the Spires Estate Local Structure Plan (LSP) in the City of Rockingham. The LSP area includes various lots east and west of Eighty Road in Baldivis, south of Fifty Road and west of Baldivis Road.

The LSP area also includes a neighbourhood activity centre located on the western side of Nairn Drive, north of Amazon Drive. Current plans indicate this neighbourhood centre would entail approximately 6,200m2 floor area (NLA), plus a proposed tavern and bottle shop of approximately 1,200m2 floor area as a proposed expansion of this neighbourhood activity centre northwest along Amazon Drive. Figure 1 shows the location of the proposed tavern within the amended Spires LSP.

Transcore prepared a TIA for the Spires Baldivis Shopping Centre in June 2021. The purpose of this TIA is the proposed tavern and bottle shop. The site currently is vacant and will be located to the west of the proposed Spires Shopping Centre.

This TIA will review the traffic generation and distribution of the proposed development and will assess the impact of the development traffic on the surrounding road network and the development crossovers on Yellowstone Road and Amazon Drive. A SIDRA network model was developed for the development crossovers and the proposed priority-controlled T-intersection of Yellowstone Road and Amazon Drive for year 2031.



Figure 1: Spires LSP with Proposed Amendment

2 Existing Situation

2.1 Existing Land Use

The subject site is vacant and does not generate any traffic. As shown in **Figure 2** substantial residential development has already occurred east of Eighty Road and residential subdivision development is progressing to the northwest of the subject site. The vegetated land south of Amazon Drive / west of Nairn Drive is a Bush Forever site and will not be developed, whereas the land north of the subject site is planned for future residential subdivision development.



Figure 2: Existing land use (April 2021)

2.2 Existing Road Network

Nairn Drive is covered by an Other Regional Roads reservation in the MRS and is planned as a future dual carriageway road with two lanes in each direction. Nairn Drive is currently constructed south of Amazon Drive with one lane each way as the first carriageway of that future dual carriageway standard. This section of Nairn Drive has a posted speed limit of 70km/h and no direct driveway access from abutting residential or commercial properties.

Eighty Road connects to Nairn Drive north of Amazon Drive and currently operates as the continuation of this through route until future construction of the future Nairn Drive extension. It is constructed as a two-lane rural road and has a posted speed limit of 70km/h.

Amazon Drive is constructed east of Nairn Drive but not yet constructed on the western side of Nairn Drive. It is constructed as a two-lane, single-carriageway urban road and the default built up area speed limit of 50km/h applies.

The Nairn Dr / Eighty Rd / Amazon Dr intersection is currently constructed as a Give Way controlled T-intersection with left and right turn lanes provided on each approach as appropriate, as shown in **Figure 3**.

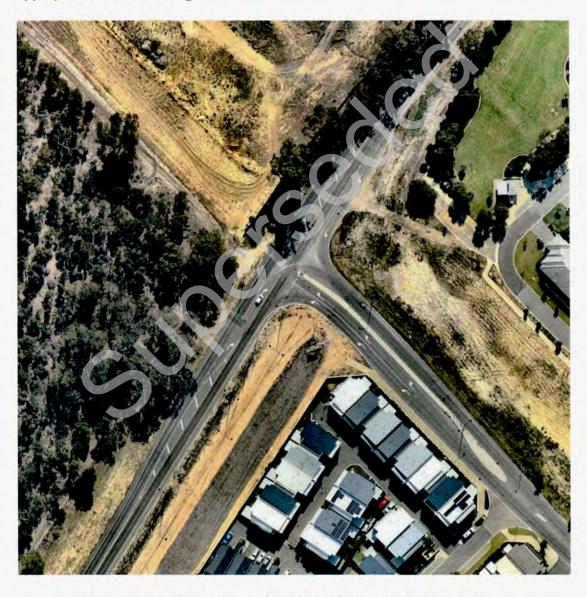


Figure 3: Existing Nairn Dr / Eighty Rd / Amazon Dr intersection

2.3 Existing Traffic Volumes

A 7-day traffic count (7-13 December 2020) of existing traffic volumes on Eighty Road south of Fifty Road recorded average weekday traffic flows of 5,338 vehicles per day (vpd) with 4,513vpd on Saturday and 3,908vpd on Sunday.

2.4 Crash Data

Information available on the Main Roads WA website indicates that no crashes were recorded at the Nairn Dr / Eighty Rd / Amazon Dr intersection during the 2016 - 2020 five-year period.

2.5 Public Transport

The closest existing bus route to the subject site is bus route No. 568 from Warnbro Train Station, which currently travels along Eighty Road in the vicinity of the subject site, as shown in **Figure 4**. It currently provides hourly service every day and more frequent service (up to 3 per hour) during weekday AM and PM peak periods.

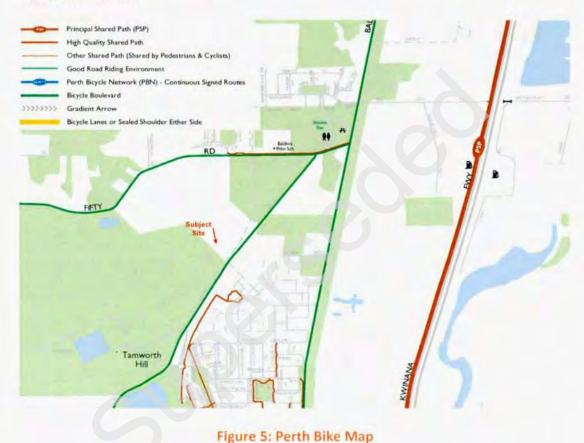


Figure 4: Existing public transport

2.6 Pedestrian and Cyclist Facilities

There is an existing footpath on the southern side of Amazon Drive east of Nairn Drive, as can be seen in **Figure 3**. Nairn Drive and Eighty Road do not have footpaths in the vicinity of the subject site. However, Nairn Drive south of Amazon Drive has been constructed with on-road cycle lanes or hard shoulders suitable for use by cyclists.

The Perth Bike Maps (see **Figure 5**) published by the Department of Transport indicate that Nairn Drive, Eighty Road, Fifty Road and Baldivis Road are considered as good road riding environment.



t21.227.mr.r01b | Proposed Tavern, Amazon Drive, Baldivis

3 Proposed Development

3.1 Proposed Site Use

Appendix A shows the proposed development plan. The development entails a tavern and a bottle shop as detailed in **Table 2**.

Table 1: Proposed Land use

Land use	Quantity (GFA) m ²
Tavern	760
Bottle shop	460

Deliveries and waste collections will be accommodated within the development site. The proposed delivery zone in front of the shop storage area will accommodate service vehicles up to 8.8m long.

Pedestrians will access the development from the proposed pedestrian paths provided on Yellowstone Road and Amazon Drive.

The development plan provides 67 parking bays including 2 accessible bays. It is understood that the proposed parking supply is satisfactory.

3.2 Proposed Access for all Modes

The proposed development provides one full movement crossovers on Yellowstone Road and one full movement crossover on Amazon Drive as shown in Figure 6.

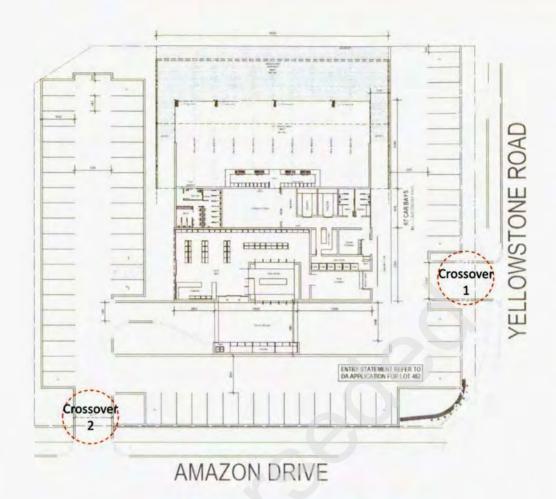


Figure 6: Proposed development crossovers

4 Changes to the Surrounding Road Network

Nairn Drive will ultimately be extended northwards from the Amazon Drive intersection and Eighty Road will then connect to Amazon Drive further east through the local road network, as shown in the Spires Estate structure plan at **Figure 7**. Amazon Drive will be constructed north-westwards from Nairn Drive as part of the development of the structure plan area.



Figure 7: Spires Estate Structure Plan

The applicant is currently liaising with Main Roads WA for final approval of the proposed signalised intersection at Nairn Drive / Eighty Rd / Amazon Rd. This signalised intersection is to be constructed concurrently with the proposed development on the subject site.

5 Integration with Surrounding Area

The proposed development is consistent with the planning of the Spires Estate Structure Plan.

6 Traffic Assessment

6.1 Assessment Period

An assessment year of 2031 has been adopted for this TIA, which is consistent with recent analysis undertaken for a proposed amendment to the Spires Estate structure plan.

The combined peak of the development and road network traffic would occur during the weekday PM peak period. Accordingly, traffic analysis has been undertaken for 2031 weekday PM peak periods.

It should be noted that the level of background traffic on surrounding roads are much less during the post development compared with 10-year post development scenario and therefore, the 2031 traffic analysis is the key analysis for the purpose of this TIA. The transport modelling and analysis undertaken in this TIA confirms that the proposed standard of the surrounding road network will accommodate the 2031 (10-year post development) traffic projections and therefore the road network should also accommodate the post development traffic projections.

6.2 Trip Generation and Distribution

6.2.1 Existing trip generation

The site is currently vacant and would not generate any traffic.

6.2.2 Proposed Development Traffic Generation

The traffic volumes likely to be generated by the proposed development have been estimated in accordance with ITE Trip Generation Manual 10th Edition.

Accordingly, the trip rates which were used to estimate the trip generation of the proposed development are as follows:

Liquor Store (899) – 1000 Sq. Ft. GFA (used for bottle shop)

- ♣□Daily vehicle trips = 101.49 per 1000 Sq. Ft. GFA.
- Levening peak hour vehicle trips = 16.37 per 1000 Sq. Ft. GFA.

Quality Restaurant (931) - 1000 Sq. Ft. GFA (used for restaurant)

- ♣ Daily vehicle trips = 83.84 per 1000 Sq. Ft. GFA.
- Morning peak hour vehicle trips = 0.73 per 1000 Sq. Ft. GFA.

Livening peak hour vehicle trips = 7.80 per 1000 Sq. Ft. GFA.

The catchment area of the proposed tavern is expected to be mainly local residents and therefore some non-motorised patronage including walking is expected for the patrons. Other patrons who are not within walking distance may use their vehicles (including ride share), Uber or taxis. Therefore, the proposed ITE trip rates are expected to be conservative for the proposed Tavern however, in order to provide a robust traffic assessment, the ITE trip rates were used for the purpose of this TIA.

Further, cross trade between the bottle shop and the restaurant is expected. This will include patrons who purchase drinks from bottle shop for their meals at the restaurant, or patrons who purchase drinks to take home after eating at the restaurant. Again, in order to provide a robust assessment, zero cross trade was assumed for the proposed development.

Accordingly, it is conservatively estimated that the proposed development would generate a total of approximately 1,190 daily vehicle trips with about 6 and 145 trips during the AM and PM peak hours respectively (outlined in **Table 2**).

Considering that the development would not start operation during the morning road network peak hours, therefore very little traffic (6vph) was assumed during the AM road network peak hour (7:00-8:00) mainly for staff and for operational purposes.

Table 3 illustrates the passing and non-passing traffic component of the trips generated by the proposed development sourced from ITE guidelines. As evident, the development would add about 45 trips to the surrounding road network traffic when taking into account the passing trips of the development. This level of traffic increase is relatively insignificant and would not impact the traffic operation of the proposed road network and intersections significantly.

Table 2: Trip generation of the proposed development

Land use	Quantitu	Quantity Daily Rate	AM Peak PM	DM Dook	PM Peak Daily Trips	AAA Trins	PM Trips AM		M	PM		
Land use	Quantity	Dally Rate	AIVI PEAK	PIVI PEAK		Alvi Irips	rivi Imps	IN	OUT	IN	OUT	
	460	1.0924	0.00	0.18	503	0	81	0	0	41	40	
	760	0.9024	0.01	0.08	686	6	64	3	3	43	21	
		Total			1189	6	145	3	3	84	61	

Table 3: Passing and non-passing component of the trip generation

Passing Ti	rade Cor	nponent
------------	----------	---------

Passing Trade	AM		PM		
	Daily Trips	IN	OUT	IN	OUT
89%	448	0	0	36	36
44%	302	1	1	19	9
	750	1	1	55	45
	89%	89% 448 44% 302	89% 448 0 44% 302 1	89% 448 0 0 44% 302 1 1	Baily Trips IN OUT IN 448 0 0 36 44% 302 1 1 19

Non Passing Trade Component

Daily Trips	AM		PM	
	IN	OUT	IN	OUT
55	0	0	5	4
384	2	2	24	12
439	2	2	29	16

6.3 Traffic distribution

The distribution of traffic to and from the proposed development for year 2031 has been estimated by considering access and egress routes to and from the subject site. Development traffic distribution on surrounding roads and intersections during the PM peak hour is illustrated in **Figure 8**.

As evident the traffic distributed on surrounding roads and intersections (in particular the proposed signalised intersection of Nairn Drive/ Amazon Drive) are relatively minimal, and the road network around it is designed specifically to service and accommodate the development and the surrounding structure plan traffic. SIDRA analysis was undertaken for the development crossovers and intersection of Yellowstone Road/ Amazon Drive to confirm satisfactorily operations with no blockage of the crossovers during the PM peak hour.

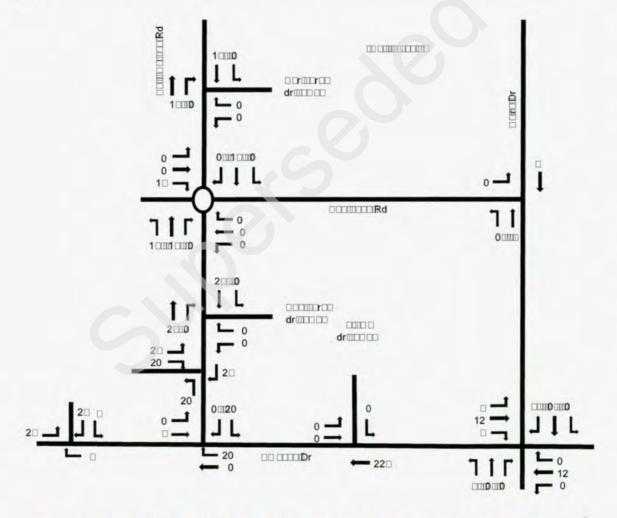


Figure 8: Weekday PM peak hour traffic generated by the proposed development

6.4 Traffic Flows

The 2031 traffic projections have been sourced from Transcore's TIA for the Spires Baldivis Shopping Centre (June 2021). The proposed development traffic manually was added to the 2031 traffic projections and illustrated in **Figure 9**.

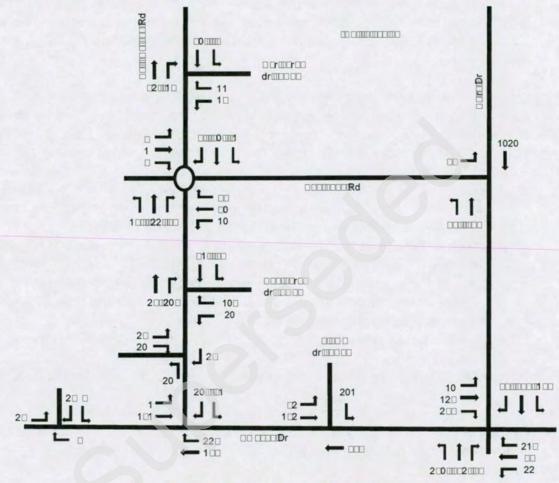


Figure 9: 2031 total weekday PM peak hour traffic

6.5 Analysis of Development's Crossovers and Intersections

A SIDRA Network model was developed for the proposed development crossovers and the intersection of Yellowstone Road/ Amazon Drive in order to assess their operations in 2031 scenario for PM peak hour. Relevant heavy vehicle settings and parameters were updated and incorporated in the SIDRA model in accordance with Main Roads WA's latest requirements.

Capacity analysis using the SIDRA computer software package was undertaken. This package is a commonly used intersection-modelling tool by traffic engineers for all types of intersections. SIDRA outputs are presented in the form of Degree of Saturation, Level of Service, Average Delay and 95% Queue. These items are defined as follows:

- ♣ Degree of Saturation: is the ratio of the arrival traffic flow to the capacity of the approach during the same period. The Degree of Saturation ranges from close to zero for varied traffic flow up to one for saturated flow or capacity.
- Level of Service: is the qualitative measure describing operational conditions within a traffic stream and the perception by motorists and/or passengers. In general, there are 6 levels of service, designated from A to F, with Level of Service A representing the best operating condition (i.e. free flow) and Level of Service F the worst (i.e. forced or breakdown flow).
- Average Delay: is the average of all travel time delays for vehicles through the intersection.
- 95% Queue: is the queue length below which 95% of all observed queue lengths fall.

The results of the SIDRA analysis are attached in **Appendix C**. A conceptual diagram of the SIDRA model coded for the analysis is shown in **Figure 10**.



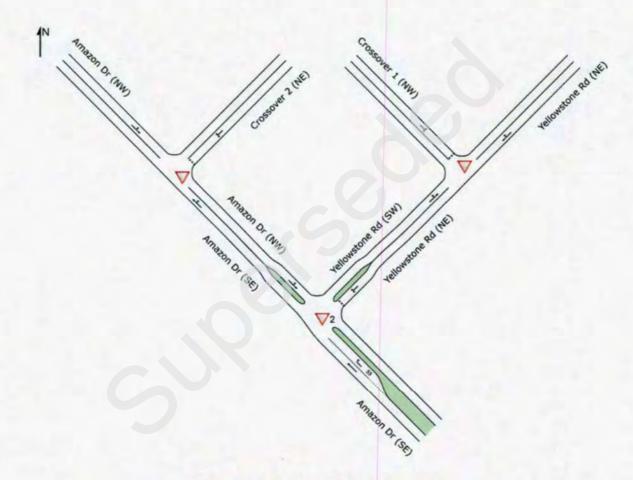


Figure 10: Network model – SIDRA layout

SIDRA analysis results indicate that the proposed development crossovers on Yellowstone Road and Amazon Drive and the intersection of Yellowstone Road/ Amazon Drive would operate satisfactorily with good level of services and with moderate queues and delays during weekday PM peak hour for year 2031.

Relevant SIDRA network outputs were reviewed for analysed peak hour to assess the operation of the proposed development crossovers on Yellowstone Road and Amazon Drive and the intersection of Yellowstone Road/ Amazon Drive as a network.

As detailed in **Figure 11** no queue back from the intersection to the development crossovers is reported during 2031 PM peak hour. Additionally, no queuing from the development crossovers back to the intersection is reported in 2031 PM peak hour.



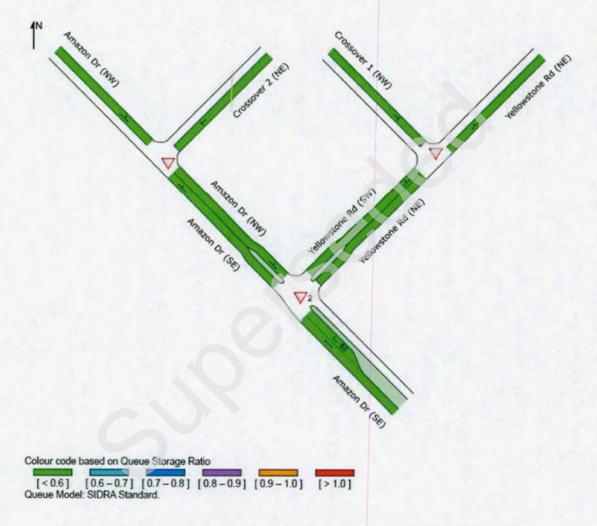


Figure 11: 2031 weekday PM peak hour network analysis - queue storage ratio

6.6 Impact on Surrounding Roads

The WAPC Transport Impact Assessment Guidelines (2016) provides guidance on the assessment of traffic impacts:

"As a general guide, an increase in traffic of less than 10 per cent of capacity would not normally be likely to have a material impact on any particular section of road, but increases over 10 per cent may. All sections of road with an increase greater than 10 per cent of capacity should therefore be included in the analysis.

For ease of assessment, an increase of 100 vehicles per hour for any lane can be considered as equating to around 10 per cent of capacity. Therefore, any section of road where the structure plan traffic would increase flows by more than 100 vehicles per hour for any lane should be included in the analysis."

The increase in traffic flows as a result of the proposed development is estimated to be below the quoted WAPC threshold and therefore no further detailed analysis is warranted. As detailed in **Figure 8**, the proposed development will not increase traffic on any lanes on the surrounding road network by more than 100vph.

6.7 Impact on Neighbouring Areas

The traffic generated by the proposed development would have insignificant impact on surrounding areas and the road network has been designed to accommodate this level of additional traffic.

6.8 Traffic Noise and Vibration

Due to the location of the proposed development with respect to the surrounding land uses traffic noise and vibration are relevant only to the residential areas directly fronting major local and regional roads which, at this location, are limited.

It generally requires a doubling of traffic volumes on a road to produce a perceptible 3dB(A) increase in road noise. The proposed development will not increase traffic volumes or noise on surrounding roads anywhere near this level.



7 Provision for Heavy Vehicles

Smaller trucks (service vehicles up to 8.8 long) are planned to undertake delivery and waste collection on site. Service vehicles would enter the site from Yellowstone Road crossover and park at the delivery zone in front of the shop storage area and then exit via the same crossover after servicing.

Turn path analysis undertaken for 8.8m service truck confirm satisfactory access, egress and circulation within the site. Minor adjustments to the Yellowstone crossover are required to facilitate the access of the trucks to the site. Turn path analysis also confirms satisfactory traffic circulation of a passenger car with trailer using the bottle shop drive thru facility.

The turn path plans are included in Appendix C.

8 Parking

The proposed development will provide 67 parking bays inclusive of 2 ACROD bays and 1 service yard. It is considered that the parking provision will adequately meet the parking demand of the proposed development considering the potential reciprocal parking arrangement due to the different peak operating hours of the various land uses.

It should be noted that the restaurant is expected to experience its highest car patronage later in the evenings (for dinner around 6-8pm) while the bottle shop would have a higher proportion of customers during the road network PM peak period (around 4-6pm) when more traffic is passing the site.



9 Public Transport Access

The existing public transport services within the vicinity of site are described in **Section 2.6** of this report.

10Pedestrian and Cyclist Access

Pedestrian and cyclist's facilities are described in Section 2.7 of this report.



11 Conclusions

This Transport Impact Assessment (TIA) has been prepared by Transcore on behalf of Carcione Nominees. The subject of this report is the proposed tavern and bottle shop to be located at Lot 446 North Baldivis.

The traffic analysis undertaken in this report shows that the traffic generation of the proposed development is relatively low and as such would not have any significant impact on the surrounding road network.

Turn path analysis undertaken indicates that 8.8m service vehicles can access and egress the site satisfactorily. Turn path analysis also confirms satisfactory traffic circulation of a passenger car and trailer using the bottle shop drive thru facility.

There are 67 parking bays proposed on site inclusive of 2 ACROD bays. It is considered that the parking provision will adequately meet the parking demand of the proposed development.

A SIDRA Network model was developed for the proposed development crossovers and the intersection of Yellowstone Road/ Amazon Drive in order to assess their operations in 2031 scenario for PM peak hour.

The SIDRA network results indicate satisfactory operations of the intersection of Yellowstone Road/ Amazon Drive and development crossovers with minimal queues and delays.

It is concluded that the findings of this Transport Impact Assessment are supportive of the proposed development.



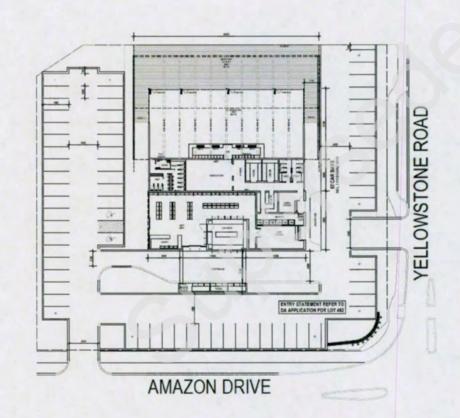
Appendix A

PROPOSED DEVELOPMENT PLAN



transport planning traffic engineering modelling

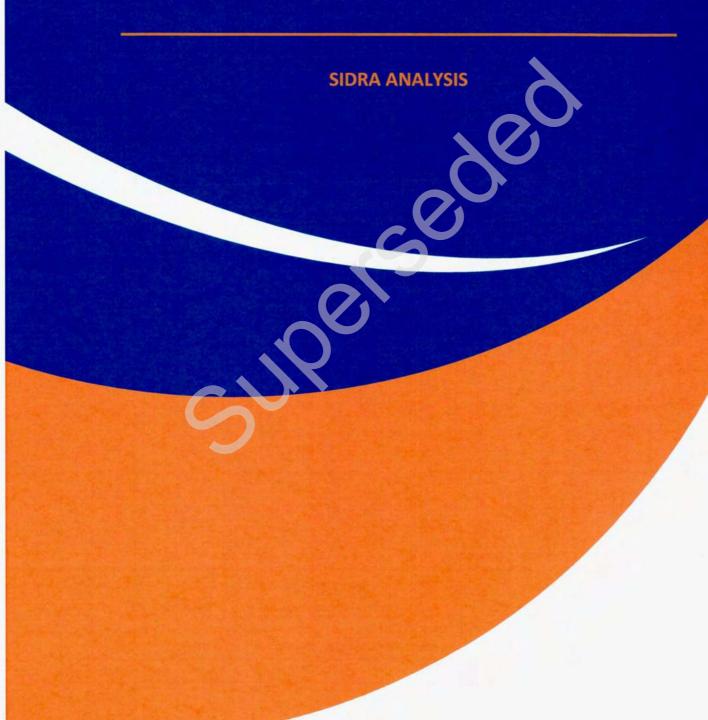
years anniversary



and, beforeign to their one-settle off environment, brody, and pright model before connecting. All programmes were to be a connected with the text firing take of neutronic expensed describers and referred formed by the state.



Appendix B



MOVEMENT SUMMARY

V Site: 2 [Amazon-Yellowstone 2031PM T-intersection (Site Folder: 2031 - PM)]

Amazon Dr / Yellowstone Rd T-intersection 2031 PM peak hour Site Category: (None) Give-Way (Two-Way)

Addition	cie Mo	vement	Perfo	rmanc	e									
Mov ID	Tum	DEM/ FLOV [Total veh/h		ARRI FLO [Total veh/h	WS HV]	Deg. Satn v/c	Aver Delay sec	Level of Service		VCK OF EUE Dist] m	Prop. Que	Effective A Stop Rate	iver. No. Cycles	Aver. Speed km/h
South	East: A	Amazon D	r (SE)							-50				
5	T1	162	3.3	162	3.3	0.086	0.0	LOSA	0.0	0.0	0.00	0.00	0.00	50.0
6	R2	236	3.3	236	3.3	0.159	4.8	LOSA	0.8	5.9	0.33	0.56	0.33	23.9
Appro	oach	398	3.3	398	3.3	0.159	2.8	NA	0.8	5.9	0.19	0.33	0.19	30.3
North	East: Y	ellowstor	ne Rd (NE)										
7	L2	54	3.3	54	3.3	0.076	3.2	LOSA	0.3	2.3	0.34	0.54	0.34	25.5
9	R2	21	3.0	21	3.0	0.076	7.0	LOSA	0.3	2.3	0.34	0.54	0.34	18.4
Appro	oach	75	3.2	75	3.2	0.076	4.2	LOSA	0.3	2.3	0.34	0.54	0.34	24.3
North	West A	Amazon [Or (NW)										
10	L2	1	3.0	1	3.0	0.101	4.6	LOSA	0.0	0.0	0.00	0.00	0.00	49.8
11	T1	191	3.3	191	3.3	0.101	0.0	LOSA	0.0	0.0	0.00	0.00	0.00	49.8
Appro	oach	192	3.3	192	3.3	0.101	0.0	NA	0.0	0.0	0.00	0.00	0.00	49.8
All Ve	hicles	664	3.3	664	3.3	0.159	2.2	NA	0.8	5.9	0.16	0.26	0.16	35.9

MOVEMENT SUMMARY

V Site: [Yellowstone - Crossover 1 - 2031PM (Site Folder: 2031 - PM)]

MHI Network: N101 [2031-PM (Network Folder: General)]

MI Network: N101 [2031- PM

(Network Folder: General)]

Site Category: (None) Give-Way (Two-Way)

Vehi	cle Mo	vement	Perfo	rmano			-	-						
Mov ID	Tum	DEMA FLOV [Total vel/h		ARR FLO Total	WS	Deg. Satn v/c		Level of Service		ACK OF EUE Dist]	Prop. Que	Effective/ Stop Rate	lver. No. Cycles	Aver. Speed km/h
Norti	East: Y	ellowston	e Rd (NE)										
2	T1	54	3.0	54	3.0	0.049	0.4	LOSA	0.2	1.3	0.24	0.21	0.24	38.2
26	R2	29	0.0	29	0.0	0.049	6.2	LOSA	0.2	1.3	0.24	0.21	0.24	37.1
Appr	oach	83	1.9	83	1.9	0.049	2.5	NA	0.2	1.3	0.24	0.21	0.24	37.7
North	West: C	Crossover	1 (NV	V)										
27	L2	29	0.0	29	0.0	0.044	5.4	LOSA	0.2	1.1	0.31	0.58	0.31	34.0
29	R2	21	0.0	21	0.0	0.044	5.8	LOSA	0.2	1.1	0.31	0.58	0.31	27.9
Appr	oach	51	0.0	51	0.0	0.044	5.6	LOSA	0.2	1.1	0.31	0.58	0.31	32.3
Sout	hWest: \	Yellowstor	ne Rd	(SW)										
30	L2	21	0.0	21	0.0	0.125	2.6	LOSA	0.0	0.0	0.00	0.06	0.00	22.1
8	T1	216	3.3	216	3.3	0.125	0.0	LOSA	0.0	0.0	0.00	0.06	0.00	53.2
Appr	oach	237	3.0	237	3.0	0.125	0.3	NA	0.0	0.0	0.00	0.06	0.00	48.4
All V	ehicles	371	2.4	371	2.4	0.125	1.5	NA	0.2	1.3	0.10	0.17	0.10	42.5

MOVEMENT SUMMARY

V Site: [Amazon Dr-Crossover 2- 2031PM (Site Folder: 2031 - PM)]

Network: N101 [2031-PM (Network Folder: General)]

Site Category: (None) Give-Way (Two-Way)

Vehi	cle Mo	vement	Perfo	rmano	e		116	of V		K		400		
Mov ID	Turn	DEMA FLON [Total veh/h		ARRI FLO [Total veh/h	WS HV]	Deg Satn v/c	Aver Delay sec	Level of Service		ACK OF EUE Dist 1	Prop. Que	Effective A Stop Rate	cycles	Aver. Speed km/h
Sout	hEast: A	mazon [or (SE)											
5	T1	175	3.3	175	3.3	0.098	0.1	LOSA	0.1	0.5	0.04	0.03	0.04	49.6
6	R2	8	3.3	8	3.3	0.098	5.3	LOSA	0.1	0.5	0.04	0.03	0.04	40.4
Appr	oach	183	3.3	183	3.3	0.098	0.3	NA	0.1	0.5	0.04	0.03	0.04	49.4
North	East: C	rossover	2 (NE)										
7	L2	8	3.3	8	3.3	0.039	5.1	LOSA	0.1	1.0	0.34	0.59	0.34	25.0
9	R2	29	3.0	29	3.0	0.039	6.1	LOSA	0.1	1.0	0.34	0.59	0.34	42.4
Appr	oach	38	3.1	38	3.1	0.039	5.9	LOSA	0.1	1.0	0.34	0.59	0.34	41.3
North	West: A	mazon [or (NW)										
10	L2	29	3.0	29	3.0	0.113	4.6	LOSA	0.0	0.0	0.00	0.08	0.00	42.0
11	T1	183	3.3	183	3.3	0.113	0.0	LOSA	0.0	0.0	0.00	0.08	0.00	49.1
Appr	oach	213	3.3	213	3.3	0.113	0.7	NA	0.0	0.0	0.00	0.08	0.00	47.9
All V	ehicles	434	3.3	434	3.3	0.113	1.0	NA	0.1	1.0	0.05	0.10	0.05	48.0

Appendix D







Service vehicle exit

Vehicle Body Wheel Path 500mm Clearance Scale: 1:250 @ A3





Proposed Tavern, Amazon Drive, Baldivis Passenger Vehicle with Trailer Vehicle with trailer circulation

LEGEND

Vehicle Body Wheel Path 500mm Clearance

t21.227.sk03

13/09/2021

Scale: 1:250 @ A3



Appendix 4: Parking Control and Management Plan

Date: 06/12/2021



transport planning traffic engineering transport modelling

Technical Note: No 1a Project No: t21.134

Project: Proposed Tavern, Amazon Drive, Baldivis

Subject: Parking Control and Management Plan (PCMP)

INTRODUCTION

Transcore prepared a Transport Impact Assessment (TIA) for the proposed Spires Baldivis Shopping Centre in June 2021 and a TIA for the proposed Tavern at Lot 9005 Fifty Road in September 2021.

The shopping centre development was approved by the JDAP on 30 September 2021 with the following condition:

20. Prior to the commencement of the development, a reciprocal parking and access agreement is required to allow for access and parking of vehicles on the shopping centre land and the commercial centre land, to the satisfaction of the City of Rockingham.

With respect to the proposed Tavern, the City has requested for additional information as follow:

A Parking Control and Management Plan (PCMP) is required to be submitted with the Development Application in order to demonstrate how the proposed on-site and off-site vehicle parking will be provided and managed, and is to demonstrate how vehicle parking associated with the development will be managed, considering the peak parking demands of the respective uses within the future Shopping Centre.

Accordingly, Transcore has been engaged to prepare the PCMP as requested by the City.

In order to prepare the PCMP, Transcore established the peak parking demand of each individual land use within the proposed shopping centre, the commercial site and the tavern during a typical Friday and a typical Saturday to investigate the adequacy of the parking supply within the subject area. The subject area includes the shopping centre, the commercial site and the tavern and the section of Yellow Stone and Pantheon Roads fronting the proposed shopping centre and tavern. **Appendix A** shows the subject area.

This technical note documents the outcome of the parking assessments.

Address: 61 York Street, Subiaco WA 6008. P.O.Box 42 Subiaco WA 6904

Phone: +61 (08) 9382 4199 Fax: +61 (08) 9382 4177 Email: admin@transcore.net.au

Transcore Pty Ltd ACN 094 951 318 ABN 19 094 951 318



PARKING SUPPLY AND DEMAND

The parking supply and demand for the proposed shopping centre, the commercial site and the tavern is summarised in Table 1 (sourced from Planning Solutions reports).

Table 1: Car parking assessment

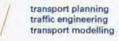
Use	Required	Provided	Surplus / Shortfall (+/-)
Tavern	144	67	-77
Shop	291	267	-24
Commercial (medical centre + Recreation)	80	118	+38
On-street bays		16	+16
Total shortfall cons	idering the on-s	treet bays	-57

As evident there is a 24-car bay shortfall for the shopping centre site which is compensated by a 38-bay surplus for the commercial site. In addition, 16 on-street parking bays are also provided on Yellowstone Road reservation which provides a surplus of 30 bays (38-24+16 = 30) for the proposed shopping centre and commercial sites combined (refer Figure 1 for the location of the proposed uses).



Figure 1: Proposed uses and vehicle access points





Condition 20 of the approval for the shopping centre requires an agreement to allow for access and parking of vehicles across the shopping centre site (which is split across both sides of Pantheon Road). Accordingly, it is proposed that a similar arrangement should apply for the tavern to permit reciprocal use of the shopping centre car parking bays.

It should be noted that majority of the shopping centre and commercial uses will be closed during peak times for the tavern (Friday and Saturday evenings). Therefore, it is expected that reasonable amount of parking bays would be available during the peak parking demand of the tavern.

Further assessments are undertaken in the next section of this technical note to establish the available parking bays at the shopping centre and commercial site for the reciprocal use of the proposed tavern.

It should be noted that:

- The catchment area of the proposed tavern is expected to be mainly local residents and therefore some non-motorised patronage including walking is expected for the patrons.
- Other patrons who are not within walking distance may use their vehicles (including ride share), Uber or taxis.
- Cross trade between the shopping centre, bottle shop and the restaurant is expected. This will include patrons who purchase drinks from bottle shop for their meals at the restaurant, or patrons who purchase drinks to take home after eating at the restaurant.

On this basis the parking requirement for the tavern as per the TPS is considered to be excessive in this instance.



PARKING ASSESSMENT

As the peak parking demand periods for the various land-uses within the subject site do not completely overlap, a daily parking demand profile was developed for each of the proposed land-uses to estimate the combined parking demand throughout the day (for a typical Friday and a typical Saturday). The peak parking demand of the tavern is expected to be during the Friday and Saturday evenings (after 6:00PM).

The percentage of parking demand assumptions outlined in **Table 1** and **Table 3** are conservative to result in a robust assessment and outcome.

Table 1: Percentage of parking demand temporal analysis - typical Friday

	Estimate	d Percenta	age of Parking D	exnand - Typical Frid
TIME	Tavern	Shop	Recreation Private	Medical Centre
6:00	0%	10%	0%	0%
7:00	0%	20%	10%	80%
8:00	0%	30%	20%	90%
9:00	5%	40%	50%	90%
10:00	5%	50%	80%	90%
11:00	20%	70%	90%	100%
12:00	40%	80%	100%	70%
13:00	40%	80%	90%	70%
14:00	30%	70%	80%	70%
15:00	20%	60%	70%	90%
16:00	30%	70%	60%	90%
17:00	40%	70%	50%	80%
18:00	80%	50%	40%	50%
19:00	100%	20%	10%	40%
20:00	80%	20%	0%	30%
21:00	70%	10%	0%	20%
Requirements based on TPS	144	291	50	30

515 468

surplus / shortfall (+/-)

7 -24

+38

The anticipated demand for car parking is then calculated by multiplying the anticipated percentage of parking demand for each land-use by its theoretical parking requirement. The estimated number of parking bays required are summarised in Table 2 (for a typical Friday) and **Table 4** (for a typical Saturday). The parking surplus (+)/ shortfall (-) for each land-use and time period is estimated by subtracting the total anticipated parking demand from the proposed number of bays provided (468 bays).



Table 2: Parking demand temporal analysis - typical Friday

	Estimated	Estimated Number of Parking Bays Required - Typical Friday						
TIME	Tavern	Shop	Recreation Private	Medical Centre	Total	Onsite Parking Surplus/Shortfall (468-Total)		
6:00	0	29	0	0	29	439		
7:00	0	58	5	24	87	381		
8:00	0	87	10	27	124	344		
9:00	7	116	25	27	176	292		
10:00	7	146	40	27	220	248		
11:00	29	204	45	30	308	161		
12:00	58	233	50	21	361	107		
13:00	58	233	45	21	356	112		
14:00	43	204	40	21	308	160		
15:00	29	175	35	27	265	203		
16:00	43	204	30	27	304	164		
17:00	58	204	25	24	310	158		
18:00	115	146	20	15	296	172		
19:00	144	58	5	12	219	249		
20:00	115	58	0	9	182	286		
21:00	101	29	0	6	136	332		

As detailed in Table 2, the maximum combined parking demand for a typical Friday is anticipated to occur at 12.00PM. During this period, it is estimated that a surplus of 107 bays would be available on the subject site. Taven peak parking demand generally starts after 5:00PM with at least 158 parking bays potentially available within the subject site at this time.

It should be noted that the shopping centre parking demand can be accommodated within the provided 267 bays and does not need reciprocal arrangements with the commercial site during the typical Fridays.

Similarly, As detailed in Table 4, the maximum combined parking demand for a typical Saturday is anticipated to occur at 12.00PM and 13:00PM. During these periods, it is estimated that a surplus of 44 to 48 bays would be available. Further, surplus of more than 180 bays would be available in the Saturday afternoon when the tavern parking demand starts to increase.

It should be noted that the parking shortfall of about 8 bays (291-267-16 = 8) would be expected for the shopping centre during the Saturday 12.00PM and 13:00PM. Therefore, reciprocal parking between the shopping centre and commercial site would be helpful for Saturdays.



Table 3: Percentage of Parking demand temporal analysis - typical Saturday

	Estimate	ed Percenta	ge of Parking Dema	nd - Typical Weekday
TIME	Tavern	Shop	Recreation Private	Medical Centre
6:00	0%	10%	0%	0%
7:00	0%	20%	1.0%	80%
8:00	0%	30%	20%	90%
9:00	5%	40%	50%	100%
10:00	5%	50%	80%	90%
11:00	20%	70%	90%	80%
12:00	40%	100%	90%	100%
13:00	40%	100%	100%	70%
14:00	30%	80%	80%	70%
15:00	20%	70%	70%	90%
16:00	30%	70%	60%	90%
17:00	40%	60%	50%	80%
18:00	70%	50%	40%	50%
19:00	90%	30%	10%	5%
20:00	100%	30%	0%	0%
21:00	70%	10%	0%	0%
Requirements based on TPS	144	291	50	30
Provided	67	267	1	18
surplus / shortfall (+/-)	-77	-24		38

Table 4: Parking demand temporal analysis - typical Saturday

	Estim	ed -	Onsite Parking			
TIME	Tavern	Shop	Recreation Private	Medical Centre	Total	Surplus/Shortfall (468-Total)
6:00	0	29	0	0	29	439
7:00	0	58	5	24	87	381
8:00	0	87	10	27	124	344
9:00	7	116	25	30	179	289
10:00	7	146	40	27	220	248
11:00	29	204	45	24	302	167
12:00	58	291	45	30	424	44
13:00	58	291	50	21	420	48
14:00	43	233	40	21	337	131
15:00	29	204	35	27	295	174
16:00	43	204	30	27	304	164
17:00	58	175	25	24	281	187
18:00	101	146	20	15	281	187
19:00	130	87	5	2	223	245
20:00	144	87	0	0	231	237
21:00	101	29	0	0	130	338



In order to establish if the surplus parking bays at the shopping centre (regardless of the commercial site bays) in the afternoon/ evening would be sufficient to accommodate the theoretical parking short fall of the proposed tavern, the total parking requirement of the tavern and the shopping centre (except the commercial site) was calculated and compared with the total parking supply for the tavern, shopping centre and on-street bays along Yellowstone Road (67+267+16 = 350) for different times of a typical Friday and Saturday. **Table 5** and **Table 6** summarise the parking assessment for the proposed tavern and the shopping centre for a typical Friday and Saturday respectively.

Table 5: Tavern and shopping centre parking assessment (typical Friday)

		Typical Friday							
TIME	Tavern and shop parking requirements	Tavern and shop parking supply	Parking Surplus/Shortfall						
6:00	29	350	321						
7:00	58	350	292						
8:00	87	350	263						
9:00	124	350	226						
10:00	153	350	197						
11:00	233	350	118						
12:00	290	350	60						
13:00	290	350	60						
14:00	247	350	103						
15:00	203	350	147						
16:00	247	350	103						
17:00	261	350	89						
18:00	261	350	89						
19:00	202	350	148						
20:00	173	350	177						
21:00	130	350	220						

As evident (from Table 5 and 6) during a typical Friday and Saturday there is plenty of parking bays available at the shopping centre and reciprocal parking between the Tavern and shopping centre should be sufficient without any dependency to the commercial site.



Table 6: Tavern and shopping centre parking assessment (typical Saturday)

		Typical Frid	ay
TIME	Tavern and shop parking requirements	Tavern and shop parking supply	Parking Surplus/Shortfall
6:00	29	350	321
7:00	58	350	292
8:00	87	350	263
9:00	124	350	226
10:00	153	350	197
11:00	233	350	118
12:00	349	350	1
13:00	349	350	1
14:00	276	350	74
15:00	233	350	118
16:00	247	350	103
17:00	232	350	118
18:00	246	350	104
19:00	217	350	133
20:00	231	350	119
21:00	130	350	220

CONCLUSION

the City has requested for additional information with respect to the proposed tavern (located at Lot 9005 Fifty Road) including a Parking Control and Management Plan (PCMP) in order to demonstrate how the proposed on-site and off-site vehicle parking will be provided and managed, and to demonstrate how vehicle parking associated with the development will be managed, considering the peak parking demands of the respective uses within the future Shopping Centre.

In order to address the City's request, Transcore established the peak parking demand of each individual land use within the proposed shopping centre, the commercial site and the tavern during a typical Friday and a typical Saturday (critical parking demand days for tavern) to investigate the adequacy of the parking supply.

The analysis undertaken indicates that the peak parking demand of the respective land uses within the proposed shopping centre, the commercial site and the tavern are different and therefore, reciprocal parking can be considered.





Parking assessments undertaken indicates that reciprocal parking would be required for the proposed shopping centre and the commercial site (to the north of Pantheon Road) during the typical Saturdays (around 12:00PM and 13:00PM).

Reciprocal parking arrangements also would be required between the proposed tavern and the shopping centre mainly for the Friday and Saturday evenings when the parking demand of the tavern is at its peak.

Condition 20 of the approval for the shopping centre requires an agreement to allow for access and parking of vehicles across the shopping centre site, and therefore a similar arrangement is proposed for the tavern to permit reciprocal use of the shopping centre car parking bays.

Appendix A

PROPOSED SUBJECT SI





Appendix 5: Bushfire Management Plan Bushfire Management Plan:

Development Application: Whitehorse Tavern at Lot 446, Baldivis

Baltavern Pty Ltd





Bushfire Management Plan: Development Application: Whitehorse Tavern at Lot 446, Baldivis | Baltavern Pty Ltd

DOCUMENT TRACKING

Project Name	Bushfire Management Plan:
	Development Application: Whitehorse Tavern at Lot 446, Baldivis
Project Number	21PER-20086
Project Manager	Daniel Panickar
Prepared by	Maitland Ely
Reviewed by	Daniel Panickar (BPAD Level 3 – 37802)
Approved by	Daniel Panickar (BPAD Level 3 – 37802)
Status	Final
Version Number	v2
Last saved on	1 October 2021

This report should be cited as 'Eco Logical Australia 2020. Bushfire Management Plan: Development Application: Whitehorse Tavern at Lot 446, Baldivis. Prepared for Baltavern Pty Ltd.

ACKNOWLEDGEMENTS

This document has been prepared by Eco Logical Australia Pty Ltd with support from Baltavern Pty Ltd.

Disclaimer

This document may only be used for the purpose for which it was commissioned and in accordance with the contract between Eco Logical Australia Pty Ltd and the client. The scope of services was defined in consultation with Carcione Nominees Pty Ltd, by time and budgetary constraints imposed by Carcione Nominees Pty Ltd, and the availability of reports and other data on the subject area. Changes to available information, legislation and schedules are made on an ongoing basis and readers should obtain up to date information. Eco Logical Australia Pty Ltd accepts no liability or responsibility whatsoever for or in respect of any use of or reliance upon this report and its supporting material by any third party. Information provided is not intended to be a substitute for site specific assessment or legal advice in relation to any matter. Unauthorised use of this report in any form is prohibited.

Template 2.8.1

Version control		
Version	Purpose	
v1	Draft – Submission to client	
v2	Final – For submission with Development Application	

Contents

1. Introduction	1
1.1 Proposal details	
1.2 Purpose and application of the plan	1
1.3 Environmental considerations	1
2. Bushfire assessment results	5
2.1 Bushfire assessment inputs	5
2.1.1 Fire Danger Index	5
2.1.2 Vegetation classification and slope under vegetation	5
2.2 Bushfire assessment outputs	7
2.2.1 BAL assessment	7
2.2.2 Method 1 BAL assessment	7
2.3 Identification of issues arising from the BAL assessment	8
3. Assessment against the Bushfire Protection Criteria	10
3.1 Compliance	10
3.2 Additional Bushfire Requirements	
4. Implementation and enforcement	13
5. Conclusion	14
6. References	15
Appendix A – Classified Vegetation Photos	16
Appendix B – Standards for Asset Protection Zones	17
Appendix C - Vehicular access technical requirements (WAPC 2017)	19
List of Figures	
Figure 1: Site overview	2
Figure 2: Site Plan	3
Figure 3: Bushfire Prone Areas	4
Figure 4: Vegetation classification	
Figure 5: Bushfire Attack Level (BAL) Contours	
Figure 6: Spatial representation of the bushfire management strategies	
Figure 7: Illustrated tree canopy cover projection (WAPC 2017)	17

Bushfire Management Plan: Development Application: Whitehorse Tavern at Lot 446, Baldivis | Baltavern Pty Ltd

List of Tables

Table 1: Classified vegetation as per AS 3959: 2018	5
Table 2: Method 1 BAL calculation (BAL contours)	7
Table 3: Summary of solutions used to achieve bushfire protection criteria	10
Table 4: Proposed work program	13

Bushfire Management Plan: Development Application: Whitehorse Tavern at Lot 446, Baldivis | Baltavern Pty Ltd

1. Introduction

1.1 Proposal details

Eco Logical Australia (ELA) was commissioned by Baltavern Pty Ltd. to prepare a Bushfire Management Plan (BMP) to support a development application for the Whitehorse Tavern future Lot 446, Baldivis (hereafter referred to as the subject site, Figure 1). The proposed development is currently situated at Lot 9005 Nairn Drive, Baldivis and will result in a carpark and the Whitehorse Tavern.

The subject site is within a designated bushfire prone area as per the Western Australia State Map of Bush Fire Prone Areas (DFES 2019; Figure 3), which triggers bushfire planning requirements under State Planning Policy 3.7 Planning in Bushfire Prone Areas (SPP 3.7; Western Australian Planning Commission (WAPC) 2015) and reporting to accompany submission of the development application in accordance with the associated Guidelines for Planning in Bushfire Prone Areas v 1.3 (the Guidelines; WAPC 2017).

The subject site is within the City of Rockingham and is neighboured by residential dwellings to the southeast and northwest and bushland on the remaining northeast and southwest sides. The subject site is also a part of the Spires Estate, Baldivis and is zoned 'Development' under the City of Rockingham Town Planning Scheme No.2 (TPS 2). Future development will lead to the southeast of the subject site being commercial developments.

This assessment has been prepared by ELA Bushfire Consultant Maitland Ely with quality assurance undertaken by Principal Bushfire Consultant Daniel Panickar (FPAA BPAD Level 3 Certified Practitioner No. BPAD37802).

1.2 Purpose and application of the plan

The primary purpose of this BMP is to act as a technical supporting document to inform planning assessment. This BMP is also designed to provide guidance on how to plan for and manage the bushfire risk to the subject site through implementation of a range of bushfire management measures in accordance with the Guidelines.

1.3 Environmental considerations

SPP 3.7 policy objective 5.4 recognises the need to consider bushfire risk management measures alongside environmental, biodiversity and conservation values.

The subject site has been previously cleared, resulting in no existing native vegetation on site.

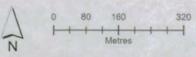
No revegetation is proposed within the development and landscaping will be maintained in a low-threat state.



Subject site

100m site assessment

150m site assessment



Datum/Projection: GDA 1994 MGA Zone 50 Project: 20089-DD Date: 22/09/2021 logical A TETRA TECH COMPANY

Floor Plan - 1:400 @ A3

White Horse Tavern







Sanitary Facilities Calculation:

Male patrons (417)			Female patrons (417)				
No. of closet pans required	4	No. of closet pans provided	4	No. of closet pans required	8	No. of closet pans provided	8
No. of urinals required	7	No. of urinals provided	7	No. of urinals required		No. of urinals provided	
No. of washbasins required	5	No. of washbasins provided	5	No. of washbasins required	4	No. of washbasins provided	5

Figure 2: Site Plan



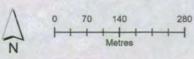
Figure 3: Bushfire Prone Areas

Subject site

100m site assessment

150m site assessment

Bushfire Prone Mapping (DFES 2019)



Datum/Projection: GDA 1994 MGA Zone 50

Project: 20089-DD Date: 22/09/2021



2. Bushfire assessment results

2.1 Bushfire assessment inputs

The following section is a consideration of spatial bushfire risk and has been used to inform the bushfire assessment in this report.

2.1.1 Fire Danger Index

A blanket Fire Danger Index (FDI) 80 is adopted for Western Australia, as outlined in Australian Standard AS 3959: 2018 Construction of Buildings in Bushfire Prone Areas (SA 2018) and endorsed by Australasian Fire and Emergency Service Authorities Council (AFAC).

2.1.2 Vegetation classification and slope under vegetation

Vegetation and effective slope (i.e. slope under vegetation) within the subject site and surrounding 150 m (the assessment area) were assessed in accordance with the Guidelines and AS 3959: 2018 with regard given to the Visual guide for bushfire risk assessment in Western Australia (DoP 2016). Site assessment was undertaken on 3 September 2021.

The classified vegetation and effective slope for the proposed development from each of the identified vegetation plots are identified below in Table 1 and Figure 4.

Table 1: Classified vegetation as per AS 3959: 2018

Plot	Vegetation Classification	Effective Slope
1	Class A Forest	All upslopes and flat land (0 degrees)
2	Excluded AS 3959: 2018 2.2.3.2 (e) & (f)	

Photographs relating to each area and vegetation type are included in Appendix A.



2.2 Bushfire assessment outputs

A Bushfire Attack Level (BAL) assessment has been undertaken in accordance with SPP 3.7, the Guidelines, AS 3959: 2018 and the bushfire assessment inputs in Section 2.1.

2.2.1 BAL assessment

All land located within 100 m of the classified vegetation depicted in Figure 4 is considered bushfire prone and is subject to a BAL assessment in accordance with AS 3959: 2018.

A Method 1 BAL assessment (as outlined in AS 3959: 2018) has been completed for the proposed development and incorporates the following factors:

- □ Fire Danger Index (FDI) rating;
- Vegetation class;
- Slope under classified vegetation; and
- Distance between proposed development area and the classified vegetation.

Based on the identified BAL, construction requirements for proposed buildings can then be assigned. The BAL rating gives an indication of the expected level of bushfire attack (i.e. radiant heat flux, flame contact and ember penetration) that may be received by proposed buildings and subsequently informs the standard of construction required to increase building survivability.

2.2.2 Method 1 BAL assessment

Table 2 and Figure 5 display the Method 1 BAL assessment (in the form of BAL contours) that has been completed for the proposed development in accordance with AS 3959: 2018 methodology.

Table 2: Method 1 BAL calculation (BAL contours)

Dist	Variable Classification			Separation distances required				
Plot	Vegetation Classification	Effective Slope	BAL-FZ	BAL-40	BAL-29	BAL-19	BAL-12.5	
1	Class A Forest	All upslopes and flat land (0 degrees)	<16	16-<21	21-<31	31-<42	42-<100	
3	Excluded AS 3959: 2018 2.2.3.2 (e) & (f)		N	lo separation	distances req	uired – BAL-L	ow	

Bushfire Management Plan: Development Application: Whitehorse Tavern at Lot 446, Baldivis | Baltavern Pty Ltd

Based on the site assessment inputs and BAL assessment, the proposed Whitehorse Tavern within the subject site has a BAL rating of BAL-19.

2.3 Identification of issues arising from the BAL assessment

Should there be any changes in development design or vegetation/hazard extent that requires a modified bushfire management response, then the above BAL ratings will need to be reassessed for the affected areas and documented in a brief addendum to this BMP.

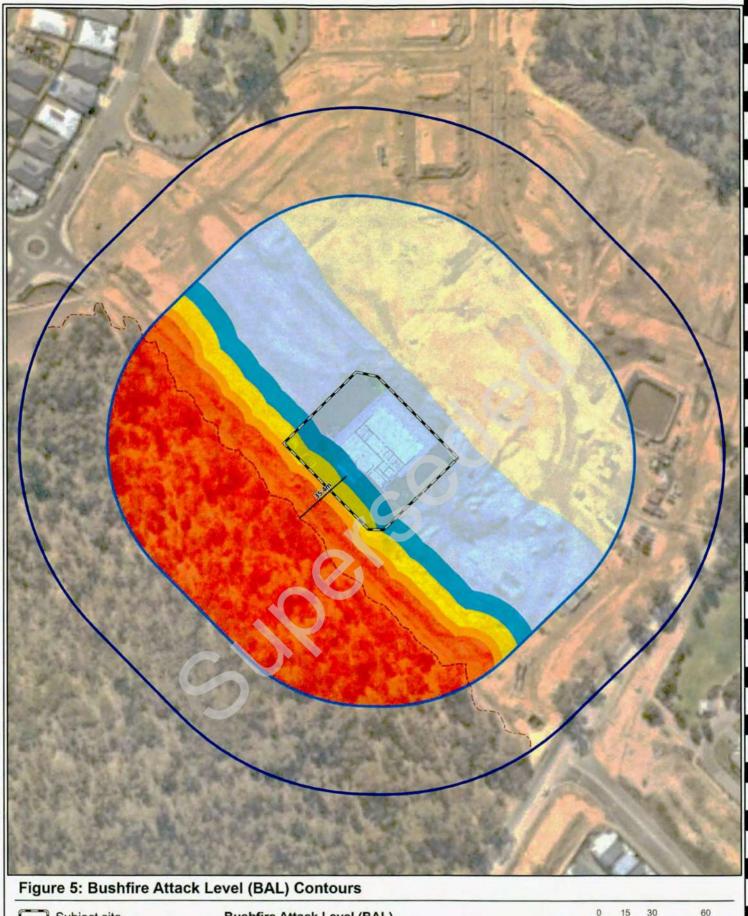


Figure 5: Bushfire Attack Level (BAL) Contours

Subject site

Bushfire Attack Level (BAL)

100m site assessment

BAL - FZ

Bushfire hazard interface

BAL - 29

BAL - 19

BAL - 19

BAL - 12.5

BAL - LOW

BUSHFIRE Attack Level (BAL)

0 15 30 60

Datum/Projection:
GDA 1994 MGA Zone 50

Project: 20089-DD Date: 22/09/2021

3. Assessment against the Bushfire Protection Criteria

3.1 Compliance

The proposed development is required to comply with policy measures 6.2 and 6.5 of SPP 3.7 and the Guidelines. Implementation of this BMP is expected to meet objectives 5.1-5.4 of SPP 3.7.

In response to the above requirements of SPP 3.7 and the Guidelines, bushfire risk management measures, as outlined, have been devised for the proposed development in accordance with Guideline acceptable solutions to meet compliance with bushfire protection criteria.

Table 3 outlines the Acceptable Solutions (AS) that are relevant to the proposal and summaries how the intent of each Bushfire Protection Criteria has been achieved. No Performance Solutions (PS) have been proposed for this proposal. These management measures are depicted in Figure 6 where relevant.

Table 3: Summary of solutions used to achieve bushfire protection criteria

Bushfire Protection Criteria	AS	PS	N/A	Comment
Element 1: Location A1.1 Development location				Proposed building within the subject site will be located in an area subject to BAL ratings of ≤BAL-29 (Figure 5; Figure 6).
				The proposed development is considered to be compliant with A1.1.
Element 2: Siting and design of development A2.1 Asset Protection Zone (APZ)	×			The proposed development has an APZ sufficient for the potential radiant heat flux to not exceed 29kW/m² and will be managed in accordance with the requirements of 'Standards for Asset Protection Zones' (WAPC 2017; Appendix B). The APZ can be contained within the boundaries of the lot or managed in perpetuity in a low fuel state. The proposed development is considered to be compliant with A2.1.
Element 3: Vehicular access A3.1 Two access routes	×	0	0	Two access routes to/from the subject site are available (Figure 6). All roads are public roads and comply with requirements outlined in the Guidelines (Appendix C). The proposed development is considered to be compliant with A3.1.
A3.2 Public road				No public roads are proposed as part of this development.
A3.3 Cul-de-sac				No cul-de-sacs are proposed as part of this Development.
A3.4 Battle-axe				No battle axe lots are proposed.

Bushfire Management Plan: Development Application: Whitehorse Tavern at Lot 446, Baldivis | Baltavern Pty Ltd

Bushfire Protection Criteria	AS	PS	N/A	Comment
A3.5 Private Driveway longer than 50 m				The proposed internal road network for the carpark is considered a private driveway. This network complies with the requirements outlined in the Guidelines (Appendix C).
				The proposed development is considered to be Compliant with A3.5.
A3.6 Emergency Access way				No emergency access way is required.
A3.7 Fire-service access routes				No fire service access routes are required or proposed.
A3.8 Firebreak width				No fire breaks are required or proposed as the subject site area will be cleared and replaced with permanent structures, despite the area being larger than the required size for a firebreak as per the City of Rockingham Fire Control Notice (CoR, 2021).
Element 4: Water A4.1 Reticulated areas				The subject site will be connected to a reticulated water supply.
	\boxtimes			The proposed development is considered to be compliant with A4.1.
				A4.2 and A4.3 are not applicable to this proposed development.
				Reticulated water is not present within the area.
A4.2 Non-Reticulated areas				Reticulated water is present within the area.
A4.3 Individual Lots within non-reticulated areas			\boxtimes	Reticulated water is present within the area.

NOTE - AS- ACCEPTABLE SOLUTION, PS- PERFORMANCE SOLUTION, N/A- NOT APPLICABLE

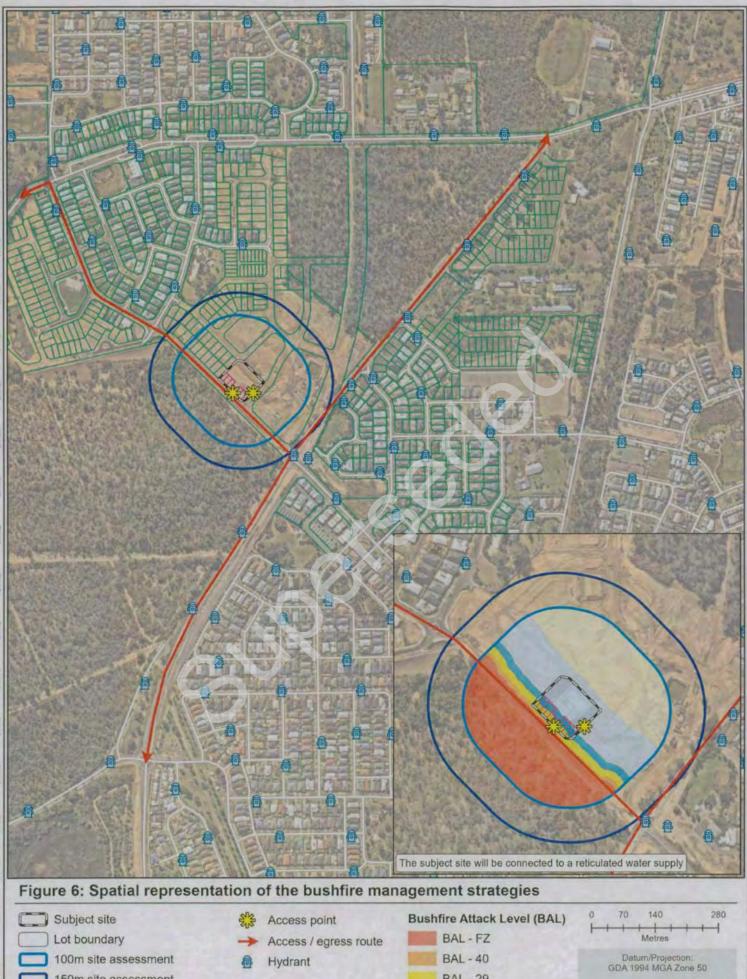
3.2 Additional Bushfire Requirements

The Guidelines state:

The bushfire construction requirements of the Buildings Code of Australia only apply to certain types of residential buildings (being Class 1, 2 or 3 buildings and/or Class 10a buildings or decks associated with a Class 1, 2 or 3 building) in designated bushfire prone areas. As such, AS 3959 does not apply to all buildings. Only vulnerable or high-risk land uses that fall within the relevant classes of buildings as set out in the Building Code of Australia will be required to comply with the bushfire construction requirements of the Building Code of Australia. As such, the planning process focuses on the location and siting of vulnerable and high-risk land uses rather than the application of bushfire construction requirements.

As the proposed building is a Class 6 and not a Class 1, 2 or 3 building and/or Class 10a building or deck associated with a Class 1, 2 or 3 building, construction to AS 3959: 2018 is not required for this proposal.

The general fire safety construction provisions within the National Construction Code (NCC) are considered suitable for bushfire construction measures, however ember protection measures in sections 3 and 5 of AS 3959: 2018 are recommended to be incorporated where applicable.



BAL - 29 150m site assessment Project: 20089-DD Date: 22/09/2021 BAL - 19 Asset Protection Zone (APZ) BAL - 12.5 BAL - LOW

4. Implementation and enforcement

Implementation of the BMP applies to the developer, future owners within the subject site and the local government to ensure bushfire management measures are adopted and implemented on an ongoing basis. A summary of the bushfire management measures described in Section 3, as well as a works program, is provided in Table 4. These measures will be implemented to ensure the ongoing protection of life and property assets is achieved. Timing and responsibilities are also defined to assist with implementation of each measure.

Table 4: Proposed work program

No	Bushfire management measure	Responsibility
Prior t	to issue of Titles	
1	Implement APZ as per plan in Figure 6.	Developer
2	Construct internal road network as per plan in Figure 6.	Developer
3	Provide reticulated water supply to proposed building and hydrants in accordance with Water Corporation Standard 'No. 63 Water Reticulation Standard' or other relevant standard if appropriate.	Developer
Prior t	to occupancy	
4	Ensure all APZs are implemented and maintained around the development site depicted in Figure 6	Developer
5	Ensure landscaping areas within the subject site outside of APZs are planted and maintained as low threat vegetation as per clause 2.2.3.2 (f) of AS 3959: 2018.	Developer
Ongoi	ng management	
6	Maintain APZs to the standard in the Guidelines	Owners

Bushfire Management Plan: Development Application: Whitehorse Tavern at Lot 446, Baldivis | Baltavern Pty Ltd

5. Conclusion

In the author's professional opinion, the bushfire protection requirements listed in this assessment provide an adequate standard of bushfire protection for the proposed development. As such, the proposed development is consistent with the aim and objectives of SPP 3.7 and associated guidelines and is recommended for approval.

6. References

City of Rockingham, 2021, Fire Control Notice 2021-2022, [Online], <u>Fire Control Notice 2021 - 2021</u> (<u>rockingham.wa.gov.au</u>)

Department of Fire and Emergency Services (DFES), 2019, Map of Bush Fire Prone Areas, [Online], Government of Western Australia, available from: http://www.dfes.wa.gov.au/regulationandcompliance/bushfireproneareas/Pages/default.aspx

Department of Planning (DoP), 2016, Visual guide for bushfire risk assessment in Western Australia. DoP, Perth.

Standards Australia (SA), 2018, Construction of buildings in bushfire-prone areas, AS 3959-2018. SAI Global, Sydney.

Western Australian Planning Commission (WAPC), 2015, State Planning Policy 3.7 Planning in Bushfire Prone Areas. WAPC, Perth.

Western Australian Planning Commission (WAPC), 2017, Guidelines for Planning in Bushfire Prone Areas Version 1.3 (including appendices), WAPC, Perth.

Western Australian Planning Commission (WAPC), 2019, A guide to developing a Bushfire Emergency Evacuation Plan, October 2019.

Appendix A ☐ Classified Vegetation Photos

Plot 1 Classification or Exclusion Clause

ot 1 Classification of Exclusion Clause

Photo Point 1

Classified vegetation within this plot is comprised of trees up to 30m high with 30% -70% foliage cover, with an understorey containing low trees and tall shrubs.

The slope under this plot was recorded as upslope/flat land.



Plot 1 Classification or Exclusion Clause

Photo Point 2

Classified vegetation within this plot is comprised of trees up to 30m high with 30% -70% foliage cover, with an understorey containing low trees and tall shrubs.

The slope under this plot was recorded as upslope/flat land.



Plot 2 Classification or Exclusion Clause

Photo Point 3

Non-vegetated area that is permanently cleared of vegetation. Future development within this plot is planned.

Excluded AS 3959-2018 2.2.3.2 (e) & (f)



Appendix B∃ Standards for Asset Protection Zones

The following standards have been extracted from the *Guidelines for Planning in Bushfire Prone Areas* v 1.3 (WAPC 2017).

Every habitable building is to be surrounded by, and every proposed lot can achieve, an APZ depicted on submitted plans, which meets the following requirements:

- a. Width: Measured from any external wall or supporting post or column of the proposed building, and of sufficient size to ensure the potential radiant heat impact of a fire does not exceed 29kW/m² (BAL-29) in all circumstances.
- **b. Location:** the APZ should be contained solely within the boundaries of the lot on which a building is situated, except in instances where the neighbouring lot or lots will be managed in a low-fuel state on an ongoing basis, in perpetuity (see explanatory notes).
- c. Management: the APZ is managed in accordance with the requirements of 'Standards for Asset Protection Zones' (below):
 - Fences: within the APZ are constructed from non-combustible materials (e.g. iron, brick, limestone, metal post and wire). It is recommended that solid or slatted non-combustible perimeter fences are used
 - Objects: within 10 metres of a building, combustible objects must not be located close to the vulnerable parts of the building i.e. windows and doors
 - Fine Fuel load: combustible dead vegetation matter less than 6 millimetres in thickness reduced to and maintained at an average of two tonnes per hectare
 - •□ Trees (> 5 metres in height): trunks at maturity should be a minimum distance of 6 metres from all elevations of the building, branches at maturity should not touch or overhang the building, lower branches should be removed to a height of 2 metres above the ground and or surface vegetation, canopy cover should be less than 15% with tree canopies at maturity well spread to at least 5 metres apart as to not form a continuous canopy (Figure 7).

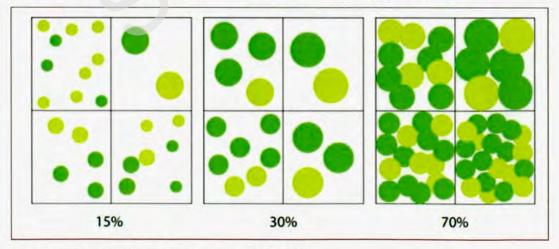


Figure 7: Illustrated tree canopy cover projection (WAPC 2017)

Bushfire Management Plan: Development Application: Whitehorse Tavern at Lot 446, Baldivis | Baltavern Pty Ltd

- •□ Shrubs (0.5 metres to 5 metres in height): should not be located under trees or within 3 metres of buildings, should not be planted in clumps greater than 5m² in area, clumps of shrubs should be separated from each other and any exposed window or door by at least 10 metres. Shrubs greater than 5 metres in height are to be treated as trees
- •□ Ground covers (<0.5 metres in height): can be planted under trees but must be properly maintained to remove dead plant material and any parts within 2 metres of a structure, but 3 metres from windows or doors if greater than 100 millimetres in height. Ground covers greater than 0.5 metres in height are to be treated as shrubs</p>
- Grass: should be managed to maintain a height of 100 millimetres or less.

Additional notes

The Asset Protection Zone (APZ) is an area surrounding a building that is managed to reduce the bushfire hazard to an acceptable level. Hazard separation in the form of using subdivision design elements or excluded and low threat vegetation adjacent to the lot may be used to reduce the dimensions of the APZ within the lot.

The APZ should be contained solely within the boundaries of the lot on which the building is situated, except in instances where the neighbouring lot or lots will be managed in a low-fuel state on an ongoing basis, in perpetuity. The APZ may include public roads, waterways, footpaths, buildings, rocky outcrops, golf courses, maintained parkland as well as cultivated gardens in an urban context, but does not include grassland or vegetation on a neighbouring rural lot, farmland, wetland reserves and unmanaged public reserves.

Appendix C Vehicular access technical requirements (WAPC 2017)

Technical requirements	Public road	Cul-de-sac	Private driveway	Emergency access way	Fire service access route
Minimum trafficable surface (m)	6*	6	4	6*	6*
Horizontal distance (m)	6	6	6	6	6
Vertical clearance (m)	4.5	N/A	4.5	4.5	4.5
Maximum grade <50 m	1 in 10	1 in 10	1 in 10	1 in 10	1 in 10
Minimum weight capacity (t)	15	15	15	15	15
Maximum crossfall	1 in 33	1 in 33	1 in 33	1 in 33	1 in 33
Curves minimum inner radius	8.5	8.5	8.5	8.5	8.5

^{*} Refer to E3.2 Public roads: Trafficable surface





© 1300 646 131 www.ecoaus.com.au Appendix 6: Environmental Noise Assessment



Lloyd George Acoustics

PO Box 717 Hillarys WA 6923 T: 9401 7770 www.lgacoustics.com.au

Environmental Noise Assessment – Development Application

White Horse Tavern

Lot 9008 Nairn Drive, Baldivis

Reference: 21096644-01A

Prepared for:

Carcione Nominees Pty Ltd



Report: 21096644-01A

Lloyd George Acoustics Pty Ltd

ABN: 79 125 812 544

PO Box 717 Hillarys WA 6923

www.lgacoustics.com.au

Contacts	General	Daniel Lloyd	Terry George	Matt Moyle
E:	info@lgacoustics.com.au	daniel@lgacoustics.com.au	terry@lgacoustics.com.au	matt@lgacoustics.com.au
P:	9401 7770	0439 032 844	0400 414 197	0412 611 330
Contacts	Ben Hillion	Rob Connolly	Daryl Thompson	Hao Tran
E:	ben@lgacoustics.com.au	rob@lgacoustics.com.au	daryl@lgacoustics.com.au	hao@lgacoustics.com.au
P:	0457 095 555	0410 107 440	0420 364 650	0438 481 207

This report has been prepared in accordance with the scope of services described in the contract or agreement between Lloyd George Acoustics Pty Ltd and the Client. The report relies upon data, surveys, measurements and results taken at or under the particular times and conditions specified herein. Any findings, conclusions or recommendations only apply to the aforementioned circumstances and no greater reliance should be assumed or drawn by the Client. Furthermore, the report has been prepared solely for use by the Client, and Lloyd George Acoustics Pty Ltd accepts no responsibility for its use by other parties.

Date:	Date: Rev Description		Prepared By	Verified
10-Sep-21	0	Issued to Client	Matt Moyle	Terry George
3-Dec-21	Α	Updated for latest Tavern Design	Matt Moyle	Terry George

Table of Contents

1	INTRODUCTION	1
2	CRITERIA	3
2.1	Reversing Alarms on Vehicles	6
2.2	Waste Collection and Site Cleaning (Specified Works)	6
3	METHODOLOGY	7
3.1	Meteorological Information	7
3.2	Topographical Data	7
3.3	Ground Absorption	8
3.4	Source Sound Levels	8
3.5	Noise Modelling Scenarios	9
4	RESULTS	10
4.1	Scenario 1 – Open Bifold Doors	10
4.2	Scenario 2 – Closed Bifold Doors	10
4.3	Scenario 3 – Carpark (Car doors)	13
5	ASSESSMENT	15
5.1	Scenario 1 – Open Bifold Doors	15
5.2	Scenario 2 – Closed Bifold Doors	16
5.3	Scenario 3 – Car Door Noise	16
6	RECOMMENDATIONS	17
7	CONCLUSION	18

Lloyd George Acoustics

List of Tables

Table 2-1 Adjustments Where Characteristics Cannot Be Removed	3
Table 2-2 Baseline Assigned Noise Levels	4
Table 2-3 Influencing Factor Calculation	4
Table 2-4 Assigned Noise Levels	5
Table 3-1 Modelling Meteorological Conditions	
Table 3-2 Source Sound Power Levels	8
Table 4-1 Predicted Noise Levels, dB L _{A10}	10
Table 4-2 Predicted Noise Levels, dB L _{A10}	
Table 4-3 Predicted Noise Levels, dB L _{Amax}	13
Table 4-1 Assessment of Scenario 1 Noise Levels, dB L _{A10}	15
Table 5-2 Assessment of Scenario 2 Noise Levels, dB L _{A10}	
Table 5-3 Assessment of Scenario 3 Noise Levels, dB L _{Amax}	
List of Figures	
Figure 1-1 Project Locality and Structure Plan	1
Figure 1-2 Proposed Tavern amongst Future Local Centre	2
Figure 2-1 Site and Receiver Locations	
Figure 4-1 Scenario 1: Open Bifold Doors Tavern at Capacity	
Figure 4-2 Scenario 2: Closed Bifold Doors Tavern at Capacity	12
Figure 4-3 Scenario 3: Car Park Noise	14

Appendices

A Terminology

1 INTRODUCTION

This report has been prepared to consider the potential noise impacts associated with a proposed Tavern development at Lot 9008 Nairn Drive, Baldivis - refer Figure 1-1 and Figure 1-2. To the east of the tavern is a shopping centre, which was assessed under a separate DA.

Noise sensitive premises to the north and northwest of the proposed tavern may exist in the future as indicated on *Figure 1-1*. These future sensitive land uses may be subject to further planning applications and therefore have been included in this assessment for information purposes and to provide guidance for future development.

The nearest existing residences are those to the northwest on Santorini Parkway and those to the southeast across Nairn Drive.

Appendix A contains a description of some of the terminology used throughout this report.



Figure 1-1 Project Locality and Structure Plan

Lloyd George Acoustics



Figure 1-2 Proposed Tavern amongst Future Local Centre

2 CRITERIA

Environmental noise in Western Australia is governed by the *Environmental Protection Act 1986*, through the *Environmental Protection (Noise) Regulations 1997* (the Regulations).

Regulation 7 defines the prescribed standard for noise emissions as follows:

- "7. (1) Noise emitted from any premises or public place when received at other premises -
 - (a) Must not cause or significantly contribute to, a level of noise which exceeds the assigned level in respect of noise received at premises of that kind; and
 - (b) Must be free of
 - i. tonality;
 - ii. impulsiveness; and
 - iii. modulation,

when assessed under regulation 9"

A "...noise emission is taken to significantly contribute to a level of noise if the noise emission ... exceeds a value which is 5 dB below the assigned level..."

Tonality, impulsiveness and modulation are defined in Regulation 9. Noise is to be taken to be free of these characteristics if:

- (a) The characteristics cannot be reasonably and practicably removed by techniques other than attenuating the overall level of noise emission; and
- (b) The noise emission complies with the standard prescribed under regulation 7 after the adjustments of Table 2-1 are made to the noise emission as measured at the point of reception.

Table 2-1 Adjustments Where Characteristics Cannot Be Removed

Where	Noise Emission is No	Where Noise Emission is Music		
Tonality	Modulation	Impulsiveness	No Impulsiveness	Impulsivenes
+ 5 dB	+ 5 dB	+ 10 dB	+ 10 dB	+ 15 dB

Note: The above are cumulative to a maximum of 15dB.

The baseline assigned levels (prescribed standards) are specified in Regulation 8 and are shown in Table 2-2.

Table 2-2 Baseline Assigned Noise Levels

Premises Receiving	Time Of Day	Assigned Level (dB)			
Noise	Time Of Day	L _{A10}	L _{A1}	L _{Amax}	
	0700 to 1900 hours Monday to Saturday (Day)	45 + influencing factor	55 + influencing factor	65 + influencing factor	
Noise sensitive	0900 to 1900 hours Sunday and public holidays (Sunday)	40 + influencing factor	50 + influencing factor	65 + influencing factor	
premises: highly sensitive area ¹	1900 to 2200 hours all days (Evening)	40 + influencing factor	50 + Influencing factor	55 + influencing factor	
	2200 hours on any day to 0700 hours Monday to Saturday and 0900 hours Sunday and public holidays (Night)	35 + influencing factor	45 + influencing factor	55 + influencing factor	

^{1.} highly sensitive area means that area (if any) of noise sensitive premises comprising -

The total influencing factor (zoning and traffic), applicable at the noise sensitive premises has been calculated to be 1 dB or 2 dB as shown in *Table 2-3* (refer *Figure 2-1* for receiver locations). With regards to road traffic, Nairn Drive and Amazon Drive are currently not considered secondary or major roads, with no nearby traffic counts available at the time of this assessment. Over time, traffic may be expected to increase such that when 6,000 vehicles per day is reached, the influencing factor would increase by 2 dB for those residences within 100 metres.

Table 2-3 Influencing Factor Calculation

Receiver	Comme	rcial Land	Road	Total Influencing	
	With 100m	Within 450m	Within 100m	Within 450m	Factor
Future Residences (R1 and R2)	1 dB (19%)	0.8 dB (16%)			2 dB
Exist Residences Southeast (R3)	1 dB (19%)	0.8 dB (16%)			2 dB
Exist Residences Northwest (R4	0 dB (0%)	0.8 dB (16%)			1 dB

Table 2-4 shows the assigned noise levels including the influencing factor and transport factor at the receiving locations.

⁽a) a building, or a part of a building, on the premises that is used for a noise sensitive purpose; and

⁽b) any other part of the premises within 15 metres of that building or that part of the building.

Lloyd George Acoustics



Figure 2-1 Site and Receiver Locations

Table 2-4 Assigned Noise Levels

Premises Receiving Noise	To office	Assigned Level (dB)			
	Time Of Day	LAIO	Laz	L _{Amax}	
R1, R2, R3	0700 to 1900 hours Monday to Saturday (Day)	47	57	67	
	0900 to 1900 hours Sunday and public holidays (Sunday)	42	52	67	
	1900 to 2200 hours all days (Evening)	42	52	57	
	2200 hours on any day to 0700 hours Monday to Saturday and 0900 hours Sunday and public holidays (Night)	37	47	57	
R4	0700 to 1900 hours Monday to Saturday (Day)	46	56	66	
	0900 to 1900 hours Sunday and public holidays (Sunday)	41	51	66	
	1900 to 2200 hours all days (Evening)	41	51	56	
	2200 hours on any day to 0700 hours Monday to Saturday and 0900 hours Sunday and public holidays (Night)	36	46	56	

It is noted the assigned noise levels are statistical levels and therefore the period over which they are determined is important. The Regulations define the Representative Assessment Period (RAP) as a period of time of not less than 15 minutes, and not exceeding 4 hours, which is determined by an inspector or authorised person to be appropriate for the assessment of a noise emission, having regard to the type and nature of the noise emission. An inspector or authorised person is a person appointed under Sections 87 & 88 of the Environmental Protection Act 1986 and include Local Government Environmental Health Officers and Officers from the Department of Environment Regulation. Acoustic consultants or other environmental consultants are not appointed as an inspector or authorised person. Therefore, whilst this assessment is based on a 4 hour RAP, which is assumed to be appropriate given the nature of the operations, this is to be used for guidance only.

2.1 Reversing Alarms on Vehicles

With regards to noise from reversing alarms, regulation 3(1)(h) states:

- (1) Nothing in these regulations applies to the following noise emissions -
 - (h) noise emissions from -
 - a reversing alarm fitted to a motor vehicle, mobile plant, or mining or earthmoving equipment;

If -

- (iii) it is a requirement under another written law that such an alarm be fitted; and
- (iv) it is not practicable to fit an alarm that complies with the written law under which it is required to be fitted and emits noise that complies with these regulations;

It is considered that any reversing alarms fitted to commercial vehicles (e.g. delivery or garbage trucks) are not necessarily exempt under the Regulations, since they are not specifically required under another written law. That is only a safe workplace must be provided, which can be undertaken in a variety of ways.

The commonly used fixed noise output tonal reversing alarms also known as 'reversing beeper' emit, by their very nature, tonal and modulating noise at high levels. As such, this type of reversing alarm generally cannot comply with the Regulations even at distant receivers. Alternative alarms such as broadband alarms are commonly used to minimise the impact.

2.2 Waste Collection and Site Cleaning (Specified Works)

Regulation 14A provides requirements for such activities as the collection of waste, landscaped area maintenance and car park cleaning. Such activities can also be exempt from having to comply with regulation 7, provided they are undertaken in accordance with regulation 14A(2) as follows:

- during daytime hours, defined as:
 - o 07:00 to 19:00 Monday to Saturday (excluding public holiday), or
 - o 09:00 to 19:00 on a Sunday or public holiday
- in the quietest reasonable and practicable manner; and
- using the quietest equipment reasonably available.

In the case where specified works are to be carried outside daytime hours and their noise emissions are likely not to comply with regulation 7, the works also need to be carried out according to a Noise Management Plan which has been approved by the local government authority CEO.

3 METHODOLOGY

Computer modelling has been used to predict noise levels at each nearby receiver. The software was SoundPLAN 8.2 using the ISO 9613-2 (ISO 171534-3 improved method) algorithms. These algorithms have been selected as they include the influence of wind and atmospheric stability. Input data required in the model are:

- · Meteorological Information;
- Topographical data;
- · Ground Absorption; and
- · Source sound power levels.

3.1 Meteorological Information

Meteorological information utilised is provided in *Table 3-1* and is considered to represent worst-case conditions for noise propagation. At wind speeds greater than those shown, sound propagation may be further enhanced, however background noise from the wind itself and from local vegetation is likely to be elevated and dominate the ambient noise levels.

 Parameter
 Day (0700-1900)
 Night (1900-0700)

 Temperature (°C)
 20
 15

 Humidity (%)
 50
 50

 Wind Speed (m/s)
 Up to 5m/s
 Up to 5m/s

 Wind Direction*
 All
 All

Table 3-1 Modelling Meteorological Conditions

It is generally considered that compliance with the assigned noise levels needs to be demonstrated for 98% of the time, during the day and night periods, for the month of the year in which the worst-case weather conditions prevail. In most cases, the above conditions occur for more than 2% of the time and therefore must be satisfied.

3.2 Topographical Data

Topographical data was based on that publicly available from *Google* in the form of spot heights and combined with the site plan and building plans provided by the project team to create a 3-dimensional noise model. A 2.4m high solid barrier was assumed on the western border of the lot to ameliorate car park noise, and this in turn assists with tavern and patron noise. Local screening of rooftop plant elements has also been included, up to 2.4m high.

^{*} Note that the modelling package used allows for all wind directions to be modelled simultaneously.

Existing houses in the area are noted as being single storey and as such, future houses are also assumed to be single storey.

3.3 Ground Absorption

Ground absorption varies from a value of 0 to 1, with 0 being for an acoustically reflective ground (e.g. water or bitumen) and 1 for acoustically absorbent ground (e.g. grass). In this instance, a value of 0.0 has been used as an average across the study area.

3.4 Source Sound Levels

The sound power levels used in the modelling are provided in *Table 3-2*. As detailed design has not yet been undertaken, all data has been obtained from previous similar projects and are therefore indicative only.

Barrel Mari	Octave Band Centre Frequency (Hz)							Overal	
Description	63	125	250	500	1k	2k	4k	8k	dB(A)
Rooftop Condensers (4 off)		77	63	62	60	55	48	-	66
Tavern Air-Conditioning (2 off)	-	84	78	76	74	69	61	-	78
Restaurant Air-Conditioning (3 off)	-	84	78	76	74	69	61	-	78
Patrons Outside Dining (80 Pax)	64	75	79	81	73	71	68	64	81
Patrons Inside (480 Pax)	82	68	70	78	97	91	76	66	98
Kitchen Exhaust Fan	95	99	95	83	84	82	83	81	92
Kitchen Supply Fan	81	77	76	70	69	68	61	52	75
Car Idling	81	78	74	72	74	74	67	64	79
Car Doors Closing	71	74	77	81	80	78	72	61	84

Table 3-2 Source Sound Power Levels

With regards to the noise sources, the following is noted:

- The Internal Tavern Area is 480m². As per the floor plans an estimated 480 persons can occupy
 this space. Of these, a worst-case of 50% of patrons will be talking simultaneously at a sound
 pressure level of 75 dB(A) per person. These patrons are at a height of 1.4 metres. In this
 area, music may be provided for ambience but is not to dominate noise levels;
- The Alfresco Deck Area is 160m². As per the floor plans an estimated 80 persons (seated) can occupy this space. Of these, a worst-case of 50% of patrons will be talking simultaneously at a sound pressure level of 70 dB(A) per person. These patrons are at a height of 1.2 metres. In this area, music may be provided for ambience but is not to dominate noise levels;
- It is noted that glass sections of the tavern hall are proposed, these have been modelled as
 double glazing or equivalent systems performing to R_w 36 dB;

Lloyd George Acoustics

- All mechanical plant have been located on the flat roof of the Tavern Kitchen/toilet building at a height of 0.5 to 1.0 metres, centrally positioned atop the building behind proposed 2.4m high solid screening;
- Car door noise is modelled as 1 metre above ground and positioned in each car parking bay;
- It is assumed the drive thru contains four cars idling simultaneously, representing a worstcase L_{A10} scenario. These are modelled as point sources within the drive thru area, 0.5m above ground;
- Absorptive ceiling panels (having NRC of 0.7) have been assumed within the ceiling space of the tavern, to provide a comfortable internal acoustic environment for patrons, which also assists in environmental noise.

3.5 Noise Modelling Scenarios

The Table 3-2 sound power levels were incorporated into the noise model and calculations were performed for existing and future receivers. Noise contour plots were also generated which illustrate via 2D imagery, the impact of noise to the surrounding area.

The following worst case scenarios are modelled:

- Open doors Tavern plant operating and patron noise in alfresco and internal rooms. Vehicles
 idling in bottle shop lane. Bifold doors open.
- Closed doors Tavern plant operating and patron noise in alfresco and internal rooms.
 Vehicles idling in bottle shop lane. Bifold doors closed.
- 3. Night L_{Amax} Car park door closing noise.

4 RESULTS

4.1 Scenario 1 – Open Bifold Doors

The noise modelling results of this mode of operation are shown in *Table 4-1* with the most dominant source group highlighted at each receiver. Note that this represents the worst case noise levels, with the tavern at full capacity (inside and outside), bifold doors open and vehicles idling in the bottle shop lanes. The noise levels are shown as a contour plot in *Figure 4-1*.

Inside Tavern Noise Exhaust Cars Alfresco Receiver **AC Plant** Total Idling Fans Patrons Via Bifolds Via Building Future R1 (West) 27 32 33 13 24 12 37 Future R2 (North) 15 29 26 22 43 28 44 Existing R3 (East) 29 25 28 <5 23 17 32 Existing R4 (North West) 22 25 <5 26 <5 10 29

Table 4-1 Predicted Noise Levels, dB LAIO

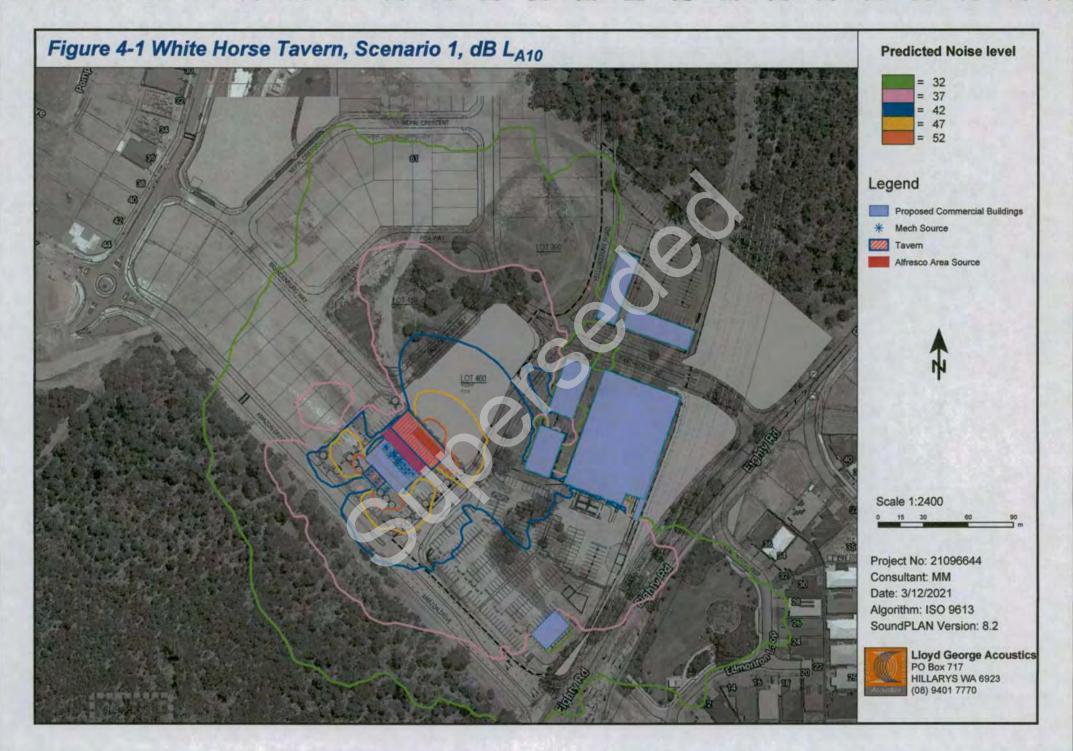
4.2 Scenario 2 – Closed Bifold Doors

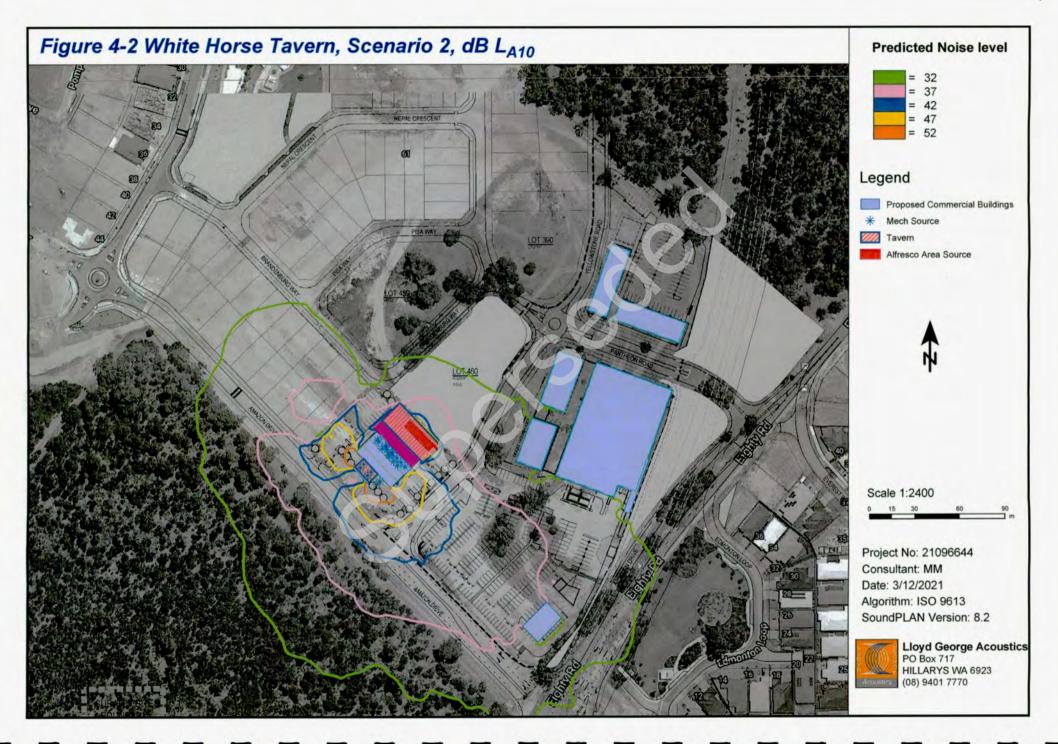
The noise modelling results of this mode of operation are shown in *Table 4-2* with the most dominant source group highlighted at each receiver. Note that this represents the noise levels with the tavern at full capacity (inside and outside), bifold doors closed and vehicles idling in the bottle shop lanes. The noise levels are shown as a contour plot in *Figure 4-2*.

It is noted that noise is now dominated by patrons in the alfresco areas and mechanical plant, with noise from within the venue reduced significantly.

Inside Tavern Noise **Exhaust** Alfresco Receiver **AC Plant** Total Idling Fans **Patrons** Via Building Via Bifolds Future R1 (West) 27 32 33 13 <5 12 36 Future R2 (North) 15 29 26 22 12 28 33 Existing R3 (East) 25 28 29 <5 <5 17 28 Existing R4 (North West) 22 25 <5 <5 26 <5 32

Table 4-2 Predicted Noise Levels, dB LA10



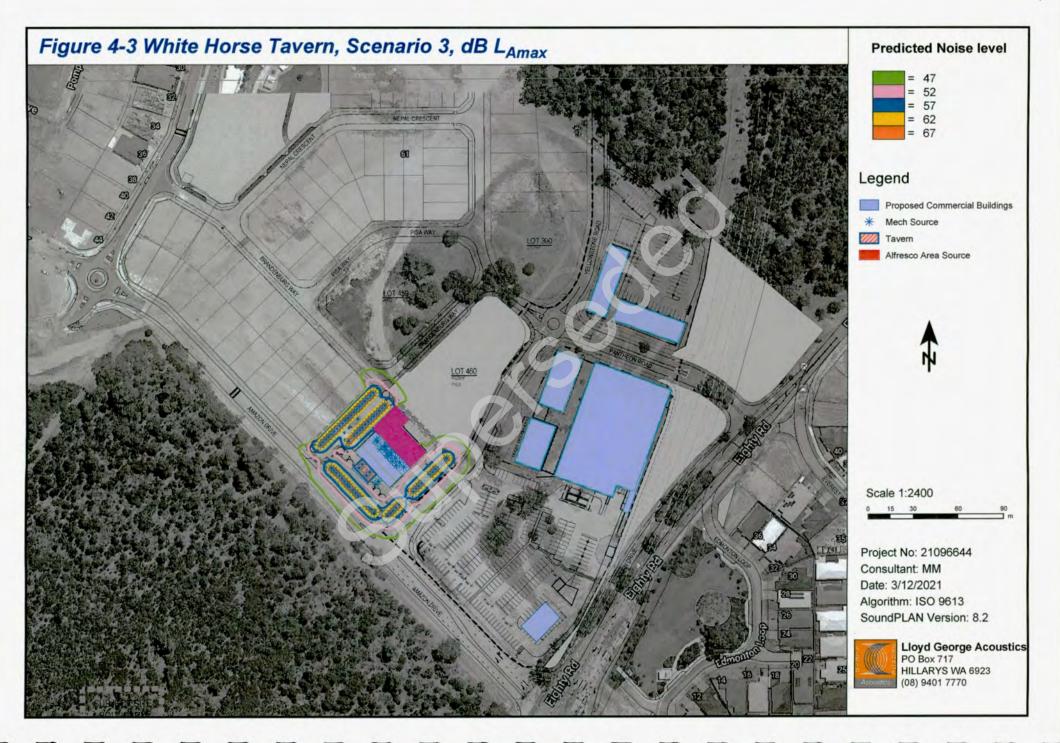


4.3 Scenario 3 – Carpark (Car doors)

The noise modelling results of car door noise is shown in *Table 4-3*. Note that this is the maximum noise event of the worst case car door closing event (levels are not cumulative). The noise levels are shown as a contour plot in *Figure 4-3*.

Table 4-3 Predicted Noise Levels, dB LAmax

Receiver	Car Door Closing (Maximum Level)
Future R1 (West)	43
Future R2 (North)	44
Existing R3 (East)	27
Existing R4 (North West)	22



5 ASSESSMENT

The noise modelling results are discussed for each time period described in Table 2-4.

5.1 Scenario 1 - Open Bifold Doors

The results for this scenario are compared against the assigned levels and displayed in *Table 5-1*. Note where there are multiple receivers in the same vicinity, the highest level is reported. Where patron noise is concerned, no intrusive characteristics are considered applicable.

Day Evening Night Predicted Dominant Receiver Assigned Exceedance, dB Assigned Assigned Level Source Level Level Level Future R1 (West) 37 Mech Plant 47 42 37 Complies (all) Tavern (via Complies/+2/+7 Future R2 (North) 44 47 42 37 Bifolds) Existing R3 (East) Mech Plant 42 Complies (all) 32 47 37 Existing R4 (North West) 29 Mech Plant 46 41 36 Complies (all)

Table 4-1 Assessment of Scenario 1 Noise Levels, dB LAIO

The results indicate that the LA10 scenario is compliant at all existing receivers.

At future residential receivers to the west (R1), should this be approved in the ultimate outcome, this scenario is compliant at all times.

At location R2 to the north, across Brandenburg Way, is an area with potential for noise sensitive land use. With the bifold doors open and at full capacity, compliance is achieved during the day, with a marginal exceedance in the Evening (also Sundays/Public Holidays), and a larger exceedance at Night.

It is assumed that the intent of the bifold doors is primarily for day time use. The modelling demonstrates that noise via the open bifold doors is the cause of exceedences outside of this time, from a full capacity venue (480 people inside). Some reductions may be achievable by way of internal acoustical treatments and noise management measures.

It is further recommended that should noise sensitive development occur at R2, consideration is taken of potential noise intrusion from the tavern, including façade treatments, glazing requirements, position of balconies etc.

It should be noted that final plant selections and positions of all plant may vary this outcome however, the proposed positioning and screening is considered adequate.

5.2 Scenario 2 – Closed Bifold Doors

The results for this scenario are compared against the assigned levels and displayed in *Table 5-2*. Note where there are multiple receivers in the same vicinity, the highest level is reported. Where patron noise is concerned, no intrusive characteristics are considered applicable.

Day Evening Night Predicted Dominant Receiver Assigned Assigned Assigned Exceedance, dB Level Source Level Level Level Future R1 (West) Mech Plant 47 36 42 37 Complies (all) Alfresco Future R2 (North) 33 47 42 37 Complies (all) **Patrons** Existing R3 (East) 28 Mech Plant 47 42 37 Complies (all) Existing R4 (North West) 32 Mech Plant 46 41 36 Complies (all)

Table 5-2 Assessment of Scenario 2 Noise Levels, dB LAIO

The results indicate that the LA10 scenario is compliant at existing and future receivers.

The closing of the bifold doors is therefore demonstrated to be an effective measure for reducing tavern patron noise, noting that the model assumes the door systems achieve an R_w rating of 36 dB when shut. Based on the outcome of Scenario 1 (Bifolds open) it is identified that compliance on Sundays and Evenings may be achievable with a depending on the number of patrons inside the hall and how the bifold doors are managed. Therefore, this measure should be considered as part of an operational noise management plan where future dwellings are developed in the locations assessed.

5.3 Scenario 3 – Car Door Noise

Results for this noise source are provided in *Table 5-3*. Where car door noise is dominant and especially during the night, a + 10 dB adjustment for impulsiveness is applied.

Table 5-3 Assessment of Scenario 3 Noise Levels, dB LAmax

Receiver	Predicted Level	Adjusted Level	Day Assigned Level	Evening and Night Assigned Level	Exceedance, dB
Future R1 (West)	43	53	67	57	Complies
Future R2 (North)	44	54	67	57	Complies
Existing R3 (East)	27	37	67	57	Complies
Existing R4 (North West)	22	32	66	56	Complies

The results demonstrate that car park noise from car doors complies at all times.

6 RECOMMENDATIONS

As the assessment is for DA approval only at this stage, the following recommendations are indicative only. However, they do indicate that noise emissions will need to be carefully considered in the detailed design where applicable –

Tavern Building Elements

- Fixed and opening glazed elements of the tavern area to have total glass/frame/seal acoustic performance of be R_w ≥ 36.
- Where not glazed or of mass construction, wall systems (cladding, frame, insulation, plasterboard) to be constructed to have total acoustic performance of R_w + C_{tr} ≥ 48.
- Bifold door systems (glass, frame and seals) to have acoustic performance rating of R_w ≥ 36 dB.
- Western entry door airlock type design utilising a second door to be fitted with automatic closers and to incorporate acoustic perimeter and astragal seals.
- No base construction requirements for bottleshop or drive-thru, although an acoustically absorptive ceiling can be considered;

· Roof/ceiling of the Tavern

- o Metal deck roof with Anticon insulation below roof sheeting and above purlins;
- Ceiling to be 13mm thick sound-rated plasterboard with minimum 75mm thick, 14kg/m³ insulation above (or approved equivalent). Underside of ceiling (minimum 60%) to be acoustically absorptive by way of acoustic panels (minimum NRC 0.7).

Mechanical Plant

- Mechanical plant to be selected to be as quiet as reasonably available with detailed design including low speed mode at night and including attenuators fitted in ductwork of fan systems such as the kitchen supply/exhaust.
- Sound levels to be in line with those assumed in Table 3-2.
- Plant to be mounted using vibration isolators.
- Local screening barriers (acoustic louvers or solid) to be planned for inclusion in detailed design along north west edge of tavern Kitchen/toilet building (shown to have a flat roof and understood to be the intended location of all external plant). Final height and compliance to be verified by a qualified acoustical consultant.

Site General

- Waste collection to occur during daytime hours, defined as:
 - 07:00 to 19:00 Monday to Saturday (excluding public holiday), or
 - 09:00 to 19:00 on a Sunday or public holiday
- Patrons leaving the tavern should be encourage by staff to leave quietly in a courteous manner where possible, signs should also be utilised in the car park, especially on the western end of the lot where residences may exist in future.

Music and Events

- A noise management plan must be prepared to encompass all aspects of noise that are operational in nature and with regard to patron numbers, seating configurations and times of day. This should include events and functions as well as day to day operations.
- It is understood that the tavern license does not allow for live music events where the level is above normal conversation.

Delivery Vehicles

- Where a safe workplace can be provided, audible reversing alarms shall be turned off and alternative methods used such as spotters etc. Audible 'beeper' reversing alarms are only acceptable if it is deemed there is no other way to provide a safe workplace.
 Where an audible alarm is required, consideration should be given to the suitability of broadband type alarms, as these have less environmental noise impacts.;
- Where possible normal (non-refrigerated) delivery trucks to turn engines off whilst unloading;
- Delivery companies are to be advised of the above requirements.

Future Residential

o It is recommended that any residential parts of new lots under the current structure plan (in particular those directly opposite Brandenburg Way) incorporate notifications on title and increased construction standards in order to ensure a satisfactory internal acoustic amenity whilst also allowing the tavern some flexibility. Whilst this may minimise complaints, it must be acknowledged by the tavern operator that the onus of compliance is on the noise emitter.

7 CONCLUSION

The analysis undertaken is preliminary at this stage, however it highlights that as the tavern building enters detailed design, noise emissions must be considered in further detail considering final equipment selections, operating hours, operational noise management measures etc. For initial guidance, Section 6 discusses possible noise mitigation requirements, noting these would be subject to change depending on the outcome(s) of the detailed analysis.

It is recommended that an environmental noise assessment report forms a condition of Building License and as information regarding mechanical plant becomes known in greater detail, such an assessment is undertaken by a suitably qualified acoustical consultant (member firm of the Association of Australasian Acoustical Consultants).

Lloyd George Acoustics

Appendix A

Terminology

The following is an explanation of the terminology used throughout this report.

Decibel (dB)

The decibel is the unit that describes the sound pressure and sound power levels of a noise source. It is a logarithmic scale referenced to the threshold of hearing.

A-Weighting

An A-weighted noise level has been filtered in such a way as to represent the way in which the human ear perceives sound. This weighting reflects the fact that the human ear is not as sensitive to lower frequencies as it is to higher frequencies. An A-weighted sound level is described as L_A dB.

Sound Power Level (Lw)

Under normal conditions, a given sound source will radiate the same amount of energy, irrespective of its surroundings, being the sound power level. This is similar to a 1kW electric heater always radiating 1kW of heat. The sound power level of a noise source cannot be directly measured using a sound level meter but is calculated based on measured sound pressure levels at known distances. Noise modelling incorporates source sound power levels as part of the input data.

Sound Pressure Level (Lp)

The sound pressure level of a noise source is dependent upon its surroundings, being influenced by distance, ground absorption, topography, meteorological conditions etc and is what the human ear actually hears. Using the electric heater analogy above, the heat will vary depending upon where the heater is located, just as the sound pressure level will vary depending on the surroundings. Noise modelling predicts the sound pressure level from the sound power levels taking into account ground absorption, barrier effects, distance etc.

LASIOW

This is the noise level in decibels, obtained using the A frequency weighting and the S (Slow) time weighting as specified in IEC 61672-1:2002. Unless assessing modulation, all measurements use the slow time weighting characteristic.

LAFast

This is the noise level in decibels, obtained using the A frequency weighting and the F (Fast) time weighting as specified in IEC 61672-1:2002. This is used when assessing the presence of modulation only.

LAPeak

This is the greatest absolute instantaneous sound pressure in decibels using the A frequency weighting as specified in IEC 61672-1:2002.

LAmax

An L_{Amax} level is the maximum A-weighted noise level during a particular measurement.

LAI

An L_{A1} level is the A-weighted noise level which is exceeded for one percent of the measurement period and is considered to represent the average of the maximum noise levels measured.

LAID

An L_{A10} level is the A-weighted noise level which is exceeded for 10 percent of the measurement period and is considered to represent the "intrusive" noise level.

LARG

The equivalent steady state A-weighted sound level ("equal energy") in decibels which, in a specified time period, contains the same acoustic energy as the time-varying level during the same period. It is considered to represent the "average" noise level.

LASO

An L_{A90} level is the A-weighted noise level which is exceeded for 90 percent of the measurement period and is considered to represent the "background" noise level.

One-Third-Octave Band

Means a band of frequencies spanning one-third of an octave and having a centre frequency between 25 Hz and 20 000 Hz inclusive.

L_{Amax} assigned level

Means an assigned level which, measured as a La slow value, is not to be exceeded at any time.

LAI assigned level

Means an assigned level which, measured as a LA Slow value, is not to be exceeded for more than 1% of the representative assessment period.

LA10 assigned level

Means an assigned level which, measured as a LA Slow value, is not to be exceeded for more than 10% of the representative assessment period.

Tonal Noise

A tonal noise source can be described as a source that has a distinctive noise emission in one or more frequencies. An example would be whining or droning. The quantitative definition of tonality is:

the presence in the noise emission of tonal characteristics where the difference between -

- (a) the A-weighted sound pressure level in any one-third octave band; and
- (b) the arithmetic average of the A-weighted sound pressure levels in the 2 adjacent one-third octave bands,

is greater than 3 dB when the sound pressure levels are determined as L_{Aeq,T} levels where the time period T is greater than 10% of the representative assessment period, or greater than 8 dB at any time when the sound pressure levels are determined as L_{A Slow} levels.

This is relatively common in most noise sources.

Modulating Noise

A modulating source is regular, cyclic and audible and is present for at least 10% of the measurement period. The quantitative definition of modulation is:

a variation in the emission of noise that -

- (a) is more than 3 dB L_{A Fast} or is more than 3 dB L_{A Fast} in any one-third octave band;
- (b) is present for at least 10% of the representative.

Impulsive Noise

An impulsive noise source has a short-term banging, clunking or explosive sound. The quantitative definition of impulsiveness is:

a variation in the emission of a noise where the difference between $L_{A peak}$ and $L_{A Max slow}$ is more than 15 dB when determined for a single representative event;

Major Road

Is a road with an estimated average daily traffic count of more than 15,000 vehicles.

Secondary / Minor Road

Is a road with an estimated average daily traffic count of between 6,000 and 15,000 vehicles.

Influencing Factor (IF)

=
$$\frac{1}{10}$$
 (% Type A₁₀₀ + % Type A₄₅₀) + $\frac{1}{20}$ (% Type B₁₀₀ + % Type B₄₅₀)

% Type A₁₀₀ = the percentage of industrial land within

a100m radius of the premises receiving the noise %TypeA₄₅₀ = the percentage of industrial land within

a 450m radius of the premises receiving the noise

% Type B₁₀₀ = the percentage of commercial land within

a 100m radius of the premises receiving the noise %TypeB₄₅₀ = the percentage of commercial land within

a 450m radius of the premises receiving the noise

+ Traffic Factor (maximum of 6 dB)

= 2 for each secondary road within 100m

= 2 for each major road within 450m

= 6 for each major road within 100m

Representative Assessment Period

Means a period of time not less than 15 minutes, and not exceeding four hours, determined by an inspector or authorised person to be appropriate for the assessment of a noise emission, having regard to the type and nature of the noise emission.

Background Noise

Background noise or residual noise is the noise level from sources other than the source of concern. When measuring environmental noise, residual sound is often a problem. One reason is that regulations often require that the noise from different types of sources be dealt with separately. This separation, e.g. of traffic noise from industrial noise, is often difficult to accomplish in practice. Another reason is that the measurements are normally carried out outdoors. Wind-induced noise, directly on the microphone and indirectly on trees, buildings, etc., may also affect the result. The character of these noise sources can make it difficult or even impossible to carry out any corrections.

Amhient Noise

Means the level of noise from all sources, including background noise from near and far and the source of interest.

Specific Noise

Relates to the component of the ambient noise that is of interest. This can be referred to as the noise of concern or the noise of interest.

Peak Component Particle Velocity (PCPV)

The maximum instantaneous velocity in mm/s of a particle at a point during a given time interval and in one of the three orthogonal directions (x, y or z) measured as a peak response. Peak velocity is normally used for the assessment of structural damage from vibration.

Peak Particle Velocity (PPV)

The maximum instantaneous velocity in mm/s of a particle at a point during a given time interval and is the vector sum of the PCPV for the x, y and z directions measured as a peak response. Peak velocity is normally used for the assessment of structural damage from vibration.

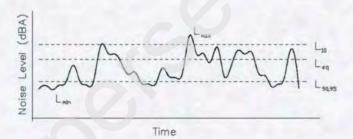
RMS Component Particle Velocity (PCPV)

The maximum instantaneous velocity in mm/s of a particle at a point during a given time interval and in one of the three orthogonal directions (x, y or z) measured as a root mean square (rms) response. RMS velocity is normally used for the assessment of human annoyance from vibration.

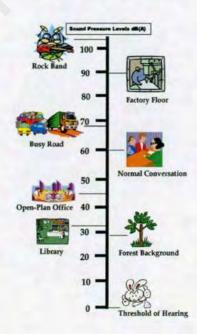
Peak Particle Velocity (PPV)

The maximum instantaneous velocity in mm/s of a particle at a point during a given time interval and is the vector sum of the PCPV for the x, y and z directions measured as a root mean square (rms) response. RMS velocity is normally used for the assessment of human annoyance from vibration.

Chart of Noise Level Descriptors



Typical Noise Levels



Appendix 7: Waste Management Plan



Waste Management Plan

White Horse Tavern

Prepared for Carcione Nominees Pty Ltd

28 September 2021

Project Number: TW21106



DOCUMENT CONTROL

Version	Description	Date	Author	Reviewer	Approver
1.0	First Approved Release	23/09/2021	RH	DM	RH
2.0	Second Approved Release	28/09/2021	RH	DP	RH

Approval for Release

Name	Position	File Reference
Rachel Hayton	Project Manager – Waste Management Consultant	TW21106-01_Waste Management Plan_2.0
Signature		

Copyright of this document or any part of this document remains with Talis Consultants Pty Ltd and cannot be used, transferred or reproduced in any manner or form without prior written consent from Talis Consultants Pty Ltd.



Executive Summary

Carcione Nominees Pty Ltd is seeking development approval for the proposed White Horse Tavern located at Lot 446 South Baldivis (the Proposal).

To satisfy the conditions of the development application the City of Rockingham (the City) requires the submission of a Waste Management Plan (WMP) that will identify how waste is to be stored and collected from the Proposal. Talis Consultants has been engaged to prepare this WMP to satisfy the City's requirements.

A summary of the bin size, numbers, collection frequency and collection method is provided in the below table.

Proposed Waste Collection Summary

Waste Type	Generation (L/week)	Bin Size (L)	Number of Bins	Collection Frequency	Collection
		Tavern Bin S	Storage Area		
Refuse	20,077	1,100L	Five	Four times each week	Private Contractor
Recycling	1,505	1,100L	One	Four times each week	Private Contractor
ELLIBRI		Shop Bin St	torage Area		
Refuse	938	240L	One	Four times each week	Private Contractor
Recycling	938	240L	One	Four times each week	Private Contractor

A private contractor will service the Proposal onsite, directly from the dedicated Delivery Zone. The private contractor's waste collection vehicle will enter and exit the Proposal in forward gear via Yellowstone Road or Amazon Drive.

A building manager will oversee the relevant aspects of waste management at the Proposal.



Table of Contents

1	Intro	duction	. 1
	1.1	Objectives and Scope	. 1
2	Was	te Generation	. 2
	2.1	Proposed Tenancies	. 2
	2.2	Waste Generation Rates	. 2
	2.3	Waste Generation Volumes	. 2
		2.3.1 Tavern Waste Generation	. 2
		2.3.2 Shop Waste Generation	. 3
3	Inte	rnal Transfer of Waste	. 4
4	Was	te Storage	. 5
	4.1	Bin Sizes	. 5
	4.2	Tavern Bin Storage Area Size	. 5
	4.3	Shop Bin Storage Area Size	. 6
	4.4	Bin Storage Area Design	. 7
5	Was	te Collection	. 8
	5.1	Bulk and Speciality Waste	10
6	Was	te Management	11
7	Con	clusion	12
Та	bles		
Tab	ole 2-1	: Waste Generation Rates	. 2
Tak	ole 2-2	: Estimated Waste Generation – Tavern	. 3
Tab	ole 2-3	: Estimated Waste Generation – Shop	. 3
Tak	ole 4-1	: Typical Bin Dimensions	. 5
Tak	ole 4-2	: Bin Requirements for Bin Storage Area – Tavern	. 5
Tak	le 4-3	: Bin Requirements for Bin Storage Area – Shop	6



Diagrams

Diagram 1: Tavern Bin Storage Area

Diagram 2: Shop Bin Storage Area

Diagram 3: Waste Collection Area - Delivery Zone

Diagram 4: Waste Collection Swept Path (8.8m service vehicle) - Entry

Diagram 5: Waste Collection Swept Path (8.8m service vehicle) - Exit



1 Introduction

Carcione Nominees Pty Ltd is seeking development approval for the proposed White Horse Tavern located at Lot 446 South Baldivis (the Proposal).

To satisfy the conditions of the development application the City of Rockingham (the City) requires the submission of a Waste Management Plan (WMP) that will identify how waste is to be stored and collected from the Proposal. Talis Consultants has been engaged to prepare this WMP to satisfy the City's requirements.

1.1 Objectives and Scope

The objective of this WMP is to outline the equipment and procedures that will be adopted to manage waste (refuse and recyclables) at the Proposal. Specifically, the WMP demonstrates that the Proposal is designed to:

- Adequately cater for the anticipated volume of waste to be generated;
- Provide adequately sized Bin Storage Area, including appropriate bins; and
- Allow for efficient collection of bins by appropriate waste collection vehicles.

To achieve the objective, the scope of the WMP comprises:

- Section 2: Waste Generation;
- Section 3: Internal Transfer of Waste;
- Section 4: Waste Storage;
- Section 5: Waste Collection;
- Section 6: Waste Management; and
- Section 7: Conclusion.



2 Waste Generation

The following section shows the waste generation rates used and the estimated waste volumes to be generated at the Proposal.

2.1 Proposed Tenancies

The anticipated volume of refuse and recyclables is based on the floor area (m²) of the following tenancies:

- •□ Tavern 430m2; and
- ☐ Shop 268m2.

2.2 Waste Generation Rates

In order to achieve an accurate projection of waste volumes for the Proposal, consideration was given to the following better practice guidelines:

- Western Australian Local Government Association's (WALGA) Commercial and Industrial Waste Management Plan Guidelines (2014); and
- City of Perth's Waste Guidelines for New Developments (Revision 5, effective from June 2019).

Table 2-1 shows the waste generation rates which have been applied to the Proposal.

Table 2-1: Waste Generation Rates

Tenancy Use Type	Guidelines	Guideline Reference	Refuse Generation Rate	Recycling Generation Rate
Tavern	Perth	Licenced Club, Tavern, Small Bar (with dining)	667L/100m ² /day	50L/100m ² /day
Shop	WALGA	Retail Shop (non-food) >100m²	50L/100m ² /day	50L/100m²/day

2.3 Waste Generation Volumes

Waste generation is estimated by volume in litres (L) as this is generally the influencing factor when considering bin size, numbers and storage space required.

2.3.1 Tavern Waste Generation

Waste generation volumes in litres per week (L/week) adopted for this waste assessment is shown Table 2-2. It is estimated that the Tavern will generate 20,077L of refuse and 1,505L of recyclables each week.



Table 2-2: Estimated Waste Generation - Tavern

Tenancy Use Type	Floor Area (m²)	Waste Generation (L/100m²/day)	Waste Generation (L/week)
	REFUSE		
Tavern	430	667	20,077
	RECYCLABLE	ES	
Tavern	430	50	1,505

2.3.2 Shop Waste Generation

Waste generation volumes in litres per week (L/week) adopted for this waste assessment is shown Table 2-3. It is estimated that the Tavern will generate 938L of refuse and 938L of recyclables each week.

Table 2-3: Estimated Waste Generation - Shop

Tenancy Use Type	Floor Area (m²)	Waste Generation (L/100m²/day)	Waste Generation (L/week)
	REFUSE		
Shop	268	50	938
	RECYCLABI	ES	
Shop	268	50	938



3 Internal Transfer of Waste

To ensure that waste is managed appropriately at the Proposal, it is important to allow for sufficient space to accommodate the required quantity of bins within the Bin Storage Areas.

To promote positive recycling behaviour and maximise diversion from landfill, internal bins will be available throughout the Tavern and Shop for the source separation of refuse and recycling.

These internal bins will be collected by the staff/cleaners at least once each day and transferred to the respective Bin Storage Area for consolidation into the appropriate bins. These bins will be transferred through the Proposal utilising the dedicated service corridors/areas and may be conducted outside of main operational hours to mitigate disturbances to visitors.

All bins will be colour coded and labelled in accordance with Australian Standards (AS 4123.7) to assist residents, visitors, staff and cleaners to dispose of their separate waste materials in the correct bins.



4 Waste Storage

Waste materials generated within the Proposal will be collected in the bins located in the Bin Storage Areas, as shown in Figure 2 and Figure 3, and discussed in the following sub-sections.

Note: the waste generation volumes are best practice estimates and the number of bins to be utilised represents the maximum requirements once the Proposal is fully operational. Bin requirements may be impacted as the development becomes operational and the nature of the tenants and waste management requirements are known.

4.1 Bin Sizes

Table 4-1 gives the typical dimensions of standard bins sizes that may utilised at the Proposal. It should be noted that these bin dimensions are approximate and can vary slightly between suppliers.

Table 4-1: Typical Bin Dimensions

Dimensions		Bin	Sizes	
Differsions	240L	360L	660L	1,100L
Depth (mm)	730	848	780	1,070
Width (mm)	585	680	1,260	1,240
Height (mm)	1,060	1,100	1,200	1,300
Area (mm²)	427	577	983	1,327

Reference: SULO Bin Specification Data Sheets

4.2 Tavern Bin Storage Area Size

To ensure sufficient area is available for storage of the bins, the amount of bins required for the Tavern Bin Storage Area was modelled utilising the estimated waste generation in Table 2-2, bin sizes in Table 4-1 and based on collection of refuse and recyclables four times each week.

Based on the results shown in Table 4-2 the Tavern Bin Storage Area has been sized to accommodate:

- Five 1100L refuse bins; and
- One 1100L recyclable bins.

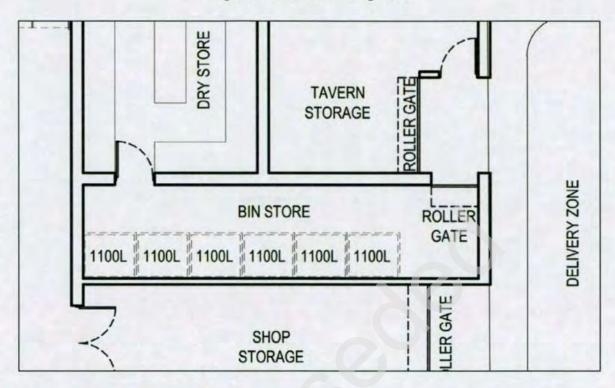
Table 4-2: Bin Requirements for Bin Storage Area - Tavern

Waste Stream	Waste Generation	Number of Bins Required			
	(L/week)	240L	360L	660L	1,100L
Refuse	20,077	21	14	8	5
Recycling	1,505	2	2	1	1

The configuration of these bins within the Bin Storage Area is shown in Diagram 1. It is worth noting that the number of bins and corresponding placement of bins shown in Diagram 1 represents the maximum requirements assuming four collections each week of refuse and recyclables. Increased collection frequencies would reduce the required number of bins.



Diagram 1: Tavern Bin Storage Area



4.3 Shop Bin Storage Area Size

To ensure sufficient area is available for storage of the bins, the amount of bins required for the Shop Bin Storage Area was modelled utilising the estimated waste generation in Table 2-2, bin sizes in Table 4-1 and based on collection of refuse and recyclables four times each week.

Based on the results shown in Table 4-3 the Shop Bin Storage Area has been sized to accommodate:

- One 240L refuse bins; and
- ☐ One 240L recyclable bins.

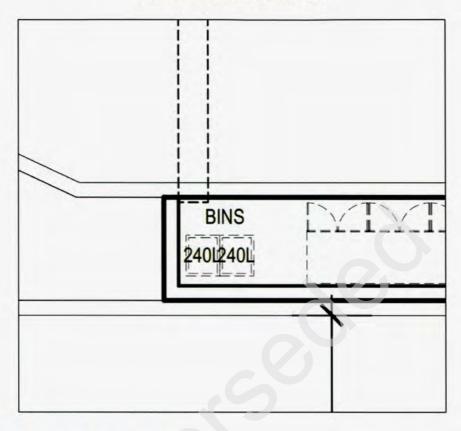
Table 4-3: Bin Requirements for Bin Storage Area - Shop

Waste Stream	Waste Generation	Number of Bins Required			
	(L/week)	240L	360L	660L	1,100L
Refuse	938	1	1	1	1
Recycling	938	1	1	1	1

The configuration of these bins within the Bin Storage Area is shown in Diagram 2. It is worth noting that the number of bins and corresponding placement of bins shown in Diagram 2 represents the maximum requirements assuming four collections each week of refuse and recyclables. Increased collection frequencies would reduce the required number of bins.



Diagram 2: Shop Bin Storage Area



4.4 Bin Storage Area Design

The design of the Bin Storage Areas will take into consideration:

- Smooth impervious floor sloped to a drain connected to the sewer system;
- Taps for washing of bins and Bin Storage Areas;
- Adequate aisle width for easy manoeuvring of bins;
- No double stacking of bins;
- Doors to the Bin Storage Areas self-closing and vermin proof;
- Doors to the Bin Storage Areas wide enough to fit bins through;
- Ventilated to a suitable standard;
- Appropriate signage;
- Undercover where possible and be designed to not permit stormwater to enter into the drain;
- Located behind the building setback line;
- Bins not to be visible from the property boundary or areas trafficable by the public; and
- Bins are reasonably secured from theft and vandalism.

Bin numbers and storage space within the Bin Storage Areas will be monitored by the building manager during the operation of the Proposal to ensure that the number of bins and collection frequency is sufficient.



5 Waste Collection

The following sections describe the waste collection methodologies for the development.

A private contractor will service the Proposal and provide the Tavern with five 1,100L bins for refuse and one 1,100L bin for recyclables. The private contractor will also provide the Shop with one 240L refuse bin and one 240L recycling bin.

The private contractor will collect refuse and recyclables from both facilities four times each week utilising a rear loader waste collection vehicle.

The private contractor's waste collection vehicle will service the bins onsite, directly from the Bin Storage Are utilising the Delivery Zone, refer Diagram 3.

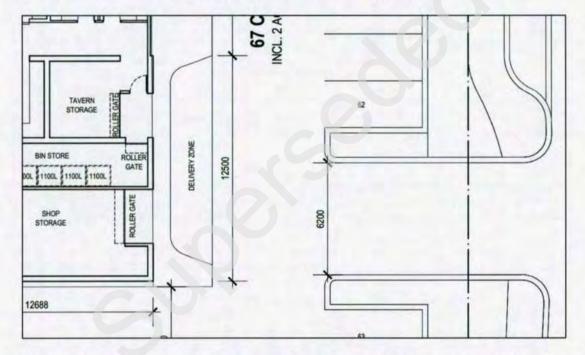


Diagram 3: Waste Collection Area - Delivery Zone

The private contractor's waste collection vehicle will travel with left hand lane traffic flow on Amazon Drive/Yellowstone Road and turn into the Proposal in forward gear and pull into the delivery zone next to the Bin Storage Area for servicing, refer Diagram 4.



Diagram 4: Waste Collection Swept Path (8.8m service vehicle) - Entry



Reference: Transcore 13/09/21

It is proposed that servicing will be conducted outside of normal operating hours to allow the waste collection vehicle to utilise the empty carpark for manoeuvring and mitigate impacts on local traffic movements during peak traffic hours.

The private contractor waste collection staff will ferry bins to and from the waste collection vehicle and the Bin Storage Area during servicing. The private contractor will be provided with key/PIN code access to the Bin Storage Area and security access gates to facilitate servicing, if required.

Once servicing is complete the private contractor's waste collection vehicle will exit in a forward motion, turning onto Yellowstone Road or Amazon Drive moving with traffic flow, refer Diagram 5.

Diagram 5: Waste Collection Swept Path (8.8m service vehicle) - Exit



Reference: Transcore 13/09/21



The above servicing method will preserve the amenity of the area by removing the requirement for bins to be presented to the street on collection days. In addition, servicing of bins onsite will reduce the noise generated in the area during collection. Noise from waste vehicles must comply with the Environmental Protection (Noise) Regulations and such vehicles should not service the site before 7.00am or after 7.00pm Monday to Saturday, or before 9.00am or after 7.00pm on Sundays and Public Holidays.

Waste collection will be in accordance with the acoustic assessment and occur in the quietest reasonable and practicable manner whilst using the quietest equipment reasonably available.

The ability for the private contractors rear loader waste collection vehicle to access the Proposal in a safe manner has been assessed by qualified traffic engineers (Transcore) and will be included within their traffic impact statement. This demonstrates the development can adequately accommodate an 8.8m waste collection service vehicle.

5.1 Bulk and Speciality Waste

Bulk and speciality waste materials will be removed from the Proposal as they are generated on an 'as required' basis.

These items are bulk and specialty wastes that are unable to be disposed of within the bins in the Bin Storage Areas. These may include items such as:

- Refurbishment wastes from fit outs:
- Batteries and E-wastes;
- White goods/appliances;
- Used Cooking Oil;
- □ Cleaning chemicals; and
- □ Commercial Light globes.

Bulk and specialty waste collection will be monitored by the building manager who will organise their transport to the appropriate waste facility, as required.



6 Waste Management

A building manager will be engaged to complete the following tasks:

- Monitoring and maintenance of bins and the Bin Storage Areas;
- □ Cleaning of bins and Bin Storage Areas, when required;
- ■☐ Ferrying bins to and from the Shop Bin Storage Area and the Delivery Zone on collection days;
- Ensure all tenants at the Proposal are made aware of this WMP and their responsibilities thereunder;
- Monitor tenant behaviour and identify requirements for further education and/or signage;
- Monitor bulk and speciality waste accumulation and assist tenants with its removal, as required;
- Regularly engage with tenants to develop opportunities to reduce waste volumes and increase resource recovery; and
- •□ Regularly engage with the private contractors to ensure efficient and effective waste service is maintained.



7 Conclusion

As demonstrated within this WMP, the Proposal provides a sufficiently sized Bin Storage Area for storage of refuse and recyclables, based on the estimated waste generation volumes and suitable configuration of bins. This indicates that an adequately designed Bin Storage Area has been provided, and collection of refuse and recyclables can be completed from the Proposal.

The above is achieved using:

- Tavern:
 - o□ Five 1100L refuse bins, collected four times each week; and
 - o□ One 1100L recycling bins, collected four times each week.
- ●□ Shop:
 - o□ One 240L refuse bins, collected four times each week; and
 - o□ One 240L recycling bins, collected four times each week.

A private contractor will service the Proposal onsite, directly from the dedicated Delivery Zone. The private contractor's waste collection vehicle will enter and exit the Proposal in forward gear via Yellowstone Road or amazon Drive.

A building manager will oversee the relevant aspects of waste management at the Proposal.



Assets | Engineering | Environment | Noise | Spatial | Waste

Talis Consultants

Head Office Level 1, 604 Newcastle Street, Leederville Western Australia 6007

> PO Box 454, Leederville Western Australia 6903

NSW Office 5/62 North Street, Nowra New South Wales, 2541

PO Box 1189, Nowra New South Wales, 2541

P: 1300 251 070 E: info@talisconsultants.com.au

Appendix 8: Public Interest Assessment



Baltavern Pty Ltd applicant for the conditional grant of a tavern licence

in respect of premises to be situated at

Cnr Amazon Drive and Yellowstone Road, North Baldivis

and to be known as

The Whitehorse Tavern

Public Interest Assessment

including section 36B submissions





Jessica Patterson Law & Consultancy Pty Ltd
ACN: 648 525 204
PH: +61 409 599 093
E: jessica.patterson@jplc.com.au
www.jplc.com.au

Prepared on behalf of and together with the applicant by:

Law & Consultancy Pty Ltd

Liquor | Hospitality | Tourism | Events

Public Interest Assessment Application for tavern licence The Whitehorse Tavern

Table of Contents

1.	Introduction and background	3
2.	Brief outline of the application	4
3.	Description of the applicant	4
4.	The premises	5
5.	Manner of trade	8
6.	Locality	10
7.	Local packaged liquor requirements - section 36B	17
8.	Harm or ill-health – section 38(4)(a)	19
9.	Impact on amenity – section 38(4)(b)	27
10.	Offence, annoyance, disturbance or inconvenience – section 38(4)(c)	30
11.	Tourism, community or cultural matters – section 38(4)(ca)	31
12.	Sections 5 and 33	33
13.	Conclusion	33

1. Introduction and background

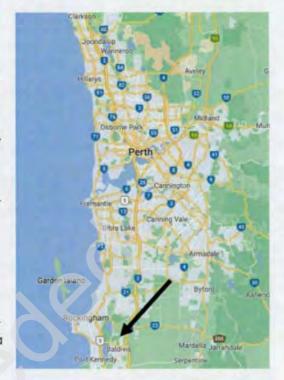
- 1.1. Baltavern Pty Ltd (ACN 651 352 957) seeks the conditional grant of a tavern licence pursuant to section 41(1)(a) of the Liquor Control Act 19988 (WA)(Act), to be known as The Whitehorse Tavern, at premises to be situated at the corner of Amazon Drive and Yellowstone Road, North Baldivis (premises).
- 1.2. This Public Interest Assessment (PIA) supports the application. The propositions contained within regarding the proposed tavern have been verified by a representative of the applicant company by way of a Statutory Declaration attached to this document.
- 1.3. This PIA has been prepared in accordance with both the Act and the policy of the Director of Liquor Licensing, "Public interest assessment policy" (PIA policy).
- 1.4. In the interests of not overburdening the licensing authority with documents, some of the supporting material referred to in this PIA has not been attached, however, is available to be produced upon request from the licensing authority.
- 1.5. The applicant engaged expert market research firm, Patterson Research Group (PRG)², to undertake a formal market survey which involved 305 people from a 3km radius surrounding the site. A detailed report on the market research that was conducted and the results that were produced has been prepared by PRG and is attached (PRG Report).
- 1.6. The applicant also conducted a further, hard-copy Public Questionnaire/Survey of the local community likely to be most affected by the application and from which The Whitehorse Tavern is expected to draw most of its catchment. 60 people completed a Public Questionnaire/Survey form. Most of those people live 1km or less from the proposed site and mainly north of the applicant's site where enormous land and community development is underway. Copies of the completed Public Questionnaire/Survey forms are attached.
- 1.7. The clear majority of combined opinion across the 365 people who participated in the market research exercises is that they:
 - 1.7.1. strongly support the tayern licence application;
 - 1.7.2. are currently unable to satisfy their packaged liquor requirements with existing liquor outlets in the relevant area; and
 - 1.7.3. fully intend to use the various products, services and facilities proposed to be available at The Whitehorse Tavern.

https://www.dlasc.wa.gov.au/department/publications/publication/public-interest-assessment-policy

² PRG is a full service market research and consulting firm based in Western Australia with over 25 years of experience in extensive quantitative and qualitative market research. https://www.marketresearch.com.au/ (There is no relation between PRG and Jessica Patterson Law & Consultancy Pty Ltd.)

2. Brief outline of the application

- 2.1. The applicant intends to establish a large upmarket community-focused, familyfriendly dining, drinking, socialising, entertainment and retail venue to become the prime meeting hub for the developing North Baldivis neighbourhood in the southwestern part of the Perth metropolitan area.
- Liquor is to be available for consumption both on and off the premises with superior dining and drinking services as well as a firstrate, modern drive-through take-away bottleshop.
- 2.3. The Whitehorse Tavern will have a strong Western Australian flavour, being dominated by food and drink produced in Western Australia, especially from the southwest region. The applicant wishes to bring a piece of the south-west up to North Baldivis through the products, services and facilities available at the new tavern.



- 2.4. The Whitehorse tavern will be a very inviting venue with a welcoming villagetype ambience designed to draw the local community together. It will comprise the following main components:
 - Internal dining and drinking area with seating and bar (approximately 430m²).
 - 2.4.2. Undercover outdoor alfresco area with seating (approximately 350m²).
 - 2.4.3. Large kitchen and associated back-of-house facilities and storage.
 - Take-away bottleshop with browse area and coolroom (approximately 268m²) and two-lane drive-through.
 - 2.4.5. Surrounding carpark (67 bays).
 - 2.4.6. Toilets, with separate facilities for staff.
- 2.5. The venue is intended to have capacity for up to 834 people at any one time.
- 2.6. Further particulars of the proposal are set out in subsequent sections of this PIA.

Description of the applicant

3.1. The applicant is a private, independent Western Australian entity which was incorporated for the purpose of making this application and establishing and operating The Whitehorse Tavern.

Public Interest Assessment Application for tavern licence The Whitehorse Tavern

- 3.2. The directors of the applicant company are three members of the Carcione Family, all of whom were born in Western Australia and currently live in WA. They have been operating in Perth's property development industry and building commercial properties and retail developments since 1974, including through their overarching Carcione Group.
- 3.3. The Carcione Group's extensive portfolio includes the Stargate Shopping Centres in Atwell, Kelmscott, Port Kennedy, Spearwood and Waikiki which are owned and operated by the Carcione Group and also The Duck Inn Bar & Bistro in Spearwood which operates under a tavern licence³. Many characteristics of The Duck Inn Bar & Bistro will be replicated at The Whitehorse Tavern.
- 3.4. As is proposed for The Whitehorse Tavern, The Duck Inn Bar & Bistro is very much a community-centric hospitality venue, catering to a regular catchment of local people and is situated close to the Stargate Shopping Centre in Spearwood.
- 3.5. The Carcione Group is owner and developer of large parcels of land, including the Spires Estate, in and around North Baldivis where The Whitehorse Tavern is proposed to be situated. The Group is in the process of developing the area with an enormous new North Baldivis Shopping Centre and around 10,000 residential lots. Other developer companies are also involved in the mammoth project. A retail commercial development Masterplan has been endorsed by the City of Rockingham and includes a tavern.
- 3.6. A related entity of the applicant company owns the land the subject of the tavern proposal and therefore, has the control to establish precisely what is proposed.
- 3.7. The Carcione Group has become an integral part of the North Baldivis district through its role as both owner and developer and proposed tavern operator. The Group has come to know local residents and determine precisely what services and facilities are required by them. The applicant company directors and their representatives are in regular contact with the local community and have been for many years. The Carcione Group is dedicated to supporting the community with modern infrastructure and services as required. Through that desire, a strong demand for a multi-faceted tavern operation was identified. It became clear that existing facilities in the district are few and far between, especially north of the applicant's site where much of the development is occurring, leaving the North Baldivis community wanting, or being forced to travel well outside of their area to access licensed services several kilometres away. With the means and know-how to fulfil the void, the Carcione Group set about establishing the applicant company, preparing the tavern business model and making this application for the licence.

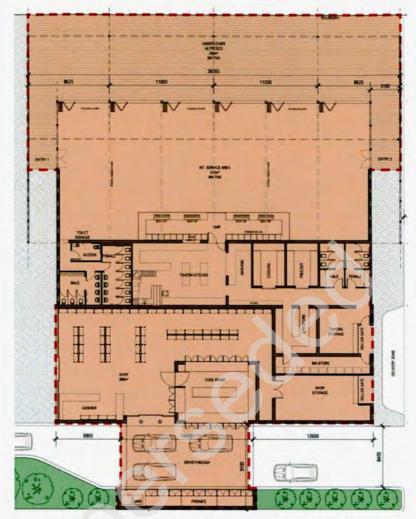
4. The premises

4.1. The Whitehorse Tavern will be located approximately 40km south of the Perth CBD in a significantly flourishing area.

³ Licence number 6020017590

Public Interest Assessment Application for tavern licence The Whitehorse Tavern

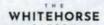
- 4.2. As both landowner, developer and intended operator the applicant is ideally placed to design and establish a premier community hospitality facility at the most suitable location for public access and with the best possible infrastructure and surrounding developments.
- 4.3. The premises will comprise approximately 1,200m² of total licensed area.
- 4.4. The configuration proposed has been designed to suit the site and provide comfortable and convenient use by patrons and staff. A relatively large bar will be a central feature, facing outwards to the public seated and drinking areas.
- 4.5. Back-of-house facilities will be connected and grouped together for efficient, effective and convenient staff usage. This area will include dedicated staff toilets.
- 4.6. The layout of the public dining, drinking and socialising part of the premises is simple with no isolated rooms so as to facilitate all patrons being able to come together mingle as a community. Bifold doors will connect the indoor and outdoor sections and enable a large collegiate open space to operate for enhanced social interaction.
- 4.7. Materials used in the construction will include a lot of glass such that the premises will be very light and open with a bright fresh atmosphere. The applicant intends to bring the outside inside the venue and in this regard lush, landscaped gardens will be created outside and around the premises.
- 4.8. Fixtures, fittings and furnishings will be natural and cosy. They will also be passive and appropriate for all ages.
- 4.9. The uncomplicated, open layout will also support clear and unobstructed supervision and surveillance for staff. The centralised bar will allow for excellent visibility for staff across the public area.
- 4.10. The bottleshop will offer a spacious browsing area, sizeable coolroom and a two-lane one-way drive-through. Although contiguous and very much a part of The Whitehorse Tavern operation as a whole, the take-away bottleshop will be isolated from the rest of the premises.
- 4.11. The entrances to the dining, drinking and socialising area will be separate from the drive-through bottleshop thereby enabling patrons to avoid the take-away section if they so wish and also ensure pedestrian safety around the bottleshop driveway.
- 4.12. The various aspects to the premises described above are illustrated in the following extract from the applicant's floor plan.



- 4.13. As stated earlier on in this document, the directors of the applicant company have great success as builders and developers of public, community facilities. They will ensure high quality materials are used in the construction and that the design and façades of the tavern complement the amenity and are welcoming.
- 4.14. The applicant has the capacity, through its directors and shareholders, to properly fund and manage the construction of the tavern and to do so without delay following approval of the application by the licensing authority and when the site becomes available for works.
- 4.15. At present the site is something of a paddock. The land is yet to be fully subdivided and is awaiting title allocation, new roads, a new neighbourhood shopping centre and large public open space, among other things, to enable the tavern to be constructed. The site and the surrounding area are shown below in the following aerial image. The location of the proposed tavern is identified by the red dot.



- 4.16. The vacant land that appears surrounding and east of the tavern site in the image above is the location of the proposed North Baldivis Shopping Centre. Other associated retail and commercial services and facilities will be developed around that area including significant open space
- 4.17. The tavern site is expected to be ready for construction to commence on the tavern within approximately 12 months.
- Manner of trade



- 5.1. The Whitehorse Tavern will be a modern, parochial multi-faceted hospitality facility. The design, style of operation and type of services will all reflect the North Baldivis community and the particular requirements of all people living within a couple of kilometres of the tavern, and particularly in the enormous residential district blooming north of the site.
- 5.2. The manner of trade will be extremely friendly and personable. Staff will come to know many patrons by name and be familiar with their families.
- 5.3. The Whitehorse Tavern is intended to be the main meeting place for local residents for ad hoc, casual dining and drinking as well as family celebrations, sporting group gatherings, functions, events and special themed occasions.

- 5.4. Further, as mentioned earlier on in this PIA, The Whitehorse Tavern is intended to replicate elements of the south-west region of the State in terms of the food and drink to be available. Produce from the south-west region will feature heavily on the menus, drinks lists and stock ranges both for consumption on and off the premises. There will be a strong feature of craft and small-batch products promoting the WA liquor producing industry. To partly illustrate this aspect of the proposal, attached is a draft list of the featured WA craft beer range proposed to be available in the bottleshop. The proposed craft range has very strong support within the consumer evidence in this case. The local community clearly requires the focus on WA produced liquor at The Whitehorse Tavern.
- 5.5. The menu at The Whitehorse Tavern will offer a wide range of food options and will include entrées, main meals, desserts, shared plates and small snack items. A large selection of meat dishes, salads, pasta and side plates will be available.
 Attached is a copy of the applicant's draft sample menu
- 5.6. Food will be available during most trading hours.
- 5.7. Pricing will be very competitive, affordable for families and also reflect the high standards proposed.
- 5.8. Entertainment will be provided by way of mainly pre-recorded background music but also occasional family-friendly live acts.
- 5.9. The applicant seeks approval for the standard permitted trading hours applicable under section 98(1) of the Act for a tavern class of licence, which are from 6am to 12 midnight Monday to Saturday and from 10am to 12 midnight on Sunday with variations for New Year's Day, Good Friday, Anzac Day and Christmas Day. However, the applicant intends at this stage to generally be open to the public from mid-late morning to midnight.
- 5.10. There are various features of the proposal which will contribute towards minimising harm. Staff will be trained thoroughly on matters of harm minimisation, responsible service and other areas of compliance, in addition to customer service and neighbour care.
- 5.11. Other aspects of the proposed manner of trade, including harm minimisation and risk management measures are referred to elsewhere in this PIA.
- 5.12. The consumer evidence gathered in respect of the application reveals consider community support for The Whitehorse Tavern as described above to be established. The expert market researcher stated in the PRG Report that "PRG has been conducting surveys in support of public interest assessments for over 20 years. In that time, we have rarely found such strong community interest in and support for a local tavern and bottle shop as has been shown in this survey"4.

-

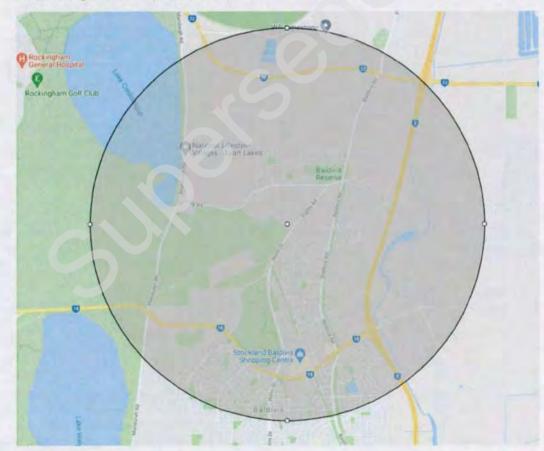
⁴ PRG Report at page 14

6. Locality

- 6.1. In the Western Australian liquor licensing jurisdiction, "[t]he term 'locality' in this instance refers to the area surrounding the proposed licensed premises. This locality will be the area most likely to be affected by the granting of an application in relation to amenity issues" (emphasis added)⁵.
- 6.2. Amenity in the WA liquor licensing jurisdiction means the "amenity, quiet and good order of the locality" and has been interpretated by the Supreme Court, Court of Appeal as follows:

"...the term 'amenity' in s 38(4)(b) "is concerned with whether and, if so, to what extent the granting of the application would be likely to have any positive or negative effects or consequences upon the overall character, quality and enjoyment of life within the locality".

6.3. The PIA policy says that a 3km radius surrounding the proposed location of the premises could potentially be the locality for an application in North Baldivis. The applicant has had regard for this area which is depicted in the Google Maps images below (3km radius):

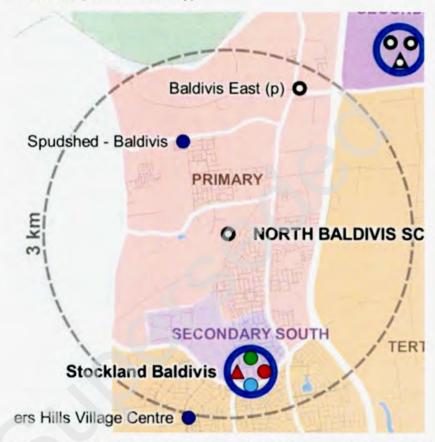


⁵ PIA policy

⁶ Section 38(4)(b) of the Act

⁷ Australian Leisure and Hospitality Group Pty Ltd v Commissioner of Police [2020] WASCA 157 [184]-[186] (Buss P)

6.4. The applicant has identified that the more relevant area in this case is that which has already been identified as the "primary sector" of the main trade area for the new North Baldivis Shopping Centre⁸ which will be located near The Whitehorse Tavern. This "primary sector" area is shaded in pale pink in the map below⁹ and is the area generally bounded by Millar Road West in the north, Kwinana Freeway to the east, Mandurah Road to the west and Tamworth Boulevard to the south. This "primary sector" area is regarded as the relevant locality in this case (relevant locality).



6.5. For the purposes of giving context, the following larger image contains the map above within the wider district:

⁸ North Baldivis Shopping Centre, Perth, Market Potential Assessment, August 2021, at pages 19 and 20 (copy **attached**)

⁹ Taken from the North Baldivis Shopping Centre, Perth, Market Potential Assessment, August 2021, at page 20 (copy *attached*)

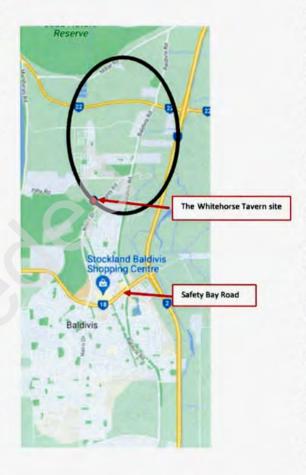


- 6.6. Further submissions in support of the proposition that in this case the relevant locality, as defined and illustrated above, should be the applicable locality area for the determination of the application, are contained in the **attached** Legal Submissions (section 3).
- 6.7. This PIA refers mainly to information arising from the relevant locality because that is considered to be the pertinent for the reasons referred to above and in the Legal Submissions. In addition, aspects of the 3km radius are also referred to.
- 6.8. Only approximately 30% of the relevant locality is developed. Much of the area that is currently undeveloped within the relevant locality will soon be developed into residential lots and other uses intended to complement and support the huge expansion of residential development.
- 6.9. The current population of the relevant locality is estimated at around 8,309¹⁰. This is projected to increase by around 17,163 people to 25,049 by 2040/41¹¹ steadily over the course of coming years. The applicant is already involved in the development of new lots and planning approval for infrastructure to be built virtually imminently.

¹⁰ North Baldivis Shopping Centre, Perth, Market Potential Assessment, August 2021, at page 23 (copy **attached**)

¹¹ North Baldivis Shopping Centre, Perth, Market Potential Assessment, August 2021, at page 21 (copy attached)

- 6.10. Slightly beyond the relevant locality, the "main trade area" for the North Baldivis Shopping Centre has a current population estimated at 10,111 with a projected increase of up to 35,851 over the next 20 years¹².
- 6.11. At present the main commercial, retail and shopping precinct in the whole of the existing suburb of Baldivis and the surrounding district is known as Stockland Baldivis which is a large mixed-use centre. Located on Safety Bay Road, the 20-year-old site caters mainly for the dense residential area south of Safety Bay Road and immediately north of Stockland Baldivis. The Google Maps image to the right depicts this whole region. It is clear from the image that the area south of Stockland Baldivis is heavily built-up. It is well established. An intricate road network is clearly illustrated. In contrast, the area north of Stockland Baldivis, especially in the top part of the map to the right, is sparsely developed but will soon include around an additional 10,000 residential lots which will mostly be created in and around the black oval shape drawn on the map. Stockland Baldivis is intended to continue to cater for the existing community which is mostly located south of Stockland Baldivis whilst the new North Baldivis Shopping Centre and associated retail and commercial neighbourhood centre, including The Whitehorse Tavern, will cater for the northern part of the district being mainly the area under development and situated around where the black oval shape has been drawn on the map to the right.



- 6.12. The majority of the area being developed and identified by the black oval shape drawn on the map above is situated 3-6km away from Stockland Baldivis.
- 6.13. Beyond the Stockland Baldivis centre, the next nearest notable facilities are currently more than 8km away.
- 6.14. The various information and maps contained in the preceding sub-paragraphs of this PIA illustrate a very large region that is divided into two parts, being north and south of Safety Bay Road.

¹² North Baldivis Shopping Centre, Perth, Market Potential Assessment, August 2021, at page 21 (copy attached)

- 6.15. In addition to the north-south division is the sheer size of the residential community in question and the enormous volume of people already in Baldivis and expected to be in North Baldivis and nearby.
- 6.16. Both the 3km radius and the relevant locality are situated in the City of Rockingham local government area. "The City of Rockingham is bounded by the City of Kwinana in the north, the Serpentine-Jarrahdale Shire in the east, the Shire of Murray and the City of Mandurah in the south and the Indian Ocean in the west. The City of Rockingham is a rapidly developing residential area, with substantial industrial and commercial areas, and a naval area on Garden Island. The City encompasses a total land area of approximately 260 square kilometres, including significant areas of coastline and parkland. With 37 km of breathtaking coastline, the area is known for its pristine beaches, nearby Penguin Island, dolphins and seals frequenting the area, and adventure experiences." 13
- 6.17. "[T]he City is now designated as one of Perth's Strategic Metropolitan Centres and has a population of around 140,000 and an operating revenue of more than \$156 million. Rockingham and surrounds is becoming an increasingly popular place to live and work, where residents place a high value on the relaxed coastal lifestyle that Rockingham offers."14
- 6.18. In terms of the suburb of Baldivis which covers a mammoth area comprising most of the relevant locality, the 3km radius and more, the Real Estate Institute of WA has reported as follows:

"Rapid growth in recent years has seen the semi-rural suburb of Baldivis become one of the most sought after property locations south of the river. Part of the City of Rockingham, Baldivis is populated by more than 31,000 people according to the 2016 Census - this figure has more than doubled since the 2011 Census." 15

- 6.19. The market research conducted by the applicant addressed both the 3km radius and also the relevant locality. The two survey exercises slightly overlapped each other in terms of area. PRG addressed the 3km radius while the hard-copy Public Questionnaire/Survey concentrated on the relevant locality and especially people living in the area north of the applicant's site. The resulting evidence, which is very strongly in favour of the application, is referred to elsewhere in this PIA.
- 6.20. One of the residential developments closest to The Whitehorse Tavern site is that of Spires Private Estate which, when completed, will comprise 2,000 dwellings. The City of Rockingham has approved the Spires Local Structure Plan as part of the development process. Subdivision approval was granted in 2018 for the creation of the neighbourhood centre and surrounding streets.

¹³ https://rockingham.wa.gov.au/your-city/about-us/city-of-rockingham-profile

¹⁴ https://rockingham.wa.gov.au/your-city/about-us/city-of-rockingham-profile

¹⁵ https://reiwa.com.au/suburb/baldivis/

6.21. In connection with that nearby land development is the future Stargate North Baldivis Shopping Centre, depicted below. This will be a significant facility within the area and a neighbour of The Whitehorse Tavern.



- 6.22. The owner, developer and intended operator of the Stargate North Baldivis Shopping Centre is the Carcione Group. It will comprise generally the following:
 - 6.22.1. Supermarket.
 - 6.22.2. 12x commercial tenancies.
 - 6.22.3. public art.
 - 6.22.4. 273 on-site car parking bays and bicycle parking, plus additional parking nearby.
 - 6.22.5. Extensive landscaping.
- 6.23. The following statements were made in the expertly prepared development application for the Stargate North Baldivis Shopping Centre and other components alongside The Whitehorse Tavern:
 - 6.23.1. "The proposed development is classified a 'Neighbourhood Centre' in the Activity Centres Hierarchy of SPP4.2. As outlined within Table 3 of SPP4.2 "Neighbourhood centres provide for daily and weekly household shopping needs, community facilities and a small range of other convenience services." 16
 - 6.23.2. "The proposed development will cater for some day to day needs of local residents, and provides an activity centre that will enable a range of land uses and encourage integration within the surrounding community, supporting improved social interactions between residents and visitors to the proposed development."

 17
 - 6.23.3. "The proposed development provides sufficient commercial development to meet the day to day needs of local residents and provides an activity centre that will provide for a range of land uses and

¹⁶ Development Application Proposed Neighbourhood Centre Development, Lot 9005 Nairn Drive, Baldivis WA, Planning Solutions, June 2021 (copy attached) at page 15

¹⁷ Development Application Proposed Neighbourhood Centre Development, Lot 9005 Nairn Drive, Baldivis WA, Planning Solutions, June 2021 (copy **attached**) at page 30

encourage integration within the surrounding community, supporting improved social interactions between residents and visitors to the neighbourhood centre."

18

- 6.24. The co-location of The Whitehorse Tavern with the neighbourhood and activity centre, all within the relevant locality, will help enable walkability for residents and the much-desired village lifestyle. Several people who contributed to the applicant's market research commented on the desire to walk to The Whitehorse Tavern¹⁹. Almost 50% of those who participated in the applicant's hard-copy Public Questionnaire/Survey live less than 1km from the applicant's site with several only a couple of hundred metres away. 63% live within 1km. All survey participants expressed clear support for the tavern to be approved as proposed.
- 6.25. The Whitehorse Tavern manner of trade is entirely consistent with the building of a new modern neighbourhood centre and associated community and will provide an excellent complementary facility.
- 6.26. In August 2021 the City of Rockingham supported a proposal to amend the Spires Private Estate structure plan so as to include the tavern development. The applicant's expertly prepared development application for the tavern includes the following:
 - 6.26.1. "The proposal will support the proposed neighbourhood activity centre at an appropriate scale to accommodate for the needs of the local community through the provision of entertainment and dining options to the residents of North Baldivis and the surrounding catchment area"20.
 - 6.26.2. "The proposed development provides a modern, attractive tavern that will encourage integration of the surrounding community and aims to provide context for a range of future development that capitalises on proximity to local services, along with providing a focal point for the local community"21.
 - 6.26.3. "The design concept is inspired by the aesthetic of the 'stable'; a building in which horses are sheltered and fed, grounding the design back to the history of the Baldivis region and the rural heritage of the area. A balance of a hardy, industrial form and warm, tactile finishes and detailing to the interior tavern fitout"²².

¹⁸ Development Application Proposed Neighbourhood Centre Development, Lot 9005 Nairn Drive, Baldivis WA, Planning Solutions, June 2021 (copy attached) at page 30

¹⁹ For example, Public Questionnaire/Survey, J Redfern, at page 2, Public Questionnaire/Survey, P Earles, at page 2 and Public Questionnaire/Survey, K Blaney-Murphy, at page 2

²⁰ Development Application The Whitehorse Tavern Lot 9005 Nairn Drive Baldivis, Planning Solutions, September 2021 (copy attached) at page 11

²¹ Development Application The Whitehorse Tavern Lot 9005 Nairn Drive Baldivis, Planning Solutions, September 2021 (copy attached) at page 11

²² Development Application The Whitehorse Tavern Lot 9005 Nairn Drive Baldivis, Planning Solutions, September 2021 (copy *attached*) at page 14

- 6.26.4. "The proposed neighbourhood centre will result in an attractive community hub for the locality, encouraging social interaction and a sense of community"²³.
- 6.26.5. "The various technical reporting prepared in support of the development confirms the proposal is acceptable from a traffic impact, parking, and acoustic amenity perspective"²⁴.
- 6.27. Clearly the relevant locality will become self-sufficient with services and facilities to support the substantial neighbourhood and community development if the tavern is approved. The Whitehorse Tavern will become a major attraction.

Local packaged liquor requirements - section 36B

- 7.1. Section 36B of the Act deals with packaged liquor sold and supplied for takeaway purposes for consumption off the premises and it also deals with premises authorised, or proposed to be authorised, to sell and supply packaged liquor.
- 7.2. A "packaged liquor premises" for the purposes of section 36B is:
 - 7.2.1. a hotel licence without restriction;
 - 7.2.2. a tavern licence;
 - 7.2.3. a liquor store licence; and
 - 7.2.4. a special facility licence of a prescribed type. No types have been prescribed.

Therefore, section 36B applies to the present application.

- 7.3. No issue arises in respect of section 36B(3) of the Act in this case. The proposed packaged liquor service will not comprise a retail area that is of the prescribed size. Therefore, the application is eligible to be heard and determined.
- 7.4. Section 36B has been said to have been intended to "enable the licensing authority to manage the number of packaged liquor outlets where sufficient outlets already exist within a locality" 25.
- 7.5. Notwithstanding the restriction imposed by section 36B of the Act and the narrow interpretation of it, new licences for packaged liquor premises have been approved under the new law in appropriate cases²⁶. There are many aspects to the application for The Whitehorse Tavern which could enable it to also be approved.
- 7.6. With reference to the outlet density information and evidence referred to in this PIA, the "packaged liquor premises" to be considered in the context of this case in terms of the relevant locality and section 36B is only the Baldivis Liquor Store

²³ Development Application The Whitehorse Tavern Lot 9005 Nairn Drive Baldivis, Planning Solutions, September 2021 (copy attached) at page 25

²⁴ Development Application The Whitehorse Tavern Lot 9005 Nairn Drive Baldivis, Planning Solutions, September 2021 (copy attached) at page 25

²⁵ Explanatory Memorandum, Liquor Control Amendment Bill 2018 at page 1

²⁶ For example, Costco Wholesale (603213623419). Pirate Life Perth (602213750319), Commune Wine Store (60321533920, Cherubino City Cellar (602215063820,) Kakka Alley Brewing Co (602215442820), Casa Perth (602215763420), Gage Roads Brew Co (602216177321) and Bailey Brewing Co. (602216939721)

which is located approximately 1.6km away to the west on Mandurah Road. There is no other licensed premises currently situated in the relevant locality.

7.7. To the extent that may be relevant, existing "packaged liquor premises" situated in the 3km radius are the following.

Existing packaged liquor premises	Approx. straight line distance from applicant's site	Direction/ location from applicant's site
ALDI Baldivis	2km	South
Liquorland Baldivis	2km	South
First Choice Liquor Market Baldivis	2km	South
BWS Baldivis	2km	South
The Chase Bar & Bistro	2km	South
Baldivis Liquor Store	1.7km	West

- 7.8. All but one of the premises listed above is located in a cluster within Stockland Baldivis. None is a drive-through facility.
- 7.9. The evidence of the requirements of consumers, as referred to in this PIA, is very clearly that they are not currently satisfied with existing packaged liquor services in the relevant locality and that the applicant's proposed stock range and associated services need to be available to them to purchase for take-away. Some of the persuasive results in the market research most relevant to issues under section 36B(4) of the Act include the following:
 - 7.9.1. In the expert market research, "almost seven in ten (68%) reported that the proposed Whitehorse Tavern drive- through bottle shop would better meet their packaged alcohol requirements than the current available outlets" within the 3km radius.²⁷
 - 7.9.2. Also in the expert market research, "overall 81% reported that the new bottle shop would be more convenient for them" than existing outlets within the 3km radius.²⁸
 - 7.9.3. The expert market research also found that "the great majority of packaged liquor buyers would shop for at least some of their packaged liquor requirements from the Whitehorse Tavern drivethrough bottle shop"²⁹.
 - 7.9.4. 78% of people who participated in the hard-copy Public Questionnaire/Survey stated that they will shop for packaged liquor

²⁷ PRG Report at page 10

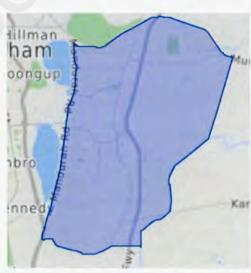
²⁸ PRG Report at page 11

²⁹ PRG Report at page 12

- at The Whitehorse Tavern bottleshop at least fortnightly³⁰ indicating considerable regulatory of requirement and patronage.
- 7.9.5. 50% of people who participated in the hard-copy Public Questionnaire/Survey stated that it is "currently **greatly in**convenient ...to access...particular packaged liquor requirements..."31 (emphasis added).
- 7.10. Further and better particulars regarding the existing packaged liquor premises are provided further on in this PIA under the "amenity" heading in accordance with the PIA policy.
- 7.11. Further and more detailed submissions regarding section 36B of the Act are contained in the attached Legal Submissions.

Harm or ill-health – section 38(4)(a)

- 8.1. In preparing this application, the applicant has had regard to harm and ill-health factors referred to in the PIA policy in the context of selling and supplying liquor as proposed.
- 8.2. In doing so, the applicant has sought to identify at risk groups and sub-communities referred to in the PIA policy who are present in the relevant locality. Regard has been had to Australian Bureau of Statistics (ABS) Census data³².
- 8.3. Unfortunately, data for the relevant locality specifically/in isolation could not be identified. The applicant has, instead, had regard for the whole of Baldivis, which is a large suburb. As stated previously in this PIA, the boundary of Baldivis as at the last fully reported Census in 2016 covered almost all of the relevant locality and also the 3km radius, plus additional land area. A very large population of 31,653 was recorded³³. It is a very large statistical area as shown in the ABS map to the right.



- 8.4. Only approximately 30% of the Baldivis suburb statistical area depicted above is within the relevant locality.
- 8.5. Statistics are contained in the table below including statistics for the whole State to give context.

³⁰ Question 5

³¹ Question 8

^{32 2016} Census: https://www.abs.gov.au/websitedbs/D3310114.nsf/Home/2016%20QuickStats

³³ https://quickstats.censusdata.abs.gov.au/census_services/getproduct/census/2016/quickstat/\$\$C500548 opendocument

ABS Census category	Baldivis	Western Australia
Aboriginal and Torres Strait Islander people (percentage of population)	1.5%	3.1%
Juveniles - percentage of people under 19	33.2%	25.3%
Average age	29	36
Ancestry – top response	English (32.9%)	English (27.9%)
Country of birth – top response	Australia (59.3%)	Australia (60.3%
Unemployed	7.9%	7.8%
Median weekly income – personal	\$842	\$724
Median weekly income – family	\$2,068	\$1,910
Couple family without children	32.6%	38.5%
Couple family with children	54.3%	45.3%
One parent family	12.2%	14.5%

- 8.6. The PIA policy refers to the following at risk groups and sub-communities which the applicant addresses as follows in relation to the relevant locality, with regard to the ABS statistics referred to in the table above and other information as referenced:
 - 8.6.1. Children and young people:
 - 8.6.1.1. The statistics contained in the table above reveal a larger than average percentage of Baldivis is home to children and young people. Whilst this factor could potentially be regarded as negative, the proposal under consideration in this case is purposefully designed to accommodate children and young people. Further, the business model proposed contains no high risk factors. Therefore, the new tavern will most likely have no adverse impact on children and young people.
 - 8.6.2. Aboriginal people and communities:
 - 8.6.2.1. There is a significantly less portion of the Baldivis community that identifies as being Aboriginal. According to the PIA policy, this can be seen as a positive factor in this case.
 - 8.6.3. People from regional, rural and remote communities:
 - 8.6.3.1. The relevant locality is near the southern boundary of the metropolitan area. It is not part of any regional, rural or remote community.

8.6.3.2. However, the applicant acknowledges that people from such communities may visit the relevant locality and that rural land uses operate within and near the relevant locality.

8.6.4. Families:

- 8.6.4.1. The statistics indicate that families do live in Baldivis. This is a positive factor in this case given the modus operandi proposed for The Whitehorse Tavern and the applicant's motivation for the application. Families will be within the target market.
- 8.6.4.2. The main family unit represented in Baldivis based on the data is that of couples with children. These people will be very well accommodated and welcomed at The Whitehorse Tavern.
- 8.6.5. Migrant groups from non-English speaking countries:
 - 8.6.5.1. The statistics do not reveal any stand-out migrant group or people from non-English speaking countries. It is acknowledged that some such people would most likely be living in the relevant locality.
- 8.6.6. People in low socio-economic areas:
 - 8.6.6.1. Residents in Baldivis enjoy income levels that are higher than the State averages.
 - 8.6.6.2. The unemployment rate is on par with the State rate.
 - 8.6.6.3. The Baldivis property market is experiencing a considerable positive and increasing growth rate of 12.2% annually with an increasing median annual house price of \$415,000.34
 - 8.6.6.4. "Based on the 2016 ABS census data, the City of Rockingham had a SEIFA Index of relative socioeconomic disadvantage score of 1,001. The SEIFA index scores for LGAs within the South Metropolitan Health Service (SMHS) ranged of scores from 945 to 1088."35 The following table shows the SEIFA scores for each suburb within the City of Rockingham revealing that Baldivis is the third most advantaged which reflects positively in this case.

³⁴ https://reiwa.com.au/suburb/baldivis/

³⁵ City of Rockingham Health and Wellbeing Profile 2019 (copy attached) at page 8

Table 3: SEIFA Index of Relative Socio-Economic Disadvantage scores by suburb, Rockingham (C) LGA, 2016

Suburb	SEIFA score	Usual resident population
Baldivis	1,045	31,653
Cooloongup	916	6,739
East Rockingham	850	263
Golden Bay	1,014	3,785
Hillman	925	1,848
Karnup	1,047	1,371
Peron	N/A	N/A
Port Kennedy	993	5,591
Rockingham	944	14,428
Safety Bay	1,002	7,407
Secret Harbour	1,065	12,073
Shoalwater	973	4,100
Singleton	1,036	3,752
Waikiki	983	12,396
Warnbro	966	10,769

- 8.6.6.5. These various factors all indicate healthy and aboveaverage socio economic conditions.
- 8.6.7. Mining communities or communities with a high number of itinerant workers:
 - 8.6.7.1. There is no mining known to be occurring in the relevant locality and therefore, no mining community to be concerned with.
 - 8.6.7.2. It has not been possible to identify the number of itinerant workers in the relevant locality. Whilst it is acknowledged that there may be some, there is nothing to indicate a high number of them.
 - 8.6.7.3. The mature and low risk nature of the proposed tavern business model is most unlikely to adversely affect any itinerant worker.
- 8.6.8. Communities that experience high tourist numbers:
 - 8.6.8.1. The City of Rockingham recorded average annual visitors of 173,000 across the 2017/18/19 reporting period.³⁶ It is understood that most of these people would visit the beach and coastline rather than the inland areas where Baldivis is situated.

³⁶ City of Rockingham Overnight Visitor Factsheet 2017/18/19 prepared by Tourism WA Strategy and Research, September 2020: https://www.tourism.wa.gov.au/Publications%20Library/Markets%20and%20research/2019/Adhoc/LGA%20Factsheets/LGA%20Visitor%20Factsheet%202019%20-%20City%20of%20Rockingham.pdf

- 8.6.8.2. The City of Rockingham has published a strategic objective to "promote Rockingham as Western Australia's premium coastal destination as a place to visit, live and invest in". 37
- 8.6.8.3. Neither the relevant locality, the 3km radius, nor the suburb of Baldivis are known tourist districts and they do not contain any notable tourist attractions. Therefore, it has been reasonably concluded that the community applicable to the determination of this application does not experience high tourist numbers.
- 8.6.8.4. The Whitehorse Tavern will, however, be more than suitable to cater for the requirements of tourists and will be an excellent example of Western Australian licensed hospitality services.
- 8.7. As required by the PIA Policy, the applicant has considered whether there are other groups of people who may be vulnerable or more at risk than the average person who lives in, works in, or visits the relevant locality and who may not be identifiable from the information set out in preceding paragraphs above. In this regard, the following have been considered:
 - 8.7.1. Residents the nearest is approximately 150m away (straight line).
 - 8.7.2. Schools the nearest is Baldivis Primary approximately 700m away (straight line).
 - 8.7.3. Churches the nearest is The Rocks approximately 400m away (straight line).
 - 8.7.4. Day care centres the nearest is Sonas Early Living & Care, approximately 600m away (straight line).
 - 8.7.5. Hospitals the nearest is Waikiki Private Hospital, approximately 4.2km away (straight line).
 - 8.7.6. Alcohol and other drug treatment centres the nearest is believed to be the South Metro Community Alcohol & Drug Service approximately 6.5km away (straight line).
- 8.8. No schools, hospitals, churches, day care centres or other sensitive type places have been identified currently within close vicinity of the site. It is acknowledged that as the surrounding area is developed, these places may be established nearby. It is also acknowledged that people will be living in relatively close proximity to The Whitehorse Tavern although none will be within the immediate vicinity.
- 8.9. The applicant has designed premises to fit perfectly into the local area and not disturb residents. This aspect of the business proposal is referred to in more detail further on in this PIA. The overwhelming majority of people who participated in

© Jessica Patterson Law & Consultancy Pty Ltd 2021

³⁷ City of Rockingham Tourist Destination Strategy (2019-2024), May 2019 (https://rockingham.wa.gov.au/forms-and-publications/your-city/our-vision/tourist-destination-strategy-2019-2024) at page 8

the market research have opined that they hold no concerns of adverse consequences resulting from the operation of the tavern.

- 8.10. The Whitehorse Tavern will not be located on any direct or obvious route to or from any church, hospital or school for any particular residents as far as the applicant is aware.
- 8.11. The applicant has considered additional social health indicators to assess risks in the relevant locality and beyond. In particular, the City of Rockingham Health and Wellbeing Profile 2019 (copy attached) has been reviewed. The following alcohol-related findings from that document are relevant to highlight as follows:
 - 8.11.1. Risky levels of alcohol consumption were lower in the City of Rockingham for the reporting period January 2015 - December 2016n as per the table below³⁸ which is a positive factor in this case.

Table 5: Prevalence of lifestyle risk factors for adults (aged 16 years and over), Rockingham (C) LGA and WA State, January 2015 – December 2016

	Rocking	WA	
Risk factors	Prevalence estimate	Estimated population	Prevalence estimate
Currently smokes	12.8	12,633	11.8
Eats less than 2 serves of fruit daily	55.7	54,716	50.3
Eats less than 5 serves of vegetables daily	90.6	89,046	88.4
Risky/high risk drinking for long term harm (a)	26.0	25,516	27.5
Risky/high risk drinking for short term harm (b)	9.2	9,060	10.0
Insufficient physical activity (c)	33.6	31,876	36.4

8.11.2. Alcohol-related hospitalisations have been fluctuating³⁹:

Table 12: Number of alcohol-related hospitalisations, Rockingham (C) LGA; by year, age group and gender, 2011 – 2015

	Age group		Ger		
Year	Less than 18 years	18 years and above	Male	Female	Total
2011	41	659	444	256	700
2012	39	713	468	284	752
2013	34	680	450	264	714
2014	25	665	428	262	690
2015	29	716	452	294	746
Total	169	3,433	2,242	1,360	3,602

8.12. In July 2021 the Australian Institute of Health and Welfare released its latest report on alcohol, tobacco and other drugs finding that consumption rates in

³⁸ City of Rockingham Health and Wellbeing Profile 2019 (copy attached), at page 11

³⁹ City of Rockingham Health and Wellbeing Profile 2019 (copy attached), at page 18

Australia have decreased and fewer Australians are drinking at levels likely to cause lifetime harm. "According to an ANU poll included within the report, 80 per cent of respondents reported either 'no change' or a 'decrease' in their alcohol consumption in May 2020 since the spread of COVID-19. This data was complemented by Commonwealth Bank card expenditure data which showed that during the pandemic total alcohol purchases were down, despite alcohol expenditure in pubs and clubs being partially offset by bottle shops".⁴⁰ These findings are positive considerations for this application.

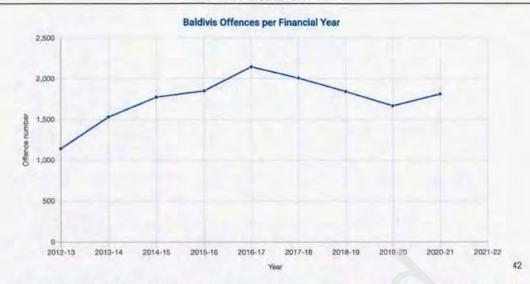
8.13. The applicant has considered the issue of crime relevant to its application, as required by the PIA policy. Information on proven crimes could not be found and so the following statistics of reported alleged offences published by Police⁴¹ have been considered for the whole of Baldivis. These statistics assist to some extent in gauging a very broad indication of crime generally in the area. Statistics have not been published for the relevant locality or 3km radius specifically.

Type of Offence	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	
Homicide	1	9	~	1	2	1	1	1		-
Sexual Offences	16	15	40	77	80	47	68	54	67	+
Assault (Family)	78	97	133	164	154	212	202	165	180	
Assault (Non-Family)	33	31	47	54	69	66	64	76	93	
Threatening Behaviour (Family)	6	9	19	23	27	36	23	35	24	
Threatening Behaviour (Non-Family)	7	16	12	12	32	27	20	19	23	*
Deprivation of Liberty	1		2		2	1	3	-	1	
Robbery	4	5	3	5	14	11	5	13	13	×
Dwelling Burglary	177	229	276	248	261	140	130	142	111	+
Non-Dwelling Burglary	57	77	75	58	54	52	59	55	42	i.
Stealing of Motor Vehicle	68	73	64	73	88	54	42	59	63	
Stealing	349	536	596	558	601	528	636	497	517	-
Property Damage	173	225	180	229	189	182	160	150	201	
Arson	9	4	21	13	9	12	3	6	10	
Drug Offences	71	60	93	158	174	263	159	168	140	-
Graffiti	24	15	12	13	12	12	11	12	12	
Fraud & Related Offences	46	88	96	100	307	288	127	94	201	
Breach of Violence Restraint Order	24	52	106	64	72	78	132	122	113	*
Total of Selected Offences	1,144	1,532	1,775	1,850	2,147	2,010	1,845	1,668	1,811	

8.14. The offence rate has increased in the last year, although in the four years prior it decreased. The trends are illustrated by the following graph:

^{40 &}lt;a href="https://www.aihw.gov.au/reports/alcohol/alcohol-tobacco-other-drugs-australia/contents/about">https://www.aihw.gov.au/reports/alcohol/alcohol-tobacco-other-drugs-australia/contents/about and https://www.aihw.gov.au/reports/alcohol/alcohol-tobacco-other-drugs-australia/contents/about and https://www.aihw.gov.au/getmedia/df04a2e7-47be-4e08-9225-d5849311e01c/aihw-phe-221-fact-sheets-Jul21-alcohol.pdf.aspx

⁴¹ https://www.police.wa.gov.au/Crime/CrimeStatistics#/start



- 8.15. The main spike in the last year has been in the category of fraud and related offences which have more than doubled. The sale and supply of liquor is not generally known to be associated with such offences.
- 8.16. The Whitehorse Tavern will be a professionally constructed and managed facility with secure structures and modern security systems including CCTV. Together with the light and bright style and the family-focused manner of trade, the venue is considered unlikely to attract criminal activity of any concern. Offensive behaviour will not be tolerated.
- 8.17. A range of strategies will operate at The Whitehorse Tavern to minimise the potential for harm or ill-health to occur in the community as a result of liquor being sold and supplied at the premises. Those strategies include the following:
 - 8.17.1. Pricing liquor at levels that won't encourage rapid or excessive consumption.
 - 8.17.2. Offering food and providing other products and services which are separate and distinct from the liquor itself.
 - 8.17.3. Creating and maintaining services and facilities of a high standard in all respects, designed to accommodate people of all ages and persuasions and particularly local families.
 - 8.17.4. Engaging only qualified and reputable people to be involved with the business.
 - 8.17.5. Implementing high level training regime for staff. Thoroughly training staff on all compliance matters including responsible service of liquor, as well as customer service.
 - Adopting and subsequently operating in accordance with a responsible Management Plan and Code of Conduct.

_

⁴² https://www.police.wa.gov.au/Crime/CrimeStatistics#/start

- 8.17.7. Adopting and subsequently operating in accordance with professional policies and procedures for good management, including dealing with complaints.
- 8.17.8. Installing signage which encourages responsible conduct and good behaviour.
- 8.18. The applicant is very conscious of the fact that juveniles will regularly patronise the tavern. Strict policies will apply in relation to them, including the following:
 - 8.18.1. Liquor will not be sold or supplied to anyone who is suspected of trying to obtain liquor for a juvenile.
 - 8.18.2. Entry will be refused to any juvenile who is not appropriately accompanied by a parent or adequate guardian acting in the role of a parent.
 - 8.18.3. Liquor will not be advertised or promoted in a manner likely to appeal to juveniles.
 - 8.18.4. Staff will receive regular training on dealing with juveniles.
- 8.19. The premises will be purposely designed to be suitable for juveniles with families. Food and drink options designed for juveniles will be available. From time to time family-based entertainment will be provided. The applicant is highly motivated to focus its business on being very community-centric which involves properly accommodating and caring for juveniles.

Impact on amenity – section 38(4)(b)

- 9.1. The amenity of the relevant locality has been variously described in previous sections of this PIA.
- 9.2. The Whitehorse Tavern, if operational as proposed, will make an excellent contribution to the amenity with a high quality building and upmarket services and facilities not otherwise available in the relevant locality.
- 9.3. As required by the PIA policy the applicant has identified all existing licensed premises in the relevant locality which are the following:

Approved premises name	Licence type	Address	Approx. straight line distance from applicant's site
Baldivis Liquor Store	Liquor store	Cnr Mandurah and Fifty Roads, Baldivis	1.7km
Totally & Partially Disabled Veterans of WA Inc	Club restricted	1677 Mandurah Road, Baldivis	2.3km
Baldivis Football and Netball Club Inc	Club restricted	Cnr Fifty and Baldivis Roads, Baldivis	0.9km

Bistro 129	Restaurant	129 Kerosene Lane, Baldivis	1.9km
Baldivis Soccer Club	Club restricted	Eighty Road, Baldivis	0.9km

- 9.4. Of the five premises listed in the table above which are located in the relevant locality:
 - 9.4.1. None of them is a tavern.
 - 9.4.2. None of them provide anywhere near the type or range of services proposed for The Whitehorse Tavern.
 - 9.4.3. Only the liquor store and restaurant premises are capable of providing services to the general public. The three clubs are restricted in operation by the trading privileges provided for in section 48 in the Act. The applicant will not be so restricted under a tavern class of licence if approved.
 - 9.4.4. The restaurant is obviously restricted in its operation to the trading privileges provided for in section 50 in the Act. The same restrictions will not apply at The Whitehorse Tavern if the application is approved.
 - 9.4.5. Only the liquor store premises offers a packaged liquor service.
- 9.5. Baldivis Liquor Store trades under the Bottlemart banner. It is a stand-alone store with no drive-through, pictured below:





9.6. This liquor store offers a range of packaged liquor products in a relatively modest size shop with walk-in and browse service only.

- 9.7. The store offers predominantly mainstream liquor products commonly available in the market, produced by companies around Australia and overseas. Only a small portion of the range is that of Western Australian produced products and even less consists of small- batch craft items. For example, the current beer specials advertised online for the store include barely a handful of WA products⁴³. This can be starkly contrasted with The Whitehorse Tavern proposal.
- 9.8. The location of the Baldivis Liquor Store dictates that it caters to the passing trade on Mandurah Road, a nearby caravan park and residents in surrounding streets. It has an entirely different catchment from that of The Whitehorse Tavern. It will be far from reasonable, let alone convenient, for residents in the relevant locality, especially those in the north, eastern and south-eastern quarters to navigate the road network and travel the distance to the Baldivis Liquor Store. This is particularly so when consideration is given to the wide array of products, services and facilities to be available at The Whitehorse Tavern in contrast.
- 9.9. Furthermore, the one liquor store cannot reasonably cope with the existing population in the relevant locality of 8,309⁴⁴, let alone the projected population of 25,049⁴⁵.
- 9.10. In terms of outlet distribution and the issue of amenity, the addition of The Whitehorse Tavern into an area void of services and facilities and in connection with major development and new retail and commercial infrastructure will see great improvement. The community currently residing and soon to be in the relevant locality will be forced well outside their area if The Whitehorse Tavern is not approved as proposed.
- 9.11. Given the sparsity of licensed outlets, the distant distribution of them and the void in services, there should be no issue as to any inappropriate density or such with the introduction of the Whitehorse Tavern.
- 9.12. Notwithstanding the enormity of the Baldivis suburb in terms of area and population as referred to earlier on in this PIA, there are only 25 licensed premises of any type across the whole of Baldivis.⁴⁶
- 9.13. The evidence from consumers living in the relevant locality and 3km radius is that they are not satisfied with existing outlets and desperately want The Whitehorse Tavern to be established. These propositions are supported by the following extracts from the market research which are but a couple of examples as the evidence overall provides very strong support for the application:
 - 9.13.1. "The survey found that the great majority of respondents residing in the 3km radius believe there are not enough venues in the 3km radius that would offer the range of socialising, drinking, dining,

⁴³ Attached copies of advertisements printed 7 September 2021

⁴⁴ North Baldivis Shopping Centre, Perth, Market Potential Assessment, August 2021, at page 23 (copy attached)

⁴⁵ North Baldivis Shopping Centre, Perth, Market Potential Assessment, August 2021, at page 21 (copy attached)

⁴⁶ https://portal.dlgsc.wa.gov.au/licencesearch?status=Current&suburb=BALDIVIS&group=Liquor+Premises

- entertainment opportunities and bottle shop services in a family friendly facility" 47.
- 9.13.2. 76% of people who completed a hard-copy Public Questionnaire/ Survey stated that they consider "The Whitehorse Tavern will be different from other licensed venues already operating in and around Baldivis".
- 9.13.3. "The great majority (81%) of packaged liquor buyers indicate that the Whitehorse Tavern bottle shop would be "much more" (49%) or simply "more" convenient to buy their takeaway liquor requirements at the Whitehorse drive-through bottle shop. Very few (5% or less) anticipate that it would be less convenient to shop there ."48
- 9.14. The expert market researcher concluded that "[t]he 3km radius is undergoing rapid development, in which the establishment of new suburbs and housing is progressing at a very rapid pace, and as is typical in such rapid developments, the provision of community infrastructure is lagging behind the rate of population growth"⁴⁹. The grant of The Whitehorse Tavern licence will rectify the situation.

Offence, annoyance, disturbance or inconvenience – section 38(4)(c)

- 10.1. The applicant has carefully considered the potential for The Whitehorse Tavern to cause offence, annoyance, disturbance and inconvenience.
- 10.2. A carefully planned, sophisticated proposal has been developed that will be low risk, not cause such adverse consequences and will actually promote a positive community-based hospitality culture in North Baldivis. The Whitehorse Tavern will facilitate the bringing together of the community.
- 10.3. As is referred to in the **attached** copy of the development application for the tavern, "[a]n environmental noise assessment has been prepared demonstrating the proposed tavern will not adversely impact existing noise sensitive premises in the locality" ⁵⁰.
- 10.4. The following strategies will operate to ensure potential offence, annoyance, disturbance and inconvenience is minimised at worst and even avoided for the most part and as much as possible:
 - Close monitoring of noise, both inside and outside of the premises by staff.
 - 10.4.2. Consultation with nearby businesses and residents as to the effects of the tavern operation on their circumstances.

⁴⁷ PRG Report at page 6

⁴⁸ PRG Report at page 46

⁴⁹ PRG Report at page 15

⁵⁰ At page 16

- Implementation and regular reviewing of the Harm Minimisation Policies.
- 10.4.4. Ensuring that the high business standards proposed are maintained and revised as and when appropriate.
- 10.4.5. Deliveries will occur at times and in a manner that won't adversely affect anyone.

11. Tourism, community or cultural matters – section 38(4)(ca)

- 11.1. As addressed earlier on in this PIA, the relevant locality is not regarded as a tourist area. Tourism has very little bearing on this case. Any tourists who may resort to the relevant locality will be very well accommodated at The Whitehorse Tavern. The venue will represent an excellent example of local licensed hospitality.
- 11.2. Based on the ABS data⁵¹, the majority of people comprising the community in this case are, with reference to the whole of Baldivis as an indicator because information specific to the relevant locality could not be identified:
 - 11.2.1. relatively young compared to the State average,
 - 11.2.2. earning a higher than average income,
 - 11.2.3. living in a family-unit with children,
 - 11.2.4. married,
 - 11.2.5. working full-time as a technician or trade worker and
 - 11.2.6. living in a house with four or more bedrooms which they own with a mortgage where there is two or more vehicles registered.
- 11.3. These statistics reveal healthy lifestyle characteristics and the type of people who will benefit greatly from the new tavern.
- 11.4. Members of the local community who participated in the applicant's hard-copy Public Questionnaire/Survey have an average age of 38 and live an average of approximately 1.4km from the applicant's site.
- 11.5. As referred to throughout this PIA, the proposed tavern is deliberately intended to generate local culture and support the community coming together to enjoy high quality tavern products, services and facilities designed to appeal to everyone. Families, friends and community groups in the relevant locality will be able to meet at The Whitehorse Tavern in a safe and comfortable venue designed just for them.
- 11.6. The market research confirms the many community benefits likely to result from the grant of the licence by virtue of the fact that hundreds of people have given compelling support for The Whitehorse Tavern and also expressed personal reasons why the operation will be valuable to them. The following are a few example extracts from that evidence:

_

^{51 2016} Census: https://www.abs.gov.au/websitedbs/D3310114.nsf/Home/2016%20QuickStats

- 11.6.1. "If the Whitehorse Tavern is established as proposed, a very high proportion of adults in the 3km radius will use it"52.
- 11.6.2. "Clearly the great majority of local residents (within the 3km radius) are interested in using the various features of the Whitehorse Tavern"53.
- 11.6.3. "...the overwhelming majority commented that the local amenity would be improved, largely because there are so few suitable facilities within a reasonable distance currently"54.
- 11.6.4. "When asked if overall they supported or opposed the establishment of the Whitehorse Tavern, very nearly 100% indicated support.... The very strong level of support is consistent across the demographic groups".55
- 11.6.5. "...the strong view that the new tavern would be more convenient is consistent across the gender, age group and life stage sub-groups56.
- 11.6.6. "Over half the surveyed packaged liquor buyers within the 3km radius reported that they would be "very interested" in being able to access the Whitehorse tavern bottle shop, almost eight in ten (79%) would be at least quite interested, and 95% expressed at least some interest in doing so. This response pattern is consistent across the demographic groups. The great majority express interest in being able to access WA craft liquor products in the Whitehorse Tavern bottle shop."57
- 11.6.7. "It'll be good to have a local tavern as all amenities are around Safety bay rd or South (sic)"58.
- 11.6.8. "This end of Baldivis needs a pub/eatery for families"59.
- 11.6.9. "More variety. Baldivis needs to accommodate (sic) for the expanding suburban growth" 60.
- 11.6.10. "I think a family tavern in our neighbourhood would be great for meeting other families from our local area" 61.
- 11.6.11. "I would love to be able to have access to local craft brew, especially with drive through" 62.

⁵² PRG Report at page 7

⁵³ PRG Report at page 8

⁵⁴ PRG Report at page 9

⁵⁵ PRG Report at page 14

⁵⁶ PRG Report at page 31

⁵⁷ PRG Report at page 45

⁵⁸ Public questionnaire/survey, E Lowndes, at page 2

⁵⁹ Public questionnaire/survey, B Janczyk, at page 2

⁶⁰ Public questionnaire/survey, C Gourlay, at page 4

⁶¹ Public questionnaire/survey, M Casey, at page 4

⁶² Public questionnaire/survey, Z Main, at page 3

11.7. The expert market researcher concluded as follows63:

"Currently, there is very little in the way of suitable venues where parents can meet and socialise in a family friendly licenced venue. We believe that the community demand for such a local facility is clear in the results to this survey, and we predict that should the tavern licence be granted, the Whitehorse Tavern will very quickly become a focal point for local families to meet, socialise and dine in a casual family friendly environment. Moreover, the convenient location in the rapidly developing northern section of the 3km radius, and the appeal of being able to buy craft WA liquor products, will lead more than four in five (86%) to shop for packaged liquor in the drive-through bottle shop."

12. Sections 5 and 33

12.1. Matters provided for in sections 5 and 33 of the Act have been taken into consideration in the preparation of the application. Submissions addressing those and other relevant provisions in the Act and PIA policy have been detailed in a separate set of Legal Submissions attached to this PIA.

13. Conclusion

- 13.1. This PIA addresses the PIA policy and relevant sections of the Act in full measure, with specific reference to particulars of the tavern proposal.
- 13.2. The applicant has assessed the requirements of the local community for packaged liquor and also related services relevant to the tavern class of licence. To reiterate, "PRG has been conducting surveys in support of public interest assessments for over 20 years. In that time, we have rarely found such strong community interest in and support for a local tavern and bottle shop as has been shown in this survey"64.
- 13.3. The applicant has paid close regard to a wide variety of public interest factors relevant to the application and has presented a comprehensive and polished proposal supported by a range of evidence.
- 13.4. The issue of the locality has been carefully considered and properly addressed in both this document and the **attached** Legal Submissions.
- 13.5. The Whitehorse Tavern, as proposed, is ardently supported and demanded by the public, by hundreds of people living close by. It is also already contemplated by the local council in its Masterplan for the district and essential to the neighbourhood centre being developed by both private and government sectors.

⁶³ PRG Report at page 15

⁶⁴ PRG Report at page 15

13.6. This PIA should be considered together with the attachments referred to within. Collectively the documents paints a compelling picture to illustrate how The Whitehorse Tavern will both satisfy unmet consumer requirements and fulfil the public interest.

Dated 29 September 2021

Jessica Patterson Law & Consultancy Pty Ltd Law practice acting for the applicant

Sumr	Summary of attachments				
No.	Title/description				
1.	Statutory Declaration of Vincenzo Giuseppe Carcione dated 30 September 2021				
2.	PRG Report (The Whitehorse Tavern Community Survey) dated 6 September 2021				
3.	Public Questionnaire/Survey forms - 60x completed				
4.	Draft sample menu				
5.	Draft WA craft beer stock range				
6.	Development Application Proposed Neighbourhood Centre Development, Lot 9005 Nairn Drive, Baldivis WA, Planning Solutions, June 2021				
7.	Development Application The Whitehorse Tavern Lot 9005 Nairn Drive Baldivis, Planning Solutions, September 2021				
8.	North Baldivis Shopping Centre, Perth, Market Potential Assessment, August 2021				
9.	City of Rockingham Health and Wellbeing Profile 2019				
10.	Bottlemart beer advertisements as at 7 September 2021				
11.	Legal Submissions dated 29 September 2021				

Level 1, 251 St Georges Tce, Perth WA

CoR Ref: 20.2021.262.1 - D22/7602

PS Ref: 7687

14 February 2022

David Banovic, Senior Projects Officer City of Rockingham

Via email: customer@rockingham.wa.gov.au

Attention: Casey Gillespie

Dear Sir/Madam.

LOT 9005 NAIRN DRIVE, BALDIVIS
PROPOSED TAVERN – RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION

We refer to the City's request for additional information on the above matter dated 18 January 2022, and are pleased to provide the following response.

Please find enclosed amended plans and supporting documents prepared in response to the request for additional information, as well as addressing comments of the City's Design Review Panel which had reviewed the application on 3 February 2022. The amended plans and supporting documents include:

- 1. Amended development plans, varying from the submitted plans by:
 - Reorienting the liquor store so the main pedestrian entry faces Yellowstone Road, and consequential modifications to the tavern back-of-house. The drive-through vehicle flow is reversed.
 - Moving the accessible car parking bays and shared space to the Yellowstone Road frontage, and including a pedestrian pathway between Yellowstone Road and the tavern entry via the shared space.
 - Moving most of the bicycle parking to the eastern corner, adjacent to Yellowstone Road.
 - Including turnaround bays at the ends of the blind aisles.
 - Inclusion of a 2.4m high masonry wall along the site's northwestern boundary.
 - Showing the Western Power transformer adjacent to the site's eastern corner.
- 2. Provision of a landscaping plan for the development.
- 3. Updated transport impact assessment reflecting the amended plans.
- 4. Updated waste management plan addressing the City's comments.
- 5. Updated environmental noise assessment addressing the City's comments.

We are pleased to provide the following response to the additional information requested.

Land use classification

The relevant land use definitions under the City of Rockingham Town Planning Scheme No.2 (TPS2) are:

Liquor store – small means premises the subject of a <u>liquor store licence</u> granted under the Liquor Control Act 1988 with a net lettable area of not more than 300 m².

Liquor store – large means premises the subject of a <u>liquor store licence</u> granted under the Liquor Control Act 1988 with a net lettable area of more than 300 m².

Tavern means premises the subject of a <u>tavern licence</u> granted under the Liquor Control Act 1988. [underlined emphasis added]

To be classified as a 'liquor store - small' or 'liquor store - large' use, the premises must be the subject of a 'liquor store' licence under the *Liquor Control Act* 1988. Under this Act there is a clear and distinct licence classification system. There are various different classes or types of licence. A 'tavern' class of licence is totally different from a 'liquor store' class of licence.

The Whitehorse Tavern, as a whole, would only be able to operate under a tavern licence. The liquor store component of The Whitehorse Tavern is (from a licensing perspective) not a liquor store in its own right, but rather simply the packaged liquor section of the tavern. Refer paragraph 1.1 of the Public Interest Assessment (included with the development application), and the section 40 certificate issued by the City on 3 December 2021, both of which identify the licence type as 'tavern' not 'liquor store'.

We are aware of case law concerning this issue, namely the Tribunal's deliberations in Alh Group Property Holdings Pty Ltd and Presiding Member of the Metro Central Joint Development Assessment Panel [2018] WASAT 63 where the Tribunal found a Dan Murphy's liquor store was properly categorised as a 'liquor store (large)' use under the applicable planning scheme. But the land use definitions under that planning scheme were different to the present circumstance in that the 'liquor store (large)' land use definition under that scheme simply required the premises to be the subject of a "<u>liquor licence</u>", and not the narrower "<u>liquor store licence</u>" per the TPS2 definition.

The correct land use classification of the liquor store component under TPS2 is a 'tavern', as it is a premises subject to a 'tavern' licence under the Liquor Control Act 1988.

Use area calculations

An area calculation plan has been included with the amended plans confirming the areas of the undercover alfresco area, internal service area, and the liquor store shop.

Design

The City's officers identified the following design matters:

- Lack of building activation in the form of transparent glazing along Yellowstone Road;
- Back of storage and service delivery areas fronting Yellowstone Road;
- Lack of a clearly definable entry point from Yellowstone Road; and
- The façade and roof elements fronting Yellowstone Road and Amazon Drive do not incorporate urban cues into its design.

The City's Design Review Panel (DRP) also considered the proposal on 3 February 2022. The DRP's summary recommendation was:

The design is supported subject to the appropriate siting of the building adjacent to Yellowstone Road, an effective interface with the abutting POS and the materiality being carried through to the build.

The plans have been amended to respond to the City's and DRP's comments. In particular:

- The reorientation of the liquor store entry (with glazing) to the Yellowstone Road frontage, moving servicing to the rear, and the incorporation of a dedicated pedestrian pathway between the building entry and Yellowstone Road have improved the building's interface to Yellowstone Road.
- Additional detail on landscaping has been provided, showing in greater detail the interface to the adjacent public open space. This includes a future timber deck bridge linking the tavern's outdoor alfresco area with the park.

Consideration has been given by the project team to the DRP's comments on re-siting the building. It has been decided to proceed with the building in its position, and to not re-site the building, as the improvements identified above satisfactorily address the urban design and interface objectives. The building's pitched roof and material design gives it sufficient prominence in the environment and its re-siting is not necessary for it to retain its prominence. Further, re-siting would require the crossover at the drive-through exit to move closer to Amazon Drive potentially causing issues with minimum separation distances, or alternatively would require space to be given over for internal movements next to the street corner at the expense of landscaping.

Other comments raised by the DRP have been responded to; refer the DRP response table at Attachment 1.

Waste management plan and service vehicle access

Refer the enclosed updated waste management plan addressing the City's comments.

Noise

Refer enclosed updated environmental noise assessment addressing the City's concerns.

Transport impact and parking control and management

Refer the Attachment 2 for a table prepared by Transcore responding to the City's queries, and enclosed for an updated transport impact assessment reflected the amended site plan.

Landscaping, Bushfire Management Plan and Public Open Space (POS) Interface

Refer enclosed a landscaping plan which demonstrates the interface to the POS and being consistent with the bushfire management plan.

Response to public submissions

Thank you for providing us an opportunity to review and respond to comments in objection received during public advertising. Our initial view is that the comments received largely relate to matters addressed in the development application, such as traffic, parking, and noise. That being said, if the City's officers wish for the applicant to respond to a specific comment, please advise us at the earliest opportunity.

Comments relating to the style and character of the proposed tavern have been addressed in the Public Interest Assessment included with the application, specifically in section 5 (manner of trade).

Should you have any queries or require further clarification in regard to the above matter please do not hesitate to contact the writer.

Yours sincerely

ROSS UNDERWOOD SENIOR ASSOCIATE

220214 7687 Response to RFI.docx

ATTACHMENT 1
RESPONSE TO DRP COMMENTS



PREPARED BY DESIGN MANAGEMENT GROUP-DATE 11th February 2022

Responses to City of Rockingham DRP comments

		_
Design Principles	DRP comments	DMG responses
Principle 1 – Context and Character	 The proposed design aesthetic appears to respond to the historical context and former land use of the Baldivis region. Further consideration could be given to how the "stable" typology is interpreted and executed in the design. Wayfinding and signage detail will be important to maintain the design integrity of the building. The building was described as "elegant, beautiful and polite". 	Wayfinding and signage detail will be developed in Design Development stage.
Principle 2 – Landscape Quality	 The proposed building has been designed to respond to the adjacent POS and is commendable, however, the overall landscape design for the site would benefit from further consideration and development. Recommend engaging the services of a suitably experienced landscape architect. Recommend that the proposed plant species be native and/or suited to the local climate/biodiversity. Consider integrating more medium size plantings and/or landscape structures to help break up large areas of hard landscaping and provide more variation between low-level planting and tree canopies. Consider integrating elements such as street furniture and/or planters particularly around the liquor store in lieu of bollards and other more "obvious" security requirements. Consider integrating other shading structures and/or covered walkways (such as to the liquor store entry) to complement shading and protection from trees. The use of swales to address stormwater runoff from carpark should be contemplated. The timing of the POS development should precede the building to ensure that the integration is achieved from the out-set. 	 A landscape plan and report has been prepared by Emerge Associates for the development. A mix of local native and exotic plant species have been selected for their suitability to the location and micro climate of the development. A landscape buffer has been implemented along Amazon Drive to provide visual separation of the car park and soften the street edge with planting & shade. Covered passageway has been provided to the liquor store and tavern entry. Solid protection barriers will be utilised to avoid visual obstruction & will be integrated/ combined with hard landscape elements Stormwater management strategy will be developed in Design Development Stage by hydraulic and civil engineer with the use of



Principle 3 – Build Form and Scale	 The proposed scale and built form seem appropriate for the site and intended use, acting as an important "bridging" element between commercial and residential land uses within the estate. The "middle" portion of the building containing the service areas may benefit from further design development (see comments under Principle 4 regarding integration of roof plant deck). It may assist to provide some context or estate elevations confirming how the overall building form compares to the adjacent proposed commercial and residential areas. 	 Noted. Central plant area will be further considered to better integrate screening and position of plant within the roof scape to better integrate with pitched roof forms. Much of the surrounding and adjacent sites is undeveloped -remaining as open paddocks and stands of eucalpyt. Built context is generally small single storey residential across the main road of Nairn Drive so contextual elevations do not
		help to convey final context.
Principle 4 – Functionality and Build Quality	 The development is generally considered to be functional from usability perspective. Need to carefully consider how exposed timber finishes will be managed and maintained over the life of the building e.g. will they be highly protected/sealed or allowed to age naturally? If considering the use of composite timber products, the finish of such products may have an undesirable impact on the aesthetics of the overall design (see also Principle 10 Aesthetics). Reconsider the placement of the bin store, tavern storage and storage area. While the placement of these elements is likely proposed due to separation from the residential land uses, they are directly adjacent one of the key vehicle entry points leading to the tavern and drive through liquor store. It is generally advisable to have a separate access/egress and circulation route for service and delivery vehicles. The current floor plan does not appear to give due consideration to the placement and location of building services such as electrical, and/or hydraulic plant rooms. Ensure the eventual location of these services does not have an adverse impact on the 	 Treatment to exposed timber structure will be developed in Design Development stage however the emphasis will be on naturally aging timbers rather than finishes that require extensive, frequent and costly maintenance. This will provide long term continuity of aesthetic. Bin store, tavern storage and storage have been relocated so they are not fronting Yellowstone Road with shop front relocated to Yellowstone Rd for better activation and street presence. Service delivery vehicles access will be from Amazon Drive and the key vehicle entry point leading to the tavern will be from Amazon Drive.
	overall design of the building and site. While a mechanical plant roof deck is indicated to RESPONSE TO DRP COMMENTS GE FINAL F	Building services such as electrical, hydraulic and mechanical will be



the middle portion of the building, this could be designed to better integrate with the overall form of the building.

- developed in Design Development stage to ensure these services do not have an adverse impact on the overall building design.
- Mechanical plant roof deck will be setback from the building edge to be less obtrusive from Yellowstone Rd. Also the external passageway canopy helps shield the plant roof deck from street level view.

Principle 5 – Sustainability

- The proposed material schedule identifies the roof colour as 'Colorbond Monument'. It is strongly recommended that a dark roof colour is avoided dark roof colours substantially increase the cooling load of the building in summer and contribute adversely to the urban heat island effect. Dark roofs also compromise the efficiency of renewable energy systems such as solar PV. Additionally, any roof colour with a solar absorbance greater than 0.4 will require a performance solution approach under the NCC.
- Recommend against the use of a continuous strip of polycarbonate roof sheeting as part of the main tavern roof. While improving access to natural daylight to the interior is important, this style of rooflight will also allow excessive incident solar radiation into the interior, increasing the building's cooling load in summer.
- Consider reducing the extent of skylights and/or external shade/louvre/screen over the skylights to provide solar control.
- Consider the inclusion of ceiling fans to dining areas to enhance natural ventilation and provide passive cooling.
- Reconsider design of northern overhang to allow more winter sun whilst providing protection from summer sun - consider sun studies and daylight factor calculations.
- The proposed tavern building appears to have a highly permeable building envelope – the large interior volumes can also make it difficult to keep warm in winter without excessive use of artificial heating. Consider how the building envelope and interior spaces can be enclosed and/or partitioned to create smaller volumes.
- Also, consider how the proposed palette of

- Metal roof sheeting color will be revised to an alternative that will allow better solar reflectance and compliant with NCC through performance or deemed to satisfy.
- Light diffusing baffles, light shelves or banners will be incorporated to diffuse daylight through the ridge of the tavern roof. This ridge element is also intended to assist with natural ventilation. Further design will be required to resolve this element in detail to avoid unwanted solar heat gain.
- Sun studies will be developed to review building thermal performance and design to be modified as required.
- Ceiling fans are proposed to dining and alfresco areas to enhance natural ventilation and provide passive cooling.
- The dining area is able to be enclosed or partitioned to create a smaller private space and help reduce overall volume.
- An environmental consultant will be engaged in Design Development stage to ensure the proposed



	 materials will achieve recommended R-values for the external walls. There is a large area of roof facing north-east that would be an ideal opportunity to incorporate a solar PV renewable energy system. If sized appropriately and/or integrated with battery storage, this could help to significantly reduce the operational energy loads for the tavern and/or liquor store. See also <i>Principle 6 Amenity</i>. 	development will meet the sustainability requirements including thermal performance of walls, roofs etc. • PV panels will be considered in Design Development stage to reduce the operational loads for the tavern and liquor store.
Principle 6 – Amenity	 The spaces within the building seem to adequately work together. The relationship with the broader Town Centre is noted but could be improved through better siting of the building. As part of the carpark design, consider providing taxi/rideshare drop off zones, along with and EV charging facilities for selected bays. This could be considered as an offset in lieu of the reduced car bays currently proposed on the site. Also consider the provision of bicycle parking and related amenities and how pedestrian movement can be prioritised throughout the site. 	 Connections to the POS & shopping centre pedestrian pathways have been considered and enhanced to improve legibility and accessibility. 18 bicycle parking has been provided for the development and located to provide priority at main entry points to encourage use. Client has not as yet confirmed provision of EV bays
Principle 7 – Legibility	 While the 'shopfront' portion of the north-west elevation is clearly visible in terms of approach and entry, the approach and entry to the tavern is less coherent and clearly defined. The south-east elevation has similar issues. Further design development of these elevations is recommended to address the legibility of the tavern entrances. Also refer to the building siting comments from Principle 6 Amenity. See also Principle 8 Safety. 	 With the liquor store and tavern shopfront fronting Yellowstone Road, the building façade is activated by broad glazing and entry with direct frontage to Yellowstone Road. A footpath connecting the tavern and liquor store from Yellowstone Road provides a legible approach and entry and improved pedestrian experience and connection to adjacent shopping centre.
Principle 8 – Safety	Consider some design changes to the north-west, south-east and south-west elevations to enhance opportunities for passive surveillance of the site and surrounds from the interior of the tavern and liquor store. Currently there are large areas of opaque facades and/or solid walls that potentially obstruct views from the building, which could contribute to	 Glazing extent has been increased to north-west and south-east elevations to provide passive surveillance from the interior of the tavern and liquor store. External lighting will be



	 problems such as anti-social behaviour. Consider how external lighting will be designed and implemented to facilitate safe pedestrian and vehicular movement through and around the site. 	implemented in Design Development stage twith an emphasis on facilitating safe pedestrian and vehicular
	veriloular movement unough und around the site.	movement through and around the site.
Principle 9 – Community	The proposed design and development appear to have the potential to make a positive contribution to the overall Spires Estate, assuming that issues and concerns raised can be adequately addressed.	Noted.
Principle 10 – Aesthetics	Careful design and detailing of the junctions and connections between the timber structure, stonework and external cladding will be important to ensure the overall design aesthetic will be successfully executed.	Detail design of the junctions and connections between difference materials (timber structure, stonework and external cladding) will be
	See also comments under Principle 4 Functionality and Build Quality.	developed in Design Development stage however we agree with the DRP's desire to handle these connections of materials carefully and will be detailing material connections and elements accordingly.
		3,7

ATTACHMENT 2
RESPONSE TO TRANSPORT IMPACT AND PARKING CONTROL AND MANAGEMENT
COMMENTS

Proposed Tavern, Amazon Drive, Baldivis | CITY COMMENTS

02 February 2022

	CITY COMMENTS Comments on TIA	STATUS/COMMENT
1	The City is of the view that the proposal is more akin to a "High Turnover/Sit Down Rest 932" instead of "Quality Restaurant 931" which suggests a peak hour trip rate of 0.48 and 0.42 vehicle trips per seat for AM and PM peak hour respectively. This trip generation rate suggests an expected trip generation volume of 401 and 351 vehicle trips (i.e. total vehicles entering and exiting the site) during the peak hour period which is considered to have a major impact on the surrounding road network and intersections.	The restaurant associated with the tavern and Liquor Store is not a high turnover restaurant and would not generate traffic during the AM road network peak hour. The ITE trip rates based on number of seats are not considered to be accurate because no surveys have been undertaken for high turnover restaurant of more than 300 seats. Applying the ITE Trip Generation Manual (10th Edition) for a "Drinking Place" would be more appropriate and would result in almost the same trip generation as Quality Restaurant. "Drinking Place" trip rate during the road network PM peak is 12.23vph/100m2GFA (converted to metric units).
2	Intersection analysis has not been provided for the proposed signalised intersection at Amazon Drive/Nairn Drive therefore the impact to this intersection could not be assessed.	Intersection analysis including detailed Linsig analysis have been undertaken for the proposed signalised intersection at Amazon Drive/Nairn Drive as part of the Signal Approval process. The results were reviewed and approved by Main Roads WA and the City. The Linsig analysis undertaken included the proposed Tavern trip generation.
3	The TIA has adopted a high passing trade component (i.e. 89%) for the bottle shop without justifications, therefore the validity of this assumption could not be assessed.	The adopted 89% passing trade is in line with ITE 10 passing trade suggestion for coffee shop with drive through facility (938). The ITE 10 does not provide passing trade assumption for drive through bottle shops, however, assuming a high passing trade percentage similar to coffee shop with drive through facility is reasonable.
4	It is noted that the SIDRA output presented in the TIA suggests that more patrons would be using the vehicle crossover off Yellowstone Road. The City does not agree and also questions that equal trip distribution may not be a reasonable assumption because it is expected that most patrons would be using the signalised intersection at Amazon Drive/Nairn Drive.	The catchment area of the proposed tavern is expected to be mainly existing and future local residents which would reside to the north and south of the site and would cover the four corners of the site. Therefore, equal trip distribution is reasonable for the proposed development. Furthermore, the Linsig analysis undertaken for the proposed signalised intersection at Amazon Drive/Nairn Drive as part of the Signal Approval process shows spare capacity at the intersection. Therefore, different trip distribution would not significantly impact the traffic operation of the intersection.
5	 The onsite car parking has not been designed in accordance with AS2890. Amended plans are required addressing the following: A maximum blind aisle length of six 90-degree spaces plus 1 metre be provided, otherwise a means for cars to turn around at the end and drive out in forward gear is required; The vehicle crossover is located less than 6.0m from the Tangent Point (see Figure 3.1 of AS2890.1 for details); The on-street parallel car parking bay will restrict the sight distance at the proposed vehicle crossover off Yellowstone Road increasing traffic safety risks. A minimum sight distance of 69m is required; and The blind aisle one (1) metre extension (i.e. the western one) encroaches into the bicycle parking area and therefore increases traffic safety risks. A minimum aisle width of 1.5m for bicycle parking is required. 	 Parking bay 21 and 51 will be marked as turning bays; The crossover is located about 12.8m from the Tangent Point (see attached Sk08). A minimum sight distance of 45m is required for speed limit of 50kmh. The sight line assessments undertaken shows that only a small portion of bay 1 (closer to the crossover) would be within the sight lines which is not expected to be problematic (see attached Sk08). Aisle width of about 1.7m for bicycle parking is provided.
1	Comments on Parking Control and Management Plan (PCMP)	The peels possing demand of the proposed Toyota is Friday and
1	The parking demand analysis for the Thursday has not been provided therefore could not be assessed.	The peak parking demand of the proposed Tavern is Friday and Saturday evenings. Therefore, the parking demand analysis were undertaken for these periods.
2	Concern is raised that the proposed car parking sharing arrangement will increase the number of pedestrian crossings significantly (i.e. 834 patrons expected for the tavern) which would increase traffic safety risks as well as influencing the level of service of Yellowstone Road including its intersection with Amazon Drive;	The arrangement is similar to many taverns collocating within a shopping centre. Further, the peak hour of Tavern is different to the road network and the shopping centre. Therefore, the ped/vehicle conflict would be minimal. Pedestrians would be able to walk along the existing and proposed pedestrian paths along Amazon Drive/ Yellow Stone Road. The updated design of the intersection of Amazon Drive/ Nairn Drive signalised intersection has been developed to improve the amenity and safety of the pedestrians.
3	The City is of the opinion that the car parking area for the commercial site (i.e. to the north of Pantheon Road) is unlikely to be used by tavern patrons due to the distance;	As reported in Tech Note 1a during a typical Friday and Saturday there is plenty of parking bays available at the shopping centre and reciprocal parking between the Tavern and shopping centre should be sufficient without any dependency on the parking area of the commercial site.
4	It is likely that the major tenant of the adjoining shopping centre will be open until late evening, and would be open until the evening on Friday. The presented argument contrary to this is not supported;	The estimated percentage of parking demand in Table 1 and 3 of the Tech Note 1a assumes some parking demand (but not 100%) for the shopping centre even after 6pm till 9pm. Therefore, the analysis is conservative.
5	Parking demand should be based on traffic survey data of a similar land use or established references for parking demand;	The estimated percentage of parking demand is based on Transcore experience working on similar land uses and is

		conservative. The methodology has been used successfully for projects.
6	The PCMP fails to detail how patrons will know or understand the car parking arrangement and the use of the adjoining car parking areas. What design measures, hardscape features, wayfinding and safety measures will be used to integrate the development to the adjoining areas noting the design intent of the Main Street (Yellowstone Road).	the Tavern patrons would be regular and would learn the parking availability in close proximity even without signage.

Appendix A

Sight Line Assessment



t21.227.sk08

1/02/2022

Scale: 1:300 @ A3

Attachment 6



Proposed Tavern, Amazon Drive, Baldivis

Lot 446 North Baldivis

Revised Transport Impact Assessment



Document history and status

Author	Revision	Approved by	Date approved	Revision type
M Rasouli	r01	B Bordbar	16/09/2021	Draft
M Rasouli	r01a	B Bordbar	22/09/2021	Final
M Rasouli	r01b	B Bordbar	22/09/2021	Minor adjustments
M Rasouli	r01c	B Bordbar	14/02/2022	Revised Final

File name: t21.227.mr.r01c

Author: Mohammad Rasouli

Project manager: Mohammad Rasouli

Client: Carcione Nominees

Project: Lot 446 North Baldivis

Document revision: r01c

Project number: t21.227

TABLE OF CONTENTS

INTRODUCTION AND BACKGROUND	5
EXISTING SITUATION	7
Existing Land Use	7
Existing Road Network	7
EXISTING TRAFFIC VOLUMES	9
Crash Data	9
PROPOSED DEVELOPMENT	11
Proposed Site Use	11
Proposed Access for all Modes	11
CHANGES TO THE SURROUNDING ROAD NETWORK	13
INTEGRATION WITH SURROUNDING AREA	14
PROVISION FOR HEAVY VEHICLES	25
PARKING	26
PUBLIC TRANSPORT ACCESS	27
PEDESTRIAN AND CYCLIST ACCESS	28
CONCLUSIONS	29
	EXISTING SITUATION EXISTING LAND USE

APPENDIX A: PROPOSED DEVELOPMENT PLAN

APPENDIX B: SIDRA ANALYSIS

APPENDIX C: TURN PATH ANALYSIS

REPORT FIGURES

Figure 1: Spires LSP with Proposed Amendment	6
Figure 2: Existing land use (April 2021)	7
Figure 3: Existing Nairn Dr / Eighty Rd / Amazon Dr intersection	8
Figure 4: Existing public transport	9
Figure 5: Perth Bike Map	10
Figure 6: Proposed development crossovers	12
Figure 7: Spires Estate Structure Plan	13
Figure 8: Weekday PM peak hour traffic generated by the proposed development	18
Figure 9: 2031 total weekday PM peak hour traffic	19
Figure 10: Network model – SIDRA layout	21
Figure 11: 2031 weekday PM neak hour network analysis – queue storage ratio	23

REPORT TABLES

Table 1: Proposed Land use	11
Table 2: Trip generation of the proposed development	17
Table 3: Passing and non-passing component of the trip generation	17

1 Introduction and Background

This Revised Transport Impact Assessment (TIA) has been prepared by Transcore on behalf of Carcione Nominees. The subject of this report is the proposed tavern and bottle shop to be located at Lot 446 North Baldivis. This Revised TIA reflects the updated development plan which was prepared by dmg architects to address the City's comments outlined in City's letter of 18th January 2022 to Planning Solutions.

Transcore on behalf of Carcione Nominees Pty Ltd prepared a Transport Impact Assessment (TIA) report in June 2012 and a final version in April 2014 for the Spires Estate Local Structure Plan (LSP) in the City of Rockingham. The LSP area includes various lots east and west of Eighty Road in Baldivis, south of Fifty Road and west of Baldivis Road.

The LSP area also includes a neighbourhood activity centre located on the western side of Nairn Drive, north of Amazon Drive. Current plans indicate this neighbourhood centre would entail approximately 6,200m2 floor area (NLA), plus a proposed tavern and bottle shop of approximately 1,200m2 floor area as a proposed expansion of this neighbourhood activity centre northwest along Amazon Drive. **Figure 1** shows the location of the proposed tavern within the amended Spires LSP.

Transcore prepared a TIA for the Spires Baldivis Shopping Centre in June 2021. The purpose of this Revised TIA is the proposed tavern and bottle shop. The site currently is vacant and will be located to the west of the proposed Spires Shopping Centre.

This Revised TIA will review the traffic generation and distribution of the proposed development and will assess the impact of the development traffic on the surrounding road network and the development crossovers on Yellowstone Road and Amazon Drive. A SIDRA network model was developed for the development crossovers and the proposed priority-controlled T-intersection of Yellowstone Road and Amazon Drive for year 2031.

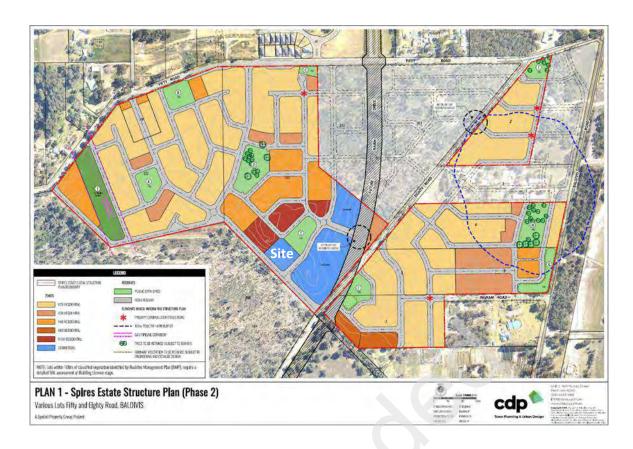


Figure 1: Spires LSP with Proposed Amendment

2 Existing Situation

2.1 Existing Land Use

The subject site is vacant and does not generate any traffic. As shown in **Figure 2** substantial residential development has already occurred east of Eighty Road and residential subdivision development is progressing to the northwest of the subject site. The vegetated land south of Amazon Drive / west of Nairn Drive is a Bush Forever site and will not be developed, whereas the land north of the subject site is planned for future residential subdivision development.



Figure 2: Existing land use (April 2021)

2.2 Existing Road Network

Nairn Drive is covered by an Other Regional Roads reservation in the MRS and is planned as a future dual carriageway road with two lanes in each direction. Nairn Drive is currently constructed south of Amazon Drive with one lane each way as the first carriageway of that future dual carriageway standard. This section of Nairn Drive has a posted speed limit of 70km/h and no direct driveway access from abutting residential or commercial properties.

Eighty Road connects to Nairn Drive north of Amazon Drive and currently operates as the continuation of this through route until future construction of the future Nairn Drive extension. It is constructed as a two-lane rural road and has a posted speed limit of 70km/h.

Amazon Drive is constructed east of Nairn Drive but not yet constructed on the western side of Nairn Drive. It is constructed as a two-lane, single-carriageway urban road and the default built up area speed limit of 50km/h applies.

The Nairn Dr / Eighty Rd / Amazon Dr intersection is currently constructed as a Give Way controlled T-intersection with left and right turn lanes provided on each approach as appropriate, as shown in **Figure 3**.



Figure 3: Existing Nairn Dr / Eighty Rd / Amazon Dr intersection

2.3 Existing Traffic Volumes

A 7-day traffic count (7-13 December 2020) of existing traffic volumes on Eighty Road south of Fifty Road recorded average weekday traffic flows of 5,338 vehicles per day (vpd) with 4,513vpd on Saturday and 3,908vpd on Sunday.

2.4 Crash Data

Information available on the Main Roads WA website indicates that no crashes were recorded at the Nairn Dr / Eighty Rd / Amazon Dr intersection during the 2016 – 2020 five-year period.

2.5 Public Transport

The closest existing bus route to the subject site is bus route No. 568 from Warnbro Train Station, which currently travels along Eighty Road in the vicinity of the subject site, as shown in **Figure 4**. It currently provides hourly service every day and more frequent service (up to 3 per hour) during weekday AM and PM peak periods.

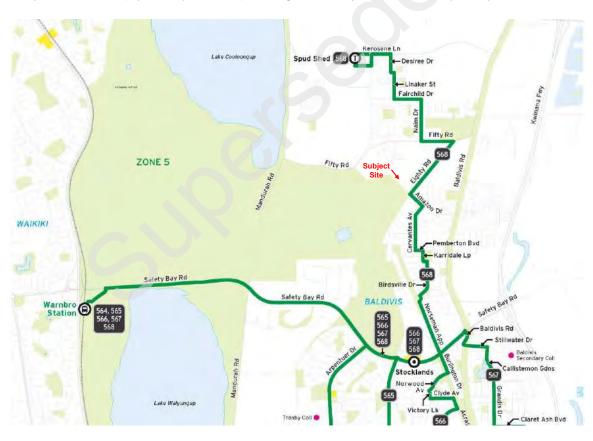


Figure 4: Existing public transport

2.6 Pedestrian and Cyclist Facilities

There is an existing footpath on the southern side of Amazon Drive east of Nairn Drive, as can be seen in **Figure 3**. Nairn Drive and Eighty Road do not have footpaths in the vicinity of the subject site. However, Nairn Drive south of Amazon Drive has been constructed with on-road cycle lanes or hard shoulders suitable for use by cyclists.

The Perth Bike Maps (see **Figure 5**) published by the Department of Transport indicate that Nairn Drive, Eighty Road, Fifty Road and Baldivis Road are considered as good road riding environment.

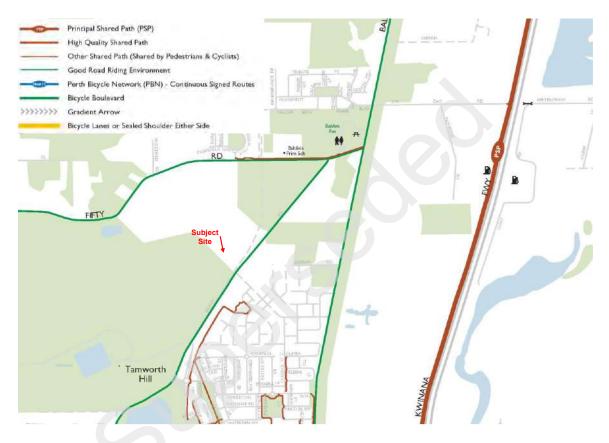


Figure 5: Perth Bike Map

3 Proposed Development

3.1 Proposed Site Use

Appendix A shows the proposed development plan. The development entails a tavern and a bottle shop as detailed in **Table 2**.

Table 1: Proposed Land use

Land use	Quantity (GFA) m ²
Tavern	760
Bottle shop	460

Deliveries and waste collections will be accommodated within the development site. The proposed delivery and service vehicles (up to 8.8m long) would utilise the bottle shop drive thru outside the peak operating time of the bottle shop for delivery and servicing.

Pedestrians will access the development from the proposed pedestrian paths provided on Yellowstone Road and Amazon Drive.

The development plan provides 67 parking bays including 2 accessible bays. It is understood that the proposed parking supply is satisfactory.

3.2 Proposed Access for all Modes

The proposed development provides one full movement crossovers on Yellowstone Road and one full movement crossover on Amazon Drive as shown in **Figure 6**.

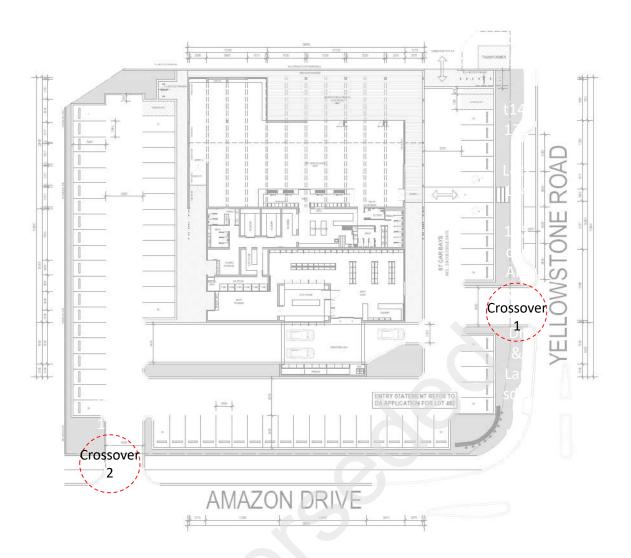


Figure 6: Proposed development crossovers

4 Changes to the Surrounding Road Network

Nairn Drive will ultimately be extended northwards from the Amazon Drive intersection and Eighty Road will then connect to Amazon Drive further east through the local road network, as shown in the Spires Estate structure plan at **Figure 7**. Amazon Drive will be constructed north-westwards from Nairn Drive as part of the development of the structure plan area.

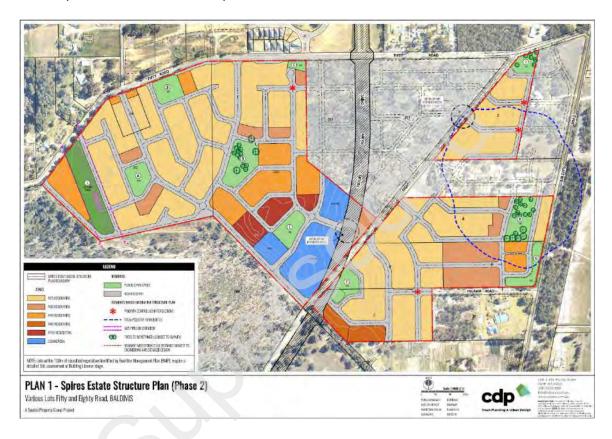


Figure 7: Spires Estate Structure Plan

The applicant is currently liaising with Main Roads WA for final approval of the proposed signalised intersection at Nairn Drive / Eighty Rd / Amazon Rd. This signalised intersection is to be constructed concurrently with the proposed development on the subject site.

5 Integration with Surrounding Area

The proposed development is consistent with the planning of the Spires Estate Structure Plan.

6 Traffic Assessment

6.1 Assessment Period

An assessment year of 2031 has been adopted for this TIA, which is consistent with recent analysis undertaken for a proposed amendment to the Spires Estate structure plan.

The combined peak of the development and road network traffic would occur during the weekday PM peak period. Accordingly, traffic analysis has been undertaken for 2031 weekday PM peak periods.

It should be noted that the level of background traffic on surrounding roads are much less during the post development compared with 10-year post development scenario and therefore, the 2031 traffic analysis is the key analysis for the purpose of this TIA. The transport modelling and analysis undertaken in this TIA confirms that the proposed standard of the surrounding road network will accommodate the 2031 (10-year post development) traffic projections and therefore the road network should also accommodate the post development traffic projections.

6.2 Trip Generation and Distribution

6.2.1 Existing trip generation

The site is currently vacant and would not generate any traffic.

6.2.2 Proposed Development Traffic Generation

The traffic volumes likely to be generated by the proposed development have been estimated in accordance with ITE Trip Generation Manual 10th Edition.

Accordingly, the trip rates which were used to estimate the trip generation of the proposed development are as follows:

Liquor Store (899) – 1000 Sq. Ft. GFA (used for bottle shop)

- Daily vehicle trips = 101.49 per 1000 Sq. Ft. GFA.
- Evening peak hour vehicle trips = 16.37 per 1000 Sq. Ft. GFA.

Quality Restaurant (931) - 1000 Sq. Ft. GFA (used for restaurant)

- **♣** Daily vehicle trips = 83.84 per 1000 Sq. Ft. GFA.
- \blacksquare Morning peak hour vehicle trips = 0.73 per 1000 Sq. Ft. GFA.
- Evening peak hour vehicle trips = 7.80 per 1000 Sq. Ft. GFA.

It should be noted that the restaurant associated with the proposed tavern and liquor store is not a high turnover restaurant and would not generate traffic during the AM road network peak hour.

The catchment area of the proposed tavern is expected to be mainly local residents and therefore some non-motorised patronage including walking is expected for the patrons. Other patrons who are not within walking distance may use their vehicles (including ride share), Uber or taxis. Therefore, the proposed ITE trip rates are expected to be conservative for the proposed Tavern however, in order to provide a robust traffic assessment, the ITE trip rates were used for the purpose of this TIA.

Further, cross trade between the bottle shop and the restaurant is expected. This will include patrons who purchase drinks from bottle shop for their meals at the restaurant, or patrons who purchase drinks to take home after eating at the restaurant. Again, in order to provide a robust assessment, zero cross trade was assumed for the proposed development.

Accordingly, it is conservatively estimated that the proposed development would generate a total of approximately 1,190 daily vehicle trips with about 6 and 145 trips during the AM and PM peak hours respectively (outlined in **Table 2**).

Considering that the development would not start operation during the morning road network peak hours, therefore very little traffic (6vph) was assumed during the AM road network peak hour (7:00-8:00) mainly for staff and for operational purposes.

Table 3 illustrates the passing and non-passing traffic component of the trips generated by the proposed development sourced from ITE guidelines. As evident, the development would add about 45 trips to the surrounding road network traffic when taking into account the passing trips of the development. This level of traffic increase is relatively insignificant and would not impact the traffic operation of the proposed road network and intersections significantly.

Table 2: Trip generation of the proposed development

Land use	Quantity Daily Rate	Daily Bata	ate AM Peak	PM Peak Daily	Daily Tring	Daily Trips AM Trips	PM Trips	AM		PM	
Lanu use	Quantity	Daily Nate	Alvi Peak	PIVI PEAK	Daily IIIps	Alvi IIIps	Fivi IIIps	IN	OUT	IN	OUT
Liquor Store	460	1.0924	0.00	0.18	503	0	81	0	0	41	40
Quality Restaurant	760	0.9024	0.01	0.08	686	6	64	3	3	43	21
Total				1189	6	145	3	3	84	61	

Table 3: Passing and non-passing component of the trip generation

Passing Trade Component

Passing Trade		AM		PM		
	Daily Trips	IN	OUT	IN	OUT	
89%	448	0	0	36	36	
44%	302	1	1	19	9	
	750	1	1	55	45	

Non Passing Trade Component

	А	M	PM		
Daily Trips	IN OUT		IN	OUT	
55	0	0	5	4	
384	2	2	24	12	
439	2	2	29	16	

6.3 Traffic distribution

The distribution of traffic to and from the proposed development for year 2031 has been estimated by considering access and egress routes to and from the subject site. Development traffic distribution on surrounding roads and intersections during the PM peak hour is illustrated in **Figure 8**.

As evident the traffic distributed on surrounding roads and intersections (in particular the proposed signalised intersection of Nairn Drive/ Amazon Drive) are relatively minimal, and the road network around it is designed specifically to service and accommodate the development and the surrounding structure plan traffic. SIDRA analysis was undertaken for the development crossovers and intersection of Yellowstone Road/ Amazon Drive to confirm satisfactorily operations with no blockage of the crossovers during the PM peak hour.



Figure 8: Weekday PM peak hour traffic generated by the proposed development

6.4 Traffic Flows

The 2031 traffic projections have been sourced from Transcore's TIA for the Spires Baldivis Shopping Centre (June 2021). The proposed development traffic manually was added to the 2031 traffic projections and illustrated in **Figure 9**.

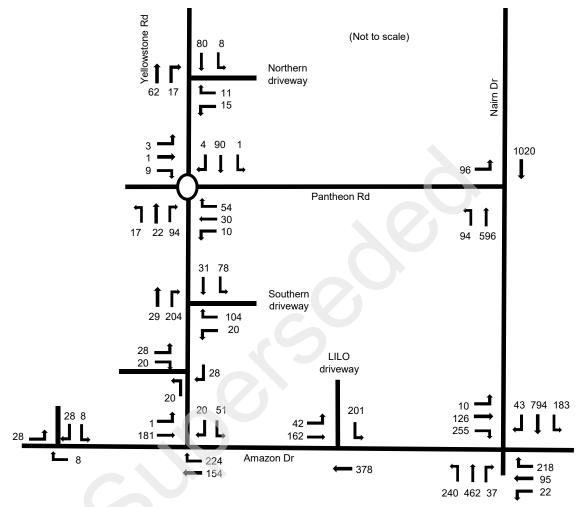


Figure 9: 2031 total weekday PM peak hour traffic

6.5 Analysis of Development's Crossovers and Intersections

A SIDRA Network model was developed for the proposed development crossovers and the intersection of Yellowstone Road/ Amazon Drive in order to assess their operations in 2031 scenario for PM peak hour. Relevant heavy vehicle settings and parameters were updated and incorporated in the SIDRA model in accordance with Main Roads WA's latest requirements.

Capacity analysis using the SIDRA computer software package was undertaken. This package is a commonly used intersection-modelling tool by traffic engineers for all types of intersections. SIDRA outputs are presented in the form of Degree of Saturation, Level of Service, Average Delay and 95% Queue. These items are defined as follows:

- **→ Degree of Saturation:** is the ratio of the arrival traffic flow to the capacity of the approach during the same period. The Degree of Saturation ranges from close to zero for varied traffic flow up to one for saturated flow or capacity.
- **Level of Service:** is the qualitative measure describing operational conditions within a traffic stream and the perception by motorists and/or passengers. In general, there are 6 levels of service, designated from A to F, with Level of Service A representing the best operating condition (i.e. free flow) and Level of Service F the worst (i.e. forced or breakdown flow).
- **Average Delay:** is the average of all travel time delays for vehicles through the intersection.
- **4 95% Queue:** is the queue length below which 95% of all observed queue lengths fall.

The results of the SIDRA analysis are attached in **Appendix C**. A conceptual diagram of the SIDRA model coded for the analysis is shown in **Figure 10**.



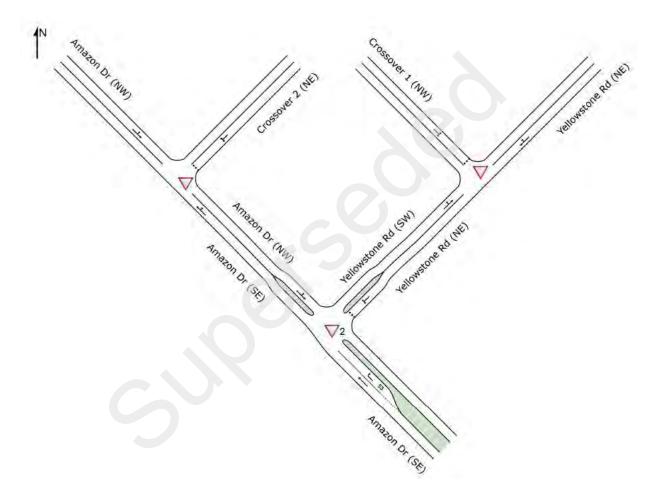


Figure 10: Network model – SIDRA layout

SIDRA analysis results indicate that the proposed development crossovers on Yellowstone Road and Amazon Drive and the intersection of Yellowstone Road/Amazon Drive would operate satisfactorily with good level of services and with moderate queues and delays during weekday PM peak hour for year 2031.

Relevant SIDRA network outputs were reviewed for analysed peak hour to assess the operation of the proposed development crossovers on Yellowstone Road and Amazon Drive and the intersection of Yellowstone Road/ Amazon Drive as a network.

As detailed in **Figure** 11 no queue back from the intersection to the development crossovers is reported during 2031 PM peak hour. Additionally, no queuing from the development crossovers back to the intersection is reported in 2031 PM peak hour.

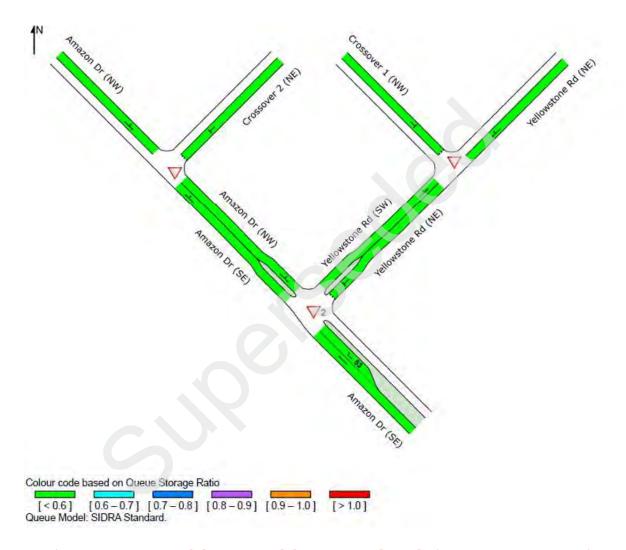


Figure 11: 2031 weekday PM peak hour network analysis - queue storage ratio

6.6 Impact on Surrounding Roads

The WAPC *Transport Impact Assessment Guidelines (2016)* provides guidance on the assessment of traffic impacts:

"As a general guide, an increase in traffic of less than 10 per cent of capacity would not normally be likely to have a material impact on any particular section of road, but increases over 10 per cent may. All sections of road with an increase greater than 10 per cent of capacity should therefore be included in the analysis.

For ease of assessment, an increase of 100 vehicles per hour for any lane can be considered as equating to around 10 per cent of capacity. Therefore, any section of road where the structure plan traffic would increase flows by more than 100 vehicles per hour for any lane should be included in the analysis."

The increase in traffic flows as a result of the proposed development is estimated to be below the quoted WAPC threshold and therefore no further detailed analysis is warranted. As detailed in **Figure 8**, the proposed development will not increase traffic on any lanes on the surrounding road network by more than 100vph.

6.7 Impact on Neighbouring Areas

The traffic generated by the proposed development would have insignificant impact on surrounding areas and the road network has been designed to accommodate this level of additional traffic.

6.8 Traffic Noise and Vibration

Due to the location of the proposed development with respect to the surrounding land uses traffic noise and vibration are relevant only to the residential areas directly fronting major local and regional roads which, at this location, are limited.

It generally requires a doubling of traffic volumes on a road to produce a perceptible 3dB(A) increase in road noise. The proposed development will not increase traffic volumes or noise on surrounding roads anywhere near this level.



7 Provision for Heavy Vehicles

Smaller trucks (service vehicles up to 8.8 long) are planned to undertake delivery and waste collection on site. Service vehicles would enter the site from Amazon Drive crossover and park at the entry of the bottle shop drive thru facility and then exit via the same crossover after servicing in forward gear.

Turn path analysis undertaken for 8.8m service truck confirm satisfactory access, egress and circulation within the site. Turn path analysis also confirms satisfactory traffic circulation of a passenger car with trailer using the bottle shop drive thru facility.

The turn path plans are included in **Appendix C**.



8 Parking

The proposed development will provide 67 parking bays inclusive of 2 ACROD bays. It is considered that the parking provision will adequately meet the parking demand of the proposed development considering the potential reciprocal parking arrangement due to the different peak operating hours of the various land uses.

It should be noted that the restaurant is expected to experience its highest car patronage later in the evenings (for dinner around 6-8pm) while the bottle shop would have a higher proportion of customers during the road network PM peak period (around 4-6pm) when more traffic is passing the site.



9 Public Transport Access

The existing public transport services within the vicinity of site are described in **Section 2.6** of this report.



10 Pedestrian and Cyclist Access

Pedestrian and cyclist's facilities are described in **Section 2.7** of this report.



11 Conclusions

This Transport Impact Assessment (TIA) has been prepared by Transcore on behalf of Carcione Nominees. The subject of this report is the proposed tavern and bottle shop to be located at Lot 446 North Baldivis.

The traffic analysis undertaken in this report shows that the traffic generation of the proposed development is relatively low and as such would not have any significant impact on the surrounding road network.

Turn path analysis undertaken indicates that 8.8m service vehicles can access and egress the site satisfactorily. Turn path analysis also confirms satisfactory traffic circulation of a passenger car and trailer using the bottle shop drive thru facility.

There are 67 parking bays proposed on site inclusive of 2 ACROD bays. It is considered that the parking provision will adequately meet the parking demand of the proposed development.

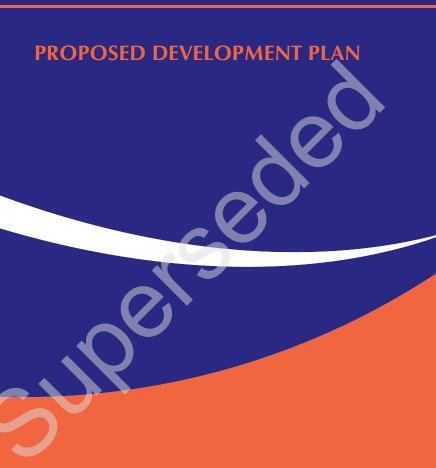
A SIDRA Network model was developed for the proposed development crossovers and the intersection of Yellowstone Road/ Amazon Drive in order to assess their operations in 2031 scenario for PM peak hour.

The SIDRA network results indicate satisfactory operations of the intersection of Yellowstone Road/ Amazon Drive and development crossovers with minimal queues and delays.

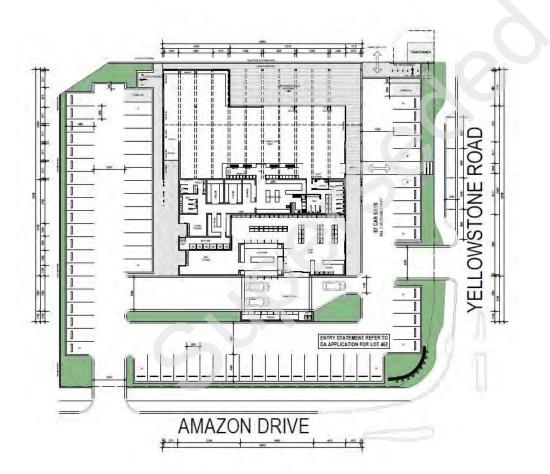
It is concluded that the findings of this Transport Impact Assessment are supportive of the proposed development.



Appendix A







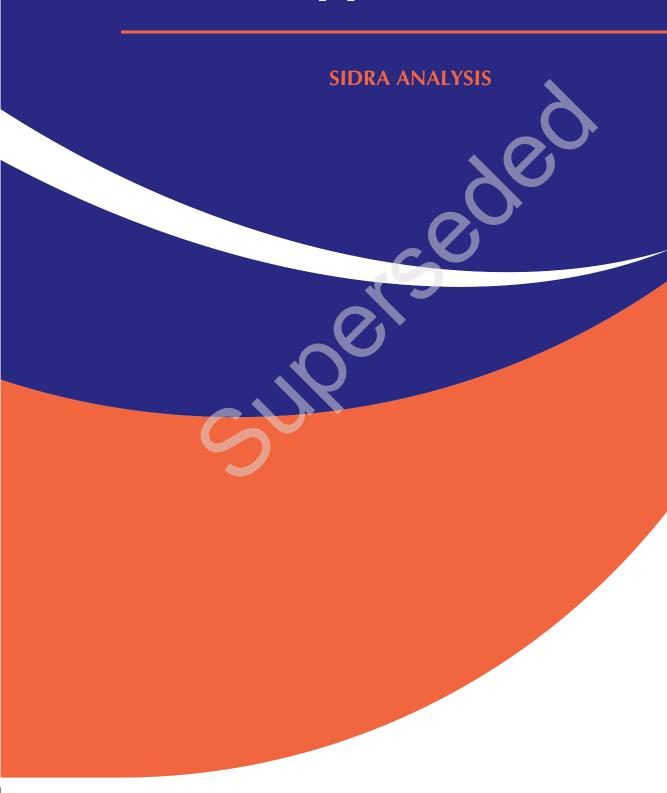
seps Scotterior to these are very all these are trade and order on the state expression. All americans each or set assumption out the set long scott statutal, received non-more and relevant controller functions.



20022 A2.01

В

Appendix B



MOVEMENT SUMMARY

∇ Site: 2 [Amazon-Yellowstone 2031PM T-intersection (Site)

Folder: 2031 - PM)]

Amazon Dr / Yellowstone Rd T-intersection 2031 PM peak hour Site Category: (None) Give-Way (Two-Way)

Vehic	cle Mo	vement	Perfo	rmand	:e									
Mov ID	Tum	DEM/ FLO\ [Total veh/h		ARRI FLO [Total veh/h	WS HV]	Deg. Satn v/c		Level of Service		ACK OF EUE Dist] m	Prop. Que	Effective A Stop Rate	ver. No. Cycles	Aver. Speed km/h
South	SouthEast: Amazon Dr (SE)													
5	T1	162	3.3	162	3.3	0.086	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	50.0
6	R2	236	3.3	236	3.3	0.159	4.8	LOSA	0.8	5.9	0.33	0.56	0.33	23.9
Appro	ach	398	3.3	398	3.3	0.159	2.8	NA	0.8	5.9	0.19	0.33	0.19	30.3
North	East: Y	ellowstor/	ne Rd (NE)										
7	L2	54	3.3	54	3.3	0.076	3.2	LOSA	0.3	2.3	0.34	0.54	0.34	25.5
9	R2	21	3.0	21	3.0	0.076	7.0	LOSA	0.3	2.3	0.34	0.54	0.34	18.4
Appro	ach	75	3.2	75	3.2	0.076	4.2	LOS A	0.3	2.3	0.34	0.54	0.34	24.3
North	West: /	Amazon [or (NW)										
10	L2	1	3.0	1	3.0	0.101	4.6	LOS A	0.0	0.0	0.00	0.00	0.00	49.8
11	T1	191	3.3	191	3.3	0.101	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	49.8
Appro	ach	192	3.3	192	3.3	0.101	0.0	NA	0.0	0.0	0.00	0.00	0.00	49.8
All Ve	hicles	664	3.3	664	3.3	0.159	2.2	NA	0.8	5.9	0.16	0.26	0.16	35.9

MOVEMENT SUMMARY

V Site: [Yellowstone - Crossover 1 - 2031PM (Site Folder: 2031 - PM)]

■■ Network: N101 [2031- PM (Network Folder: General)]

■■ Network: N101 [2031- PM

(Network Folder: General)]

Site Category: (None) Give-Way (Two-Way)

Vehi	Vehicle Movement Performance													
Mov ID	Tum	DEM/ FLO\ [Total veh/h		ARR FLO Total veh/h	ws HV]	Deg. Satn v/c		Level of Service		ACK OF EUE Dist] m	Prop. Que	Effective A Stop Rate	ver. No. Cycles	Aver. Speed km/h
North	East: Y	ellowstor	ne Rd (l	NE)										
2	T1	54	3.0	54	3.0	0.049	0.4	LOS A	0.2	1.3	0.24	0.21	0.24	38.2
26	R2	29	0.0	29	0.0	0.049	6.2	LOS A	0.2	1.3	0.24	0.21	0.24	37.1
Appro	oach	83	1.9	83	1.9	0.049	2.5	NA	0.2	1.3	0.24	0.21	0.24	37.7
North	West: 0	Crossove	r 1 (NV	V)										
27	L2	29	0.0	29	0.0	0.044	5.4	LOS A	0.2	1.1	0.31	0.58	0.31	34.0
29	R2	21	0.0	21	0.0	0.044	5.8	LOS A	0.2	1.1	0.31	0.58	0.31	27.9
Appro	oach	51	0.0	51	0.0	0.044	5.6	LOSA	0.2	1.1	0.31	0.58	0.31	32.3
South	nWest: \	Yellowsto	ne Rd	(SW)										
30	L2	21	0.0	21	0.0	0.125	2.6	LOS A	0.0	0.0	0.00	0.06	0.00	22.1
8	T1	216	3.3	216	3.3	0.125	0.0	LOS A	0.0	0.0	0.00	0.06	0.00	53.2
Appro	oach	237	3.0	237	3.0	0.125	0.3	NA	0.0	0.0	0.00	0.06	0.00	48.4
All Ve	ehicles	371	2.4	371	2.4	0.125	1.5	NA	0.2	1.3	0.10	0.17	0.10	42.5

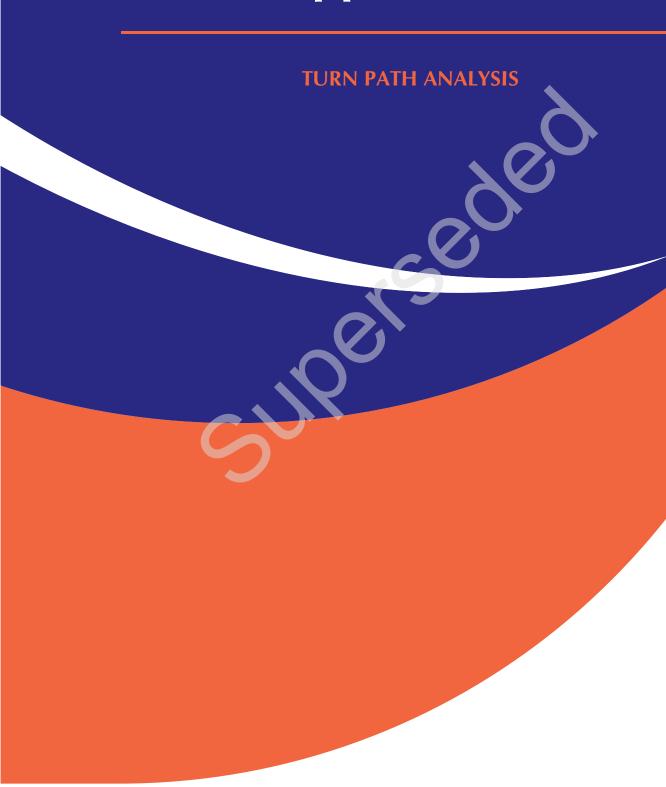
MOVEMENT SUMMARY

V Site: [Amazon Dr-Crossover 2- 2031PM (Site Folder: 2031 - PM Network: N101 [2031- PM (Network Folder: General)]

Site Category: (None) Give-Way (Two-Way)

Vehic	cle Mo	vement	Perfo	rmano	:e				•					
Mov ID	Tum	DEMA FLOV [Total veh/h	VS	ARRI FLO [Total veh/h	WS HV]	Deg. Satn v/c	Aver. Delay sec	Level of Service		ACK OF JEUE Dist] m	Prop. Que	Effective A Stop Rate	ver. No. Cycles	Aver. Speed km/h
South	East: A	Amazon D	r (SE)											
5 6	T1 R2	175 8	3.3 3.3	175 8	3.3 3.3	0.098 0.098	0.1 5.3	LOS A	0.1 0.1	0.5 0.5	0.04 0.04	0.03 0.03	0.04 0.04	49.6 40.4
Appro	ach	183	3.3	183	3.3	0.098	0.3	NA	0.1	0.5	0.04	0.03	0.04	49.4
North	East: 0	rossover	2 (NE)										
7 9	L2 R2	8 29	3.3 3.0	8 29	3.3 3.0	0.039 0.039	5.1 6.1	LOS A	0.1 0.1	1.0 1.0	0.34 0.34	0.59 0.59	0.34 0.34	25.0 42.4
Appro	ach	38	3.1	38	3.1	0.039	5.9	LOS A	0.1	1.0	0.34	0.59	0.34	41.3
North	West: /	Amazon D	r (NW)										
10	L2	29	3.0	29	3.0	0.113	4.6	LOS A	0.0	0.0	0.00	0.08	0.00	42.0
11	T1	183	3.3	183	3.3	0.113	0.0	LOS A	0.0	0.0	0.00	0.08	0.00	49.1
Appro	ach	213	3.3	213	3.3	0.113	0.7	NA	0.0	0.0	0.00	0.08	0.00	47.9
All Ve	hicles	4 34	3.3	434	3.3	0.113	1.0	NA	0.1	1.0	0.05	0.10	0.05	48.0

Appendix D





Proposed Tavern, Amazon Drive, Baldivis Austroads 2013: 8.8m Service Vehicle Servcie vehicle entry LEGEND
Vehicle Body
Wheel Path
500mm Clearance

t21.227.sk06a 14/02/2022 Scale: 1:200 @ A3

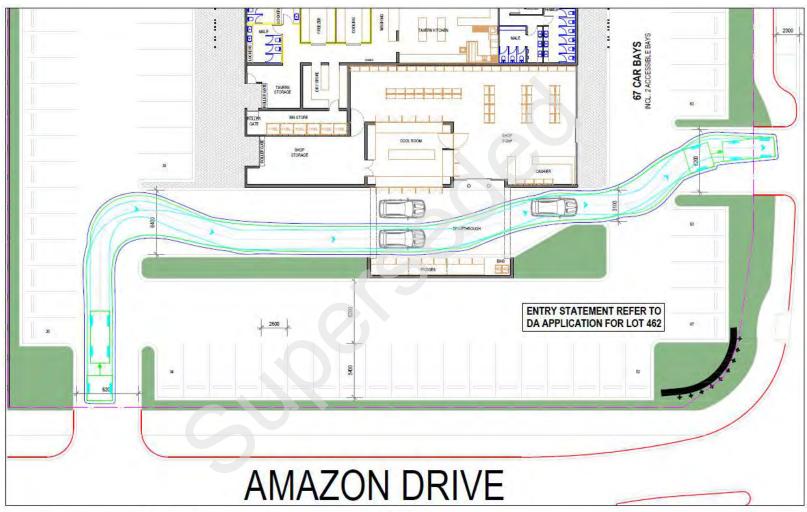




Proposed Tavern, Amazon Drive, Baldivis Austroads 2013: 8.8m Service Vehicle Servcie vehicle exit LEGEND
Vehicle Body
Wheel Path
500mm Clearance

t21.227.sk07a 14/02/2022 Scale: 1:200 @ A3





Proposed Tavern, Amazon Drive, Baldivis Passenger Vehicle with Trailer Vehicle with trailer circulation LEGEND
Vehicle Body
Wheel Path
300mm Clearance

t21.227.sk09 14/02/2022 Scale: 1:200 @ A3





Waste Management Plan

White Horse Tavern

Prepared for Carcione Nominees Pty Ltd

3 February 2022

Project Number: TW21106



DOCUMENT CONTROL

Version	Description	Date	Author	Reviewer	Approver
1.0	First Approved Release	23/09/2021	RH	DM	RH
2.0	Second Approved Release	28/09/2021	RH	DP	RH
3.0	Third Approved Release	3/02/2022	DP	RH	DP

Approval for Release

Name	Position	File Reference
Dilan Patel	Project Manager – Waste Management Consultant	TW21106-01_Waste Management Plan_3.0
Signature		

Copyright of this document or any part of this document remains with Talis Consultants Pty Ltd and cannot be used, transferred or reproduced in any manner or form without prior written consent from Talis Consultants Pty Ltd.



Executive Summary

Carcione Nominees Pty Ltd is seeking development approval for the proposed White Horse Tavern located at Lot 446 South Baldivis (the Proposal).

To satisfy the conditions of the development application the City of Rockingham (the City) requires the submission of a Waste Management Plan (WMP) that will identify how waste is to be stored and collected from the Proposal. Talis Consultants has been engaged to prepare this WMP to satisfy the City's requirements.

A summary of the bin size, numbers, collection frequency and collection method is provided in the below table.

Proposed Waste Collection Summary

Waste Type Generation (L/week)		Bin Size (L)	Number of Bins	Collection Frequency	Collection	
		Tavern Bin S	Storage Area			
Refuse	20,077	1,100L	Five	Four times each week	Private Contractor	
Recycling	1,505	1,100L	One	Four times each week	Private Contractor	
		Shop Bin St	orage Area			
Refuse	938	240L	One	Four times each week	Private Contractor	
Recycling	938	240L	One	Four times each week	Private Contractor	

A private contractor will service the Proposal onsite, directly from the drive thru lanes which will serve double purposes: liquor store drive thru & deliveries and waste collection. The private contractor's waste collection vehicle will enter and exit the Proposal in forward gear via Amazon Drive.

A building manager will oversee the relevant aspects of waste management at the Proposal.



Table of Contents

1	Introduction								
	1.1	Objectives and Scope	1						
2	Wast	te Generation	2						
	2.1	Proposed Tenancies	2						
	2.2	Waste Generation Rates	2						
	2.3	Waste Generation Volumes	2						
		2.3.1 Tavern Waste Generation	2						
		2.3.2 Shop Waste Generation	3						
3	Inter	nal Transfer of Waste	4						
4	Wast	te Storage	5						
	4.1	Bin Sizes	5						
	4.2	Tavern Bin Storage Area Size	5						
	4.3	Shop Bin Storage Area Size	6						
	4.4	Bin Storage Area Design	7						
5	Wast	te Collection	8						
	5.1	Bulk and Speciality Waste	9						
6	Wast	te Management	.1						
7	Conc	lusion	.2						
Та	bles								
Tab	le 2-1:	Waste Generation Rates	2						
Tab	le 2-2:	Estimated Waste Generation – Tavern	3						
Tab	le 2-3:	Estimated Waste Generation – Shop	3						
Tab	le 4-1:	Typical Bin Dimensions	5						
Tab	le 4-2:	Bin Requirements for Bin Storage Area – Tavern	5						
Tah	le 4-3:	Bin Requirements for Bin Storage Area – Shop	6						

Waste Management Plan White Horse Tavern Carcione Nominees Pty Ltd



Diagrams

Diagram 1: Tavern Bin Storage Area

Diagram 2: Shop Bin Storage Area

Diagram 3: Waste Collection Swept Path (8.8m service vehicle) – Entry

Diagram 4: Waste Collection Swept Path (8.8m service vehicle) – Exit



1 Introduction

Carcione Nominees Pty Ltd is seeking development approval for the proposed White Horse Tavern located at Lot 446 South Baldivis (the Proposal).

To satisfy the conditions of the development application the City of Rockingham (the City) requires the submission of a Waste Management Plan (WMP) that will identify how waste is to be stored and collected from the Proposal. Talis Consultants has been engaged to prepare this WMP to satisfy the City's requirements.

1.1 Objectives and Scope

The objective of this WMP is to outline the equipment and procedures that will be adopted to manage waste (refuse and recyclables) at the Proposal. Specifically, the WMP demonstrates that the Proposal is designed to:

- Adequately cater for the anticipated volume of waste to be generated;
- Provide adequately sized Bin Storage Area, including appropriate bins; and
- Allow for efficient collection of bins by appropriate waste collection vehicles.

To achieve the objective, the scope of the WMP comprises:

- Section 2: Waste Generation;
- Section 3: Internal Transfer of Waste;
- Section 4: Waste Storage;
- Section 5: Waste Collection;
- Section 6: Waste Management; and
- Section 7: Conclusion.



2 Waste Generation

The following section shows the waste generation rates used and the estimated waste volumes to be generated at the Proposal.

2.1 Proposed Tenancies

The anticipated volume of refuse and recyclables is based on the floor area (m²) of the following tenancies:

- Tavern 430m²; and
- Shop -268m².

2.2 Waste Generation Rates

In order to achieve an accurate projection of waste volumes for the Proposal, consideration was given to the following better practice guidelines:

- Western Australian Local Government Association's (WALGA) Commercial and Industrial Waste Management Plan Guidelines (2014); and
- City of Perth's Waste Guidelines for New Developments (Revision 5, effective from June 2019).

Table 2-1 shows the waste generation rates which have been applied to the Proposal.

Table 2-1: Waste Generation Rates

Tenancy Use Type	Guidelines	Guideline Reference	Refuse Generation Rate	Recycling Generation Rate
Tavern	Perth	Licenced Club, Tavern, Small Bar (with dining)	667L/100m²/day	50L/100m²/day
Shop	WALGA	Retail Shop (non-food) >100m²	50L/100m²/day	50L/100m²/day

2.3 Waste Generation Volumes

Waste generation is estimated by volume in litres (L) as this is generally the influencing factor when considering bin size, numbers and storage space required.

2.3.1 Tavern Waste Generation

Waste generation volumes in litres per week (L/week) adopted for this waste assessment is shown Table 2-2. It is estimated that the Tavern will generate 20,077L of refuse and 1,505L of recyclables each week.



Table 2-2: Estimated Waste Generation – Tavern

Tenancy Use Type	Floor Area (m²)	Waste Generation Rate (L/100m²/day)	Waste Generation (L/week)					
REFUSE								
Tavern	430	667 20,077						
RECYCLABLES								
Tavern	430	50	1,505					

2.3.2 Shop Waste Generation

Waste generation volumes in litres per week (L/week) adopted for this waste assessment is shown Table 2-3. It is estimated that the Tavern will generate 938L of refuse and 938L of recyclables each week.

Table 2-3: Estimated Waste Generation - Shop

Tenancy Use Type	Floor Area (m²)	Waste Generation Rate (L/100m²/day)	Waste Generation (L/week)					
REFUSE								
Shop	268	50 938						
RECYCLABLES								
Shop	268	50	938					



3 Internal Transfer of Waste

To ensure that waste is managed appropriately at the Proposal, it is important to allow for sufficient space to accommodate the required quantity of bins within the Bin Storage Areas.

To promote positive recycling behaviour and maximise diversion from landfill, internal bins will be available throughout the Tavern and Shop for the source separation of refuse and recycling.

These internal bins will be collected by the staff/cleaners at least once each day and transferred to the respective Bin Storage Area for consolidation into the appropriate bins. These bins will be transferred through the Proposal utilising the dedicated service corridors/areas and may be conducted outside of main operational hours to mitigate disturbances to visitors.

All bins will be colour coded and labelled in accordance with Australian Standards (AS 4123.7) to assist residents, visitors, staff and cleaners to dispose of their separate waste materials in the correct bins.



4 Waste Storage

Waste materials generated within the Proposal will be collected in the bins located in the Bin Storage Areas, as shown in Diagram 1 and Diagram 2, and discussed in the following sub-sections.

Note: the waste generation volumes are best practice estimates and the number of bins to be utilised represents the maximum requirements once the Proposal is fully operational. Bin requirements may be impacted as the development becomes operational and the nature of the tenants and waste management requirements are known.

4.1 Bin Sizes

Table 4-1 gives the typical dimensions of standard bins sizes that may utilised at the Proposal. It should be noted that these bin dimensions are approximate and can vary slightly between suppliers.

Table 4-1: Typical Bin Dimensions

Dimensions	Bin Sizes						
Difficusions	240L	360L	660L	1,100L			
Depth (mm)	730	848	780	1,070			
Width (mm)	585	680	1,260	1,240			
Height (mm)	1,060	1,100	1,200	1,300			
Area (mm²)	427	577	983	1,327			

Reference: SULO Bin Specification Data Sheets

4.2 Tavern Bin Storage Area Size

To ensure sufficient area is available for storage of the bins, the amount of bins required for the Tavern Bin Storage Area was modelled utilising the estimated waste generation in Table 2-2, bin sizes in Table 4-1 and based on collection of refuse and recyclables four times each week.

Based on the results shown in Table 4-2 the Tavern Bin Storage Area has been sized to accommodate:

- Five 1,100L refuse bins; and
- One 1,100L recycling bin.

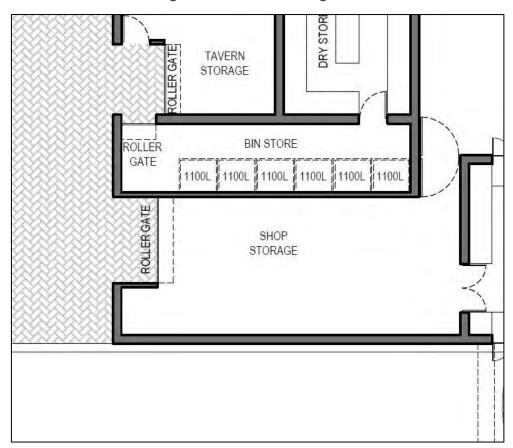
Table 4-2: Bin Requirements for Bin Storage Area – Tavern

Waste Stream	Waste Generation	Number of Bins Required					
	(L/week)	240L	360L	660L	1,100L		
Refuse	20,077	21	14	8	5		
Recycling	1,505	2	2	1	1		

The configuration of these bins within the Tavern Bin Storage Area is shown in Diagram 1. It is worth noting that the number of bins and corresponding placement of bins shown in Diagram 1 represents the maximum requirements assuming four collections each week of refuse and recyclables. Increased collection frequencies would reduce the required number of bins.



Diagram 1: Tavern Bin Storage Area



4.3 Shop Bin Storage Area Size

To ensure sufficient area is available for storage of the bins, the amount of bins required for the Shop Bin Storage Area was modelled utilising the estimated waste generation in Table 2-2, bin sizes in Table 4-1 and based on collection of refuse and recyclables four times each week.

Based on the results shown in Table 4-3 the Shop Bin Storage Area has been sized to accommodate:

- One 240L refuse bin; and
- One 240L recycling bin.

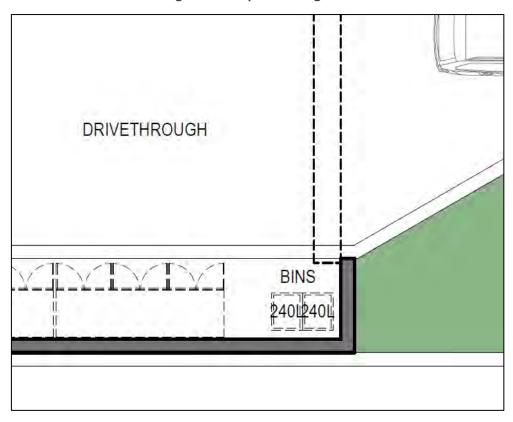
Table 4-3: Bin Requirements for Bin Storage Area – Shop

Waste Stream	Waste Generation	Number of Bins Required			
77 do 10 da 11	(L/week)	240L	360L	660L	1,100L
Refuse	938	1	1	1	1
Recycling	938	1	1	1	1

The configuration of these bins within the Shop Bin Storage Area is shown in Diagram 2. It is worth noting that the number of bins and corresponding placement of bins shown in Diagram 2 represents the maximum requirements assuming four collections each week of refuse and recyclables. Increased collection frequencies would reduce the required number of bins.



Diagram 2: Shop Bin Storage Area



4.4 Bin Storage Area Design

The design of the Bin Storage Areas will take into consideration:

- Smooth impervious floor sloped to a drain connected to the sewer system;
- Taps for washing of bins and Bin Storage Areas;
- Adequate aisle width for easy manoeuvring of bins;
- No double stacking of bins;
- Doors to the Bin Storage Areas self-closing and vermin proof;
- Doors to the Bin Storage Areas wide enough to fit bins through;
- Ventilated to a suitable standard;
- Appropriate signage;
- Undercover where possible and be designed to not permit stormwater to enter into the drain:
- Located behind the building setback line;
- Bins not to be visible from the property boundary or areas trafficable by the public; and
- Bins are reasonably secured from theft and vandalism.

Bin numbers and storage space within the Bin Storage Areas will be monitored by the building manager during the operation of the Proposal to ensure that the number of bins and collection frequency is sufficient.



5 Waste Collection

The following sections describe the waste collection methodologies for the development.

A private contractor will service the Proposal and provide the Tavern with five 1,100L bins for refuse and one 1,100L bin for recyclables. The private contractor will also provide the Shop with one 240L refuse bin and one 240L recycling bin.

The private contractor will collect refuse and recyclables from both facilities four times each week utilising a rear loader waste collection vehicle.

The private contractor's waste collection vehicle will service the bins onsite, directly from the drive thru as shown in Diagram 3.

The private contractor's waste collection vehicle will travel with left hand lane traffic flow on Amazon Drive and turn into the Proposal in forward gear and turn right into the drive thru for servicing, refer Diagram 3.



Diagram 3: Waste Collection Swept Path (8.8m service vehicle) – Entry

Reference: Transcore 01/02/22

It is proposed that servicing will be conducted outside of normal operating hours to allow the waste collection vehicle to utilise the empty carpark for manoeuvring and mitigate impacts on local traffic movements during peak traffic hours.

The private contractor waste collection staff will ferry bins to and from the waste collection vehicle and the Bin Storage Areas during servicing. The private contractor will be provided with key/PIN code access to the Bin Storage Areas and security access gates to facilitate servicing, if required.

Once servicing is complete the private contractor's waste collection vehicle will reverse into the driveway and exit in a forward motion, turning onto Amazon Drive moving with traffic flow, refer Diagram 4.



ENTRY STATEMENT REFER TO DA APPLICATION FOR LOT 462

Diagram 4: Waste Collection Swept Path (8.8m service vehicle) - Exit

Reference: Transcore 01/02/22

AMAZON DRIVE

The above servicing method will preserve the amenity of the area by removing the requirement for bins to be presented to the street on collection days. In addition, servicing of bins onsite will reduce the noise generated in the area during collection. Noise from waste vehicles must comply with the Environmental Protection (Noise) Regulations and such vehicles should not service the site before 7.00am or after 7.00pm Monday to Saturday, or before 9.00am or after 7.00pm on Sundays and Public Holidays.

Waste collection will be in accordance with the acoustic assessment and occur in the quietest reasonable and practicable manner whilst using the quietest equipment reasonably available.

The ability for the private contractors rear loader waste collection vehicle to access the Proposal in a safe manner has been assessed by qualified traffic engineers (Transcore) and will be included within their traffic impact statement. This demonstrates the development can adequately accommodate an 8.8m waste collection service vehicle.

5.1 Bulk and Speciality Waste

Bulk and speciality waste materials will be removed from the Proposal as they are generated on an 'as required' basis.

These items are bulk and specialty wastes that are unable to be disposed of within the bins in the Bin Storage Areas. These may include items such as:

- Refurbishment wastes from fit outs:
- Batteries and E-wastes;
- White goods/appliances;
- Used Cooking Oil;
- Cleaning chemicals; and
- Commercial Light globes.

Waste Management Plan White Horse Tavern Carcione Nominees Pty Ltd



Bulk and specialty waste collection will be monitored by the building manager who will organise their transport to the appropriate waste facility, as required.



6 Waste Management

A building manager will be engaged to complete the following tasks:

- Monitoring and maintenance of bins and the Bin Storage Areas;
- Cleaning of bins and Bin Storage Areas, when required;
- Ensure all tenants at the Proposal are made aware of this WMP and their responsibilities thereunder;
- Monitor tenant behaviour and identify requirements for further education and/or signage;
- Monitor bulk and speciality waste accumulation and assist tenants with its removal, as required;
- Regularly engage with tenants to develop opportunities to reduce waste volumes and increase resource recovery; and
- Regularly engage with the private contractors to ensure efficient and effective waste service is maintained.



7 Conclusion

As demonstrated within this WMP, the Proposal provides sufficiently sized Bin Storage Areas for storage of refuse and recyclables, based on the estimated waste generation volumes and suitable configuration of bins. This indicates that adequately designed Bin Storage Areas has been provided, and collection of refuse and recyclables can be completed from the Proposal.

The above is achieved using:

- Tavern:
 - \circ Five 1,100L refuse bins, collected four times each week; and
 - o One 1,100L recycling bin, collected four times each week.
- Shop:
 - o One 240L refuse bin, collected four times each week; and
 - o One 240L recycling bin, collected four times each week.

A private contractor will service the Proposal onsite, directly from the drive thru lanes which will serve double purposes: liquor store drive thru & deliveries and waste collection. The private contractor's waste collection vehicle will enter and exit the Proposal in forward gear via Amazon Drive.

A building manager will oversee the relevant aspects of waste management at the Proposal.



Assets | Engineering | Environment | Noise | Spatial | Waste

Talis Consultants

Head Office Level 1, 604 Newcastle Street, Leederville Western Australia 6007

> PO Box 454, Leederville Western Australia 6903

NSW Office 5/62 North Street, Nowra New South Wales, 2541

PO Box 1189, Nowra New South Wales, 2541

P: 1300 251 070 E: info@talisconsultants.com.au

The Whitehorse Tavern

Lot 9005 Nairn Drive, Baldivis WA





Location Plan - 1:2000 @ A3

The Whitehorse Tavern

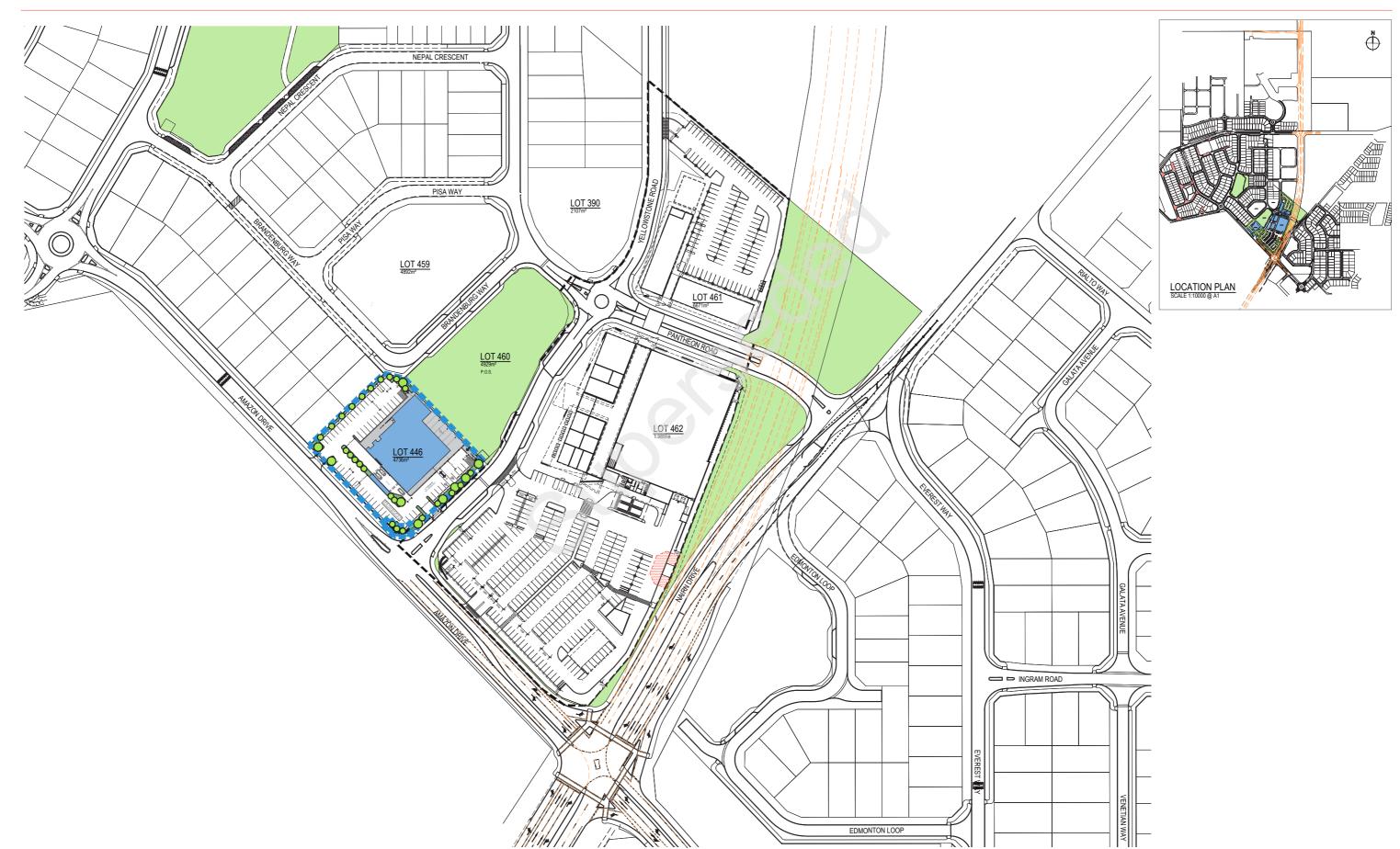




Site Plan - 1:2000 @ A3

 $The \,Whitehorse \,Tavern$





Key Idea

The Whitehorse Tavern

The design concept is inspired by the aesthetic of the 'stable'; a building in which horses are sheltered and fed, grounding the design back to the history of the Baldivis region. A balance of a hardy, industrial form and warm, tactile finishes and detailing to the interior tavern fitout.









Floor Plan - 1:400 @ A3

The Whitehorse Tavern





Sanitary Facilities Calculation:

Male patrons (306)			
No. of closet pans required	3	No. of closet pans provided	4
No. of urinals required	6	No. of urinals provided	5
No. of washbasins required	3	No. of washbasins provided	4

Female patrons (306)			
No. of closet pans required	7	No. of closet pans provided	8
No. of urinals required	N/A	No. of urinals provided	N/A
No. of washbasins required	3	No. of washbasins provided	4

Male employees (20)			
No. of closet pans required	1	No. of closet pans provided	2
No. of urinals required	1	No. of urinals provided	0
No. of washbasins required	1	No. of washbasins provided	2

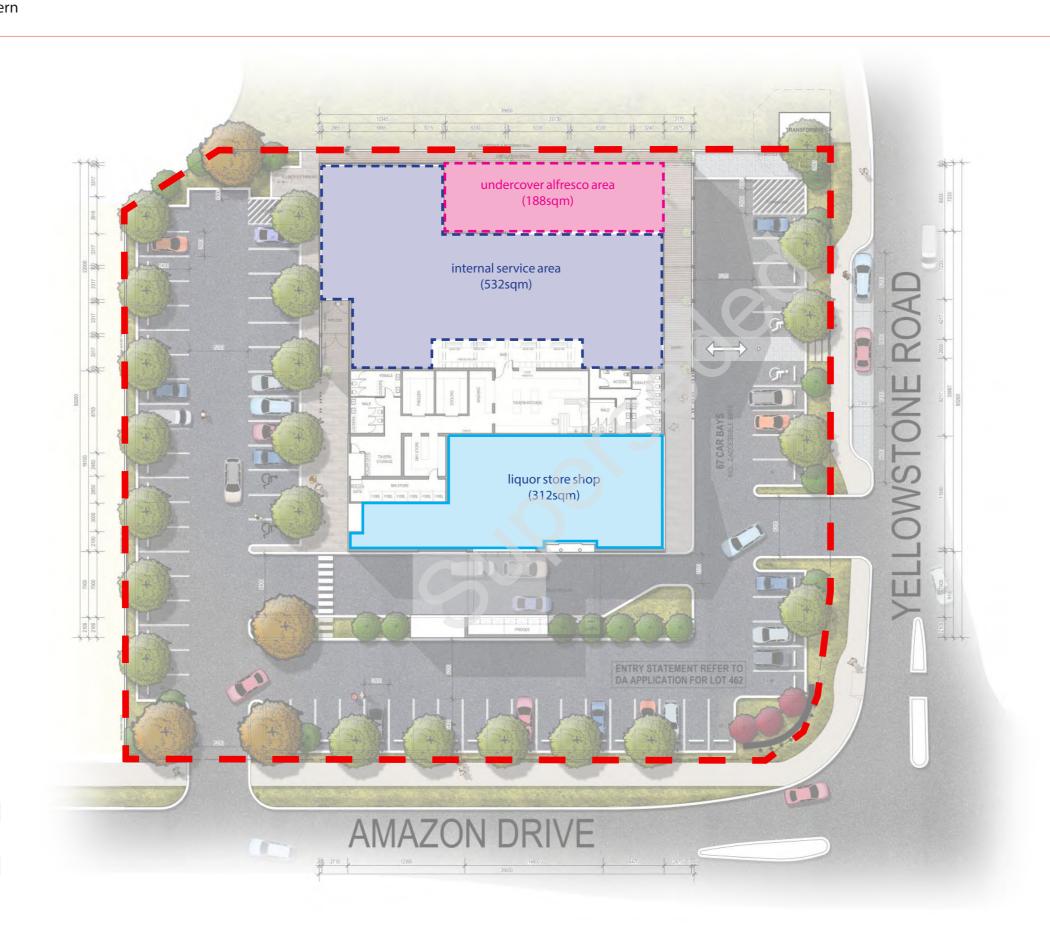
Female employees (20)			
No. of closet pans required	2	No. of closet pans provided	2
No. of urinals required	N/A	No. of urinals provided	N/A
No. of washbasins required	1	No. of washbasins provided	2

Area Calculation Plan - 1:400 @ A3



The Whitehorse Tavern

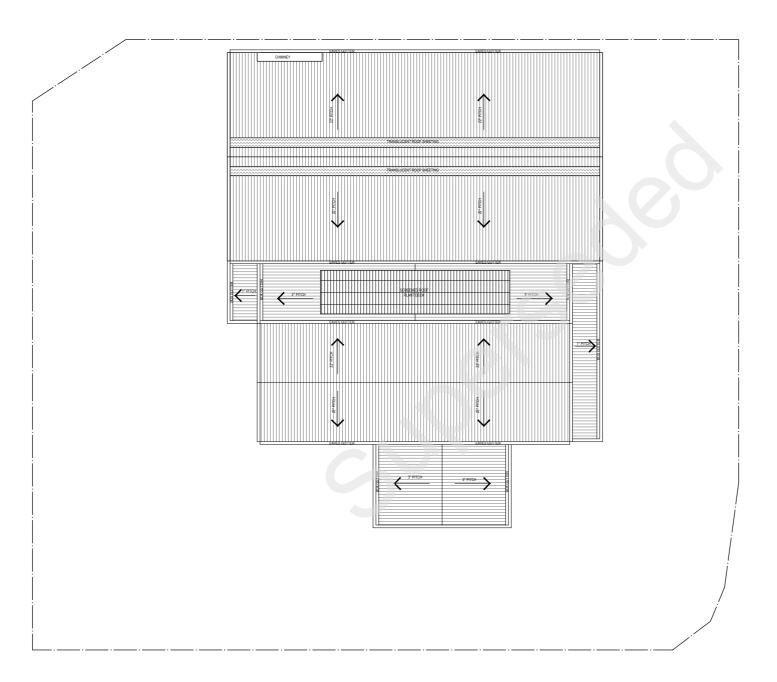






The Whitehorse Tavern





AMAZON DRIVE

YELLOWSTONE ROAD

Elevations - 1:200 @ A3

The Whitehorse Tavern







Elevations - 1:200 @ A3

The Whitehorse Tavern





NORTH EAST ELEVATION



Materials Palette Legend

The Whitehorse Tavern





Perspective - View from Yellowstone Road

The Whitehorse Tavern







Lloyd George Acoustics

PO Box 717 Hillarys WA 6923 T: 9401 7770 www.lgacoustics.com.au

Environmental Noise Assessment – Development Application

White Horse Tavern

Lot 9008 Nairn Drive, Baldivis

Reference: 21096644-01B

Prepared for:

Carcione Nominees Pty Ltd



Report: 21096644-01B

Lloyd George Acoustics Pty Ltd

ABN: 79 125 812 544

PO Box 717 Hillarys WA 6923

www.lgacoustics.com.au

Contacts	General	Daniel Lloyd	Terry George	Matt Moyle		
E:	info@lgacoustics.com.au	daniel@lgacoustics.com.au	terry@lgacoustics.com.au	matt@lgacoustics.com.au		
P:	9401 7770	0439 032 844	0400 414 197	0412 611 330		
Contacts	Ben Hillion	Rob Connolly	Daryl Thompson	Hao Tran		
E:	ben@lgacoustics.com.au	rob@lgacoustics.com.au	daryl@lgacoustics.com.au	hao@lgacoustics.com.au		
P:	0457 095 555	0410 107 440	0420 364 650	0438 481 207		

This report has been prepared in accordance with the scope of services described in the contract or agreement between Lloyd George Acoustics Pty Ltd and the Client. The report relies upon data, surveys, measurements and results taken at or under the particular times and conditions specified herein. Any findings, conclusions or recommendations only apply to the aforementioned circumstances and no greater reliance should be assumed or drawn by the Client. Furthermore, the report has been prepared solely for use by the Client, and Lloyd George Acoustics Pty Ltd accepts no responsibility for its use by other parties.

Date:	Rev	Description	Prepared By	Verified
10-Sep-21	0	Issued to Client	Matt Moyle	Terry George
3-Dec-21	Α	Updated for latest Tavern Design	Matt Moyle	Terry George
11-Feb-22	В	Updated for latest Tavern Design	Matt Moyle	Terry George

Table of Contents

1	INTRODUCTION	1
2	CRITERIA	3
2.1	Reversing Alarms on Vehicles	6
2.2	Waste Collection and Site Cleaning (Specified Works)	6
3	METHODOLOGY	7
3.1	Meteorological Information	7
3.2	Topographical Data	7
3.3	Ground Absorption	8
3.4	Source Sound Levels	8
3.5	Noise Modelling Scenarios	9
4	RESULTS	10
4.1	Scenario 1 – Open Bifold Doors	10
4.2	Scenario 2 – Closed Bifold Doors	10
4.3	Scenario 3 – Carpark (Car doors)	13
4.4	Scenario 4 – Delivery Truck	13
5	ASSESSMENT	16
5.1	Scenario 1 – Open Bifold Doors	16
5.2	Scenario 2 – Closed Bifold Doors	17
5.3	Scenario 3 – Car Door Noise	17
5.4	Scenario 4 – Delivery Truck Noise	18
6	RECOMMENDATIONS	19
7	CONCLUSION	20

List of Tables

Table 2-1 Adjustments Where Characteristics Cannot Be Removed	3
Table 2-2 Baseline Assigned Noise Levels	4
Table 2-3 Influencing Factor Calculation	4
Table 2-4 Assigned Noise Levels	5
Table 3-1 Modelling Meteorological Conditions	7
Table 3-2 Source Sound Power Levels	8
Table 4-1 Predicted Noise Levels, dB L _{A10}	10
Table 4-2 Predicted Noise Levels, dB L _{A10}	10
Table 4-3 Predicted Noise Levels, dB L _{Amax}	13
Table 4-4 Predicted Noise Levels, dB L _{A1}	13
Table 4-1 Assessment of Scenario 1 Noise Levels, dB L _{A10}	16
Table 5-2 Assessment of Scenario 2 Noise Levels, dB L _{A10}	17
Table 5-3 Assessment of Scenario 3 Noise Levels, dB L _{Amax}	17
Table 5-4 Assessment of Scenario 4 Noise Levels, dB L _{A1}	18
List of Figures	
Figure 1-1 Project Locality and Structure Plan	1
Figure 1-2 Proposed Tavern amongst Future Local Centre	2
Figure 2-1 Site and Receiver Locations	5
Figure 4-1 Scenario 1: Open Bifold Doors Tavern at Capacity	11
Figure 4-2 Scenario 2: Closed Bifold Doors Tavern at Capacity	12
Figure 4-3 Scenario 3: Car Park Noise	14
Figure 4-4 Scenario 4: Delivery Truck Noise	15

Appendices

A DA Plans

B Terminology

1 INTRODUCTION

This report has been prepared to consider the potential noise impacts associated with a proposed Tavern development at Lot 9008 Nairn Drive, Baldivis - refer *Figure 1-1* and *Figure 1-2*. To the east of the tavern is a shopping centre, which was assessed under a separate DA.

Noise sensitive premises to the north and northwest of the proposed tavern may exist in the future as indicated on *Figure 1-1*. These future sensitive land uses may be subject to further planning applications and therefore have been included in this assessment for information purposes and to provide guidance for future development.

The nearest existing residences are those to the northwest on Santorini Parkway and those to the southeast across Nairn Drive.

The architectural drawings of the proposal are included in *Appendix A*.

Appendix B contains a description of some of the terminology used throughout this report.

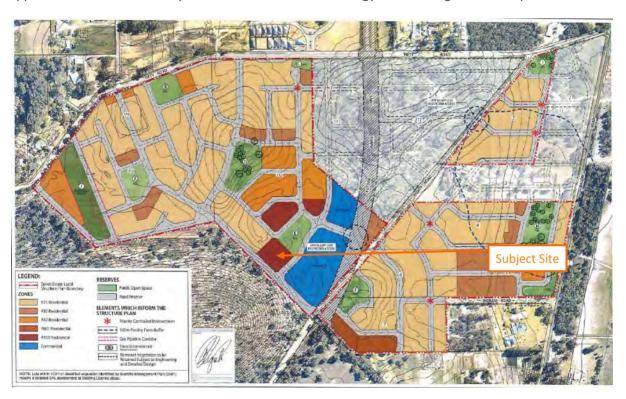


Figure 1-1 Project Locality and Structure Plan

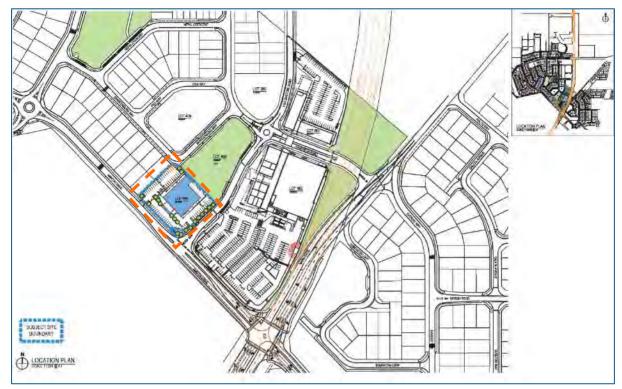


Figure 1-2 Proposed Tavern amongst Future Local Centre

2 CRITFRIA

Environmental noise in Western Australia is governed by the *Environmental Protection Act 1986*, through the *Environmental Protection (Noise) Regulations 1997* (the Regulations).

Regulation 7 defines the prescribed standard for noise emissions as follows:

- "7. (1) Noise emitted from any premises or public place when received at other premises
 - (a) Must not cause or significantly contribute to, a level of noise which exceeds the assigned level in respect of noise received at premises of that kind; and
 - (b) Must be free of
 - i. tonality;
 - ii. impulsiveness; and
 - iii. modulation,

when assessed under regulation 9"

A "...noise emission is taken to significantly contribute to a level of noise if the noise emission ... exceeds a value which is 5 dB below the assigned level..."

Tonality, impulsiveness and modulation are defined in Regulation 9. Noise is to be taken to be free of these characteristics if:

- (a) The characteristics cannot be reasonably and practicably removed by techniques other than attenuating the overall level of noise emission; and
- (b) The noise emission complies with the standard prescribed under regulation 7 after the adjustments of *Table 2-1* are made to the noise emission as measured at the point of reception.

Table 2-1 Adjustments Where Characteristics Cannot Be Removed

Where	Noise Emission is Not	Where Noise Emission is Music		
Tonality	nality Modulation Impulsiveness		No Impulsiveness	Impulsiveness
+ 5 dB	+ 5 dB	+ 10 dB	+ 10 dB	+ 15 dB

Note: The above are cumulative to a maximum of 15dB.

The baseline assigned levels (prescribed standards) are specified in Regulation 8 and are shown in *Table 2-2*.

Table 2-2	Baseline	Assigned	Noise Levels

Premises Receiving		Assigned Level (dB)				
Noise	Time Of Day	L _{A10}	L _{A1}	L _{Amax}		
Noise sensitive premises: highly sensitive area ¹	0700 to 1900 hours Monday to Saturday (Day)	45 + influencing factor	55 + influencing factor	65 + influencing factor		
	0900 to 1900 hours Sunday and public holidays (Sunday)	40 + influencing factor	50 + influencing factor	65 + influencing factor		
	1900 to 2200 hours all days (Evening)	40 + influencing factor	50 + influencing factor	55 + influencing factor		
	2200 hours on any day to 0700 hours Monday to Saturday and 0900 hours Sunday and public holidays (Night)	35 + influencing factor	45 + influencing factor	55 + influencing factor		

^{1.} *highly sensitive area* means that area (if any) of noise sensitive premises comprising —

The total influencing factor (zoning and traffic), applicable at the noise sensitive premises has been calculated to be 1 dB or 2 dB as shown in *Table 2-3* (refer *Figure 2-1* for receiver locations). With regards to road traffic, Nairn Drive and Amazon Drive are currently not considered secondary or major roads, with no nearby traffic counts available at the time of this assessment. Over time, traffic may be expected to increase such that when 6,000 vehicles per day is reached, the influencing factor would increase by 2 dB for those residences within 100 metres.

Table 2-3 Influencing Factor Calculation

Dessives	Commer	Commercial Land		Road Traffic		
Receiver	With 100m	Within 450m	Within 100m	Within 450m	Factor	
Future Residences (R1 and R2)	1 dB (19%)	0.8 dB (16%)	-	-	2 dB	
Exist Residences Southeast (R3)	1 dB (19%)	0.8 dB (16%)	-	-	2 dB	
Exist Residences Northwest (R4	0 dB (0%)	0.8 dB (16%)	-	-	1 dB	

Table 2-4 shows the assigned noise levels including the influencing factor and transport factor at the receiving locations.

a) a building, or a part of a building, on the premises that is used for a noise sensitive purpose; and

⁽b) any other part of the premises within 15 metres of that building or that part of the building.



Figure 2-1 Site and Receiver Locations

Table 2-4 Assigned Noise Levels

Premises	Time Of Day		Assigned Level (dB)				
Receiving Noise	Time Of Day	L _{A10}	L _{A1}	L _{Amax}			
	0700 to 1900 hours Monday to Saturday (Day)	47	57	67			
R1, R2, R3	0900 to 1900 hours Sunday and public holidays (Sunday)	42	52	67			
	1900 to 2200 hours all days (Evening)	42	52	57			
	2200 hours on any day to 0700 hours Monday to Saturday and 0900 hours Sunday and public holidays (Night)	37	47	57			
	0700 to 1900 hours Monday to Saturday (Day)		56	66			
	0900 to 1900 hours Sunday and public holidays (Sunday)	41	51	66			
R4	1900 to 2200 hours all days (Evening)	41	51	56			
	2200 hours on any day to 0700 hours Monday to Saturday and 0900 hours Sunday and public holidays (Night)	36	46	56			

It is noted the assigned noise levels are statistical levels and therefore the period over which they are determined is important. The Regulations define the Representative Assessment Period (RAP) as a period of time of not less than 15 minutes, and not exceeding 4 hours, which is determined by an inspector or authorised person to be appropriate for the assessment of a noise emission, having regard to the type and nature of the noise emission. An inspector or authorised person is a person appointed under Sections 87 & 88 of the Environmental Protection Act 1986 and include Local Government Environmental Health Officers and Officers from the Department of Environment Regulation. Acoustic consultants or other environmental consultants are not appointed as an inspector or authorised person. Therefore, whilst this assessment is based on a 4 hour RAP, which is assumed to be appropriate given the nature of the operations, this is to be used for guidance only.

2.1 Reversing Alarms on Vehicles

With regards to noise from reversing alarms, regulation 3(1)(h) states:

- (1) Nothing in these regulations applies to the following noise emissions
 - (h) noise emissions from
 - (i) a reversing alarm fitted to a motor vehicle, mobile plant, or mining or earthmoving equipment;
 - If -
 - (iii) it is a requirement under another written law that such an alarm be fitted; and
 - (iv) it is not practicable to fit an alarm that complies with the written law under which it is required to be fitted and emits noise that complies with these regulations;

It is considered that any reversing alarms fitted to commercial vehicles (e.g. delivery or garbage trucks) are not necessarily exempt under the Regulations, since they are not specifically required under another written law. That is only a safe workplace must be provided, which can be undertaken in a variety of ways.

The commonly used fixed noise output tonal reversing alarms also known as 'reversing beeper' emit, by their very nature, tonal and modulating noise at high levels. As such, this type of reversing alarm generally cannot comply with the Regulations even at distant receivers. Alternative alarms such as broadband alarms are commonly used to minimise the impact.

2.2 Waste Collection and Site Cleaning (Specified Works)

Regulation 14A provides requirements for such activities as the collection of waste, landscaped area maintenance and car park cleaning. Such activities can also be exempt from having to comply with regulation 7, provided they are undertaken in accordance with regulation 14A(2) as follows:

- during daytime hours, defined as:
 - o 07:00 to 19:00 Monday to Saturday (excluding public holiday), or
 - o 09:00 to 19:00 on a Sunday or public holiday
- in the quietest reasonable and practicable manner; and
- using the quietest equipment reasonably available.

In the case where specified works are to be carried outside daytime hours and their noise emissions are likely not to comply with regulation 7, the works also need to be carried out according to a Noise Management Plan which has been approved by the local government authority CEO.

3 METHODOLOGY

Computer modelling has been used to predict noise levels at each nearby receiver. The software was *SoundPLAN 8.2* using the ISO 9613-2 (ISO 171534-3 improved method) algorithms. These algorithms have been selected as they include the influence of wind and atmospheric stability. Input data required in the model are:

- Meteorological Information;
- Topographical data;
- Ground Absorption; and
- Source sound power levels.

3.1 Meteorological Information

Meteorological information utilised is provided in *Table 3-1* and is considered to represent worst-case conditions for noise propagation. At wind speeds greater than those shown, sound propagation may be further enhanced, however background noise from the wind itself and from local vegetation is likely to be elevated and dominate the ambient noise levels.

Parameter	Day (0700-1900)	Night (1900-0700)
Temperature (°C)	20	15
Humidity (%)	50	50
Wind Speed (m/s)	Up to 5m/s	Up to 5m/s
Wind Direction*	All	All

Table 3-1 Modelling Meteorological Conditions

It is generally considered that compliance with the assigned noise levels needs to be demonstrated for 98% of the time, during the day and night periods, for the month of the year in which the worst-case weather conditions prevail. In most cases, the above conditions occur for more than 2% of the time and therefore must be satisfied.

3.2 Topographical Data

Topographical data was based on that publicly available from *Google* in the form of spot heights and combined with the site plan and building plans provided by the project team to create a 3-dimensional noise model. A 2.4m high solid barrier was assumed on the western border of the lot to ameliorate car park noise, and this in turn assists with tavern and patron noise. The wall is assumed to have a

^{*} Note that the modelling package used allows for all wind directions to be modelled simultaneously.

surface mass no less than 15 kg/m². Local screening of rooftop plant elements has also been included, up to 2.4m high.

Existing houses in the area are noted as being single storey and as such, future houses are also assumed to be single storey.

3.3 Ground Absorption

Ground absorption varies from a value of 0 to 1, with 0 being for an acoustically reflective ground (e.g. water or bitumen) and 1 for acoustically absorbent ground (e.g. grass). In this instance, a value of 0.0 has been used as an average across the study area.

3.4 Source Sound Levels

The sound power levels used in the modelling are provided in *Table 3-2*. As detailed design has not yet been undertaken, all data has been obtained from previous similar projects and are therefore indicative only.

Description	Octave Band Centre Frequency (Hz)							Overall	
Description	63	125	250	500	1k	2k	4k	8k	dB(A)
Rooftop Condensers (4 off)	-	77	63	62	60	55	48	-	66
Tavern Air-Conditioning (2 off)	-	84	78	76	74	69	61	-	78
Restaurant Air-Conditioning (3 off)	-	84	78	76	74	69	61	-	78
Patrons Outside Dining (80 Pax)	64	75	79	81	73	71	68	64	81
Patrons Inside (480 Pax)	82	68	70	78	97	91	76	66	98
Kitchen Exhaust Fan	95	99	95	83	84	82	83	81	92
Kitchen Supply Fan	81	77	76	70	69	68	61	52	75
General Exhaust Fans, each	81	77	76	70	69	68	61	52	75
Delivery Truck Idling	97	88	84	85	80	78	76	80	87
Car Idling	81	78	74	72	74	74	67	64	79
Car Doors Closing	71	74	77	81	80	78	72	61	84

Table 3-2 Source Sound Power Levels

With regards to the noise sources, the following is noted:

- The Internal Tavern Area is 480m². As per the floor plans an estimated 480 persons can occupy this space. Of these, a worst-case of 50% of patrons will be talking simultaneously at a sound pressure level of 75 dB(A) per person. These patrons are at a height of 1.4 metres. In this area, music may be provided for ambience but is not to dominate noise levels;
- The Alfresco Deck Area is 160m². As per the floor plans an estimated 80 persons (seated) can occupy this space. Of these, a worst-case of 50% of patrons will be talking simultaneously at

- a sound pressure level of 70 dB(A) per person. These patrons are at a height of 1.2 metres. In this area, music may be provided for ambience but is not to dominate noise levels;
- It is noted that glass sections of the tavern hall are proposed, these have been modelled as
 double glazing or equivalent systems performing to R_w 36 dB;
- All mechanical plant have been located on the flat roof of the Tavern Kitchen/toilet building at a height of 0.5 to 1.0 metres, centrally positioned atop the building behind proposed 2.4m high solid screening;
- In addition to the above, general exhaust fans have been assumed to account for modes of
 operation when bi-fold doors might be shut, noting that precise make and model will need to
 be verified at building permit stage.
- Car door noise is modelled as 1 metre above ground and positioned in each car parking bay;
- It is assumed the drive thru contains four cars idling simultaneously, representing a worstcase L_{A10} scenario. These are modelled as point sources within the drive thru area, 0.5m above ground;
- Delivery Truck noise is located in the designated delivery location and based the source height at 2.1m height above the truck cabin.
- Absorptive ceiling panels (having NRC of 0.7) have been assumed within the ceiling space of
 the tavern, to provide a comfortable internal acoustic environment for patrons, which also
 assists in environmental noise.

3.5 Noise Modelling Scenarios

The *Table 3-2* sound power levels were incorporated into the noise model and calculations were performed for existing and future receivers. Noise contour plots were also generated which illustrate via 2D imagery, the impact of noise to the surrounding area.

The following worst case scenarios are modelled:

- 1. Open doors Tavern plant operating and patron noise in alfresco and internal rooms. Vehicles idling in bottle shop lane. Bifold doors open.
- 2. Closed doors Tavern plant operating and patron noise in alfresco and internal rooms. Vehicles idling in bottle shop lane. Bifold doors closed.
- 3. Night L_{Amax} Car park door closing noise.
- 4. Delivery Truck Noise Noise from a truck in the loading bay shown on plans.

4 RESULTS

4.1 Scenario 1 - Open Bifold Doors

The noise modelling results of this mode of operation are shown in *Table 4-1* with the most dominant source group highlighted at each receiver. Note that this represents the worst case noise levels, with the tavern at full capacity (inside and outside), bifold doors open and vehicles idling in the bottle shop lanes. The noise levels are shown as a contour plot in *Figure 4-1*.

Deseiven	Cars	AC Dlant	Exhaust	Inside Tav	ern Noise	Alfresco	Tabel
Receiver	Idling	AC Plant	Fans	Via Building	Via Bifolds	Patrons	Total
Future R1 (West)	27	32	33	13	24	12	37
Future R2 (North)	15	29	26	22	43	28	44
Existing R3 (East)	25	28	29	<5	23	17	32
Existing R4 (North West)	22	26	25	<5	10	<5	29

Table 4-1 Predicted Noise Levels, dB LA10

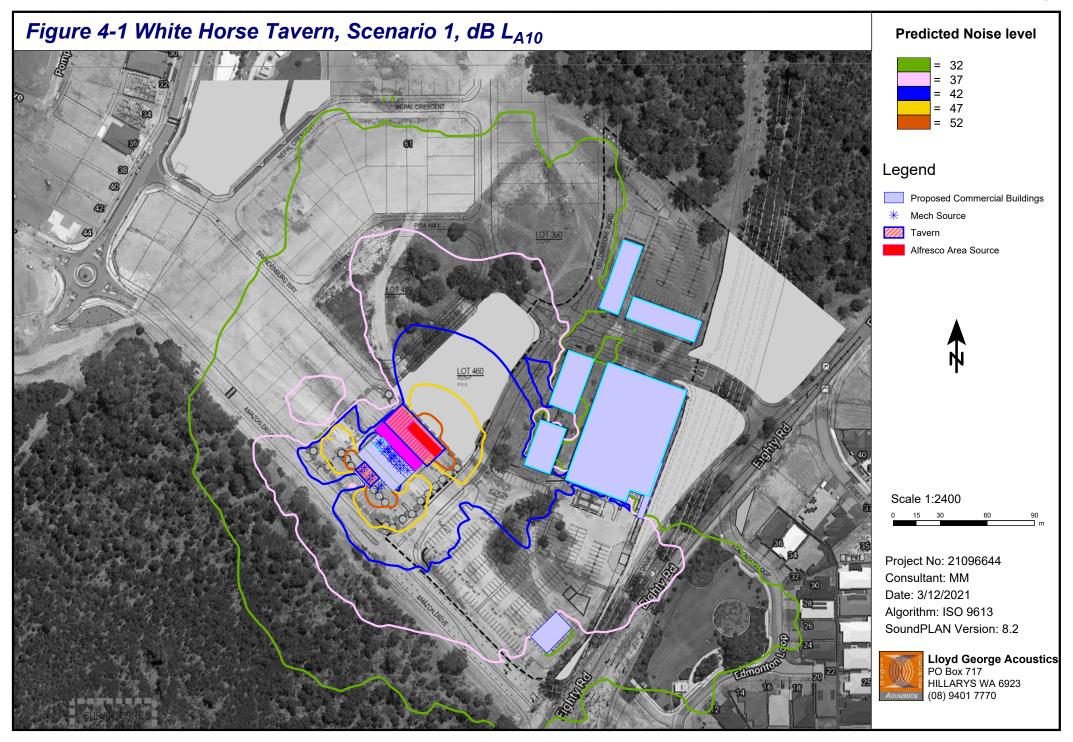
4.2 Scenario 2 - Closed Bifold Doors

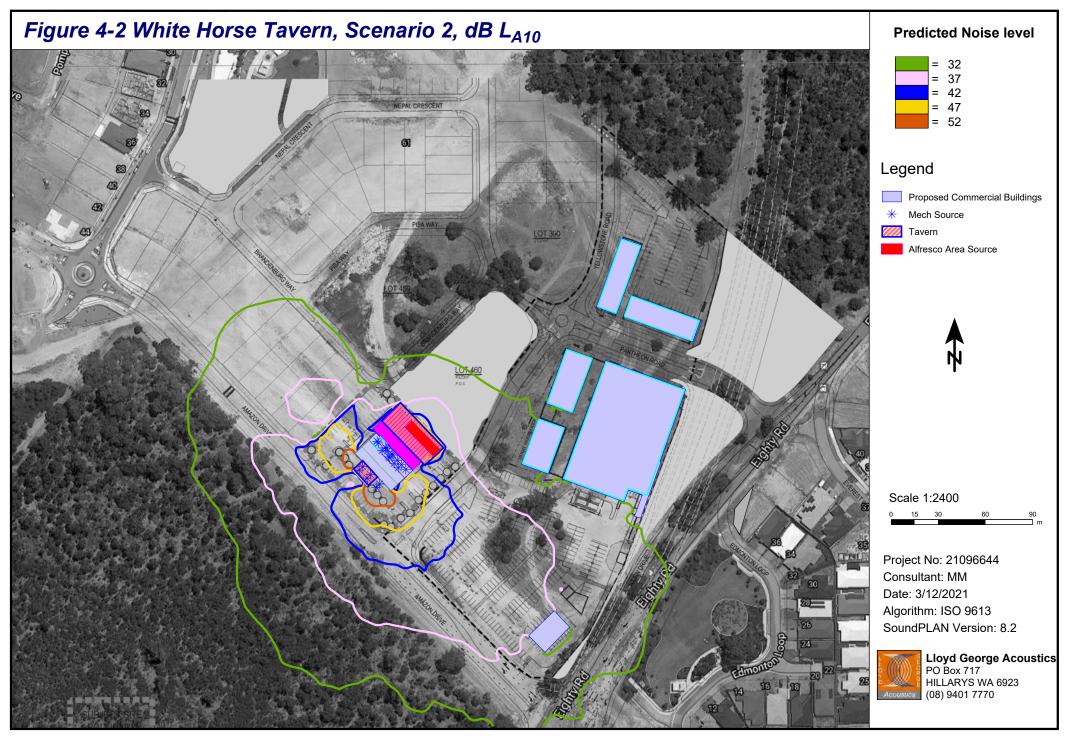
The noise modelling results of this mode of operation are shown in *Table 4-2* with the most dominant source group highlighted at each receiver. Note that this represents the noise levels with the tavern at full capacity (inside and outside), bifold doors closed and vehicles idling in the bottle shop lanes. The noise levels are shown as a contour plot in *Figure 4-2*.

It is noted that noise is now dominated by patrons in the alfresco areas and mechanical plant, with noise from within the venue reduced significantly.

Receiver	Cars	AC Plant	Exhaust	Inside Tav	vern Noise	Alfresco	Total
Receiver	Idling	AC Plant	Fans	Via Building	Via Bifolds	Patrons	Total
Future R1 (West)	27	32	33	13	<5	12	36
Future R2 (North)	15	29	26	22	12	28	33
Existing R3 (East)	25	28	29	<5	<5	17	28
Existing R4 (North West)	22	26	25	<5	<5	<5	32

Table 4-2 Predicted Noise Levels, dB LA10





4.3 Scenario 3 - Carpark (Car doors)

The noise modelling results of car door noise is shown in *Table 4-3*. Note that this is the maximum noise event of the worst case car door closing event (levels are not cumulative). The noise levels are shown as a contour plot in *Figure 4-3*.

Table 4-3 Predicted Noise Levels, dB LAmax

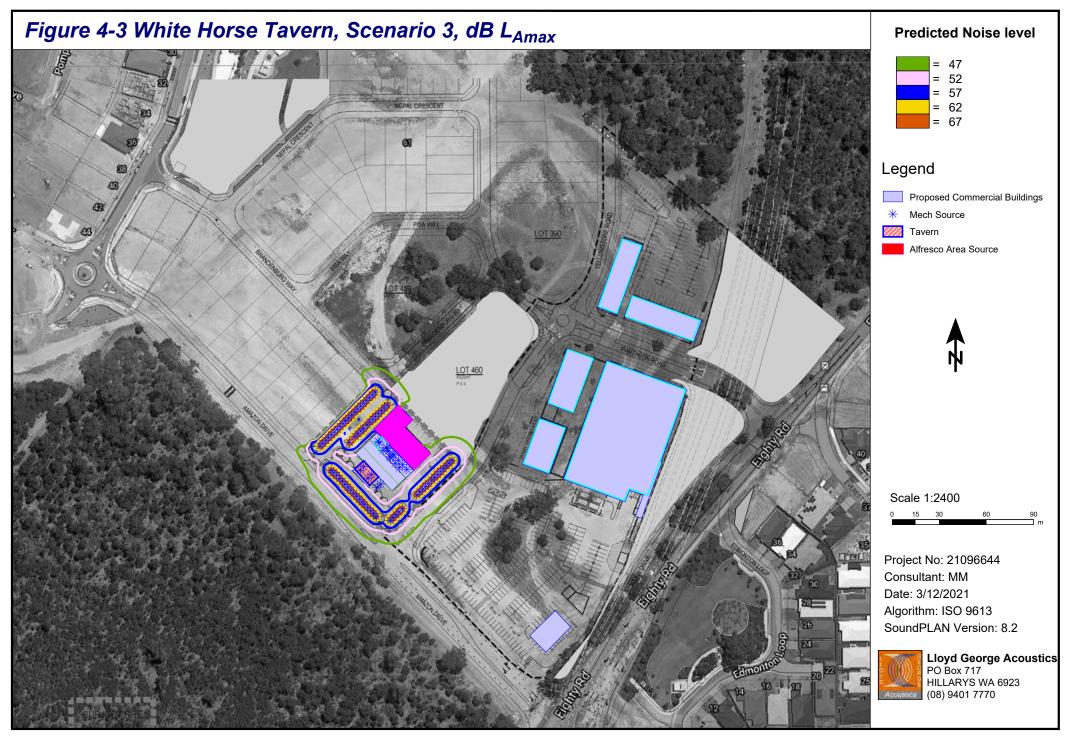
Receiver	Car Door Closing (Maximum Level)
Future R1 (West)	43
Future R2 (North)	44
Existing R3 (East)	27
Existing R4 (North West)	22

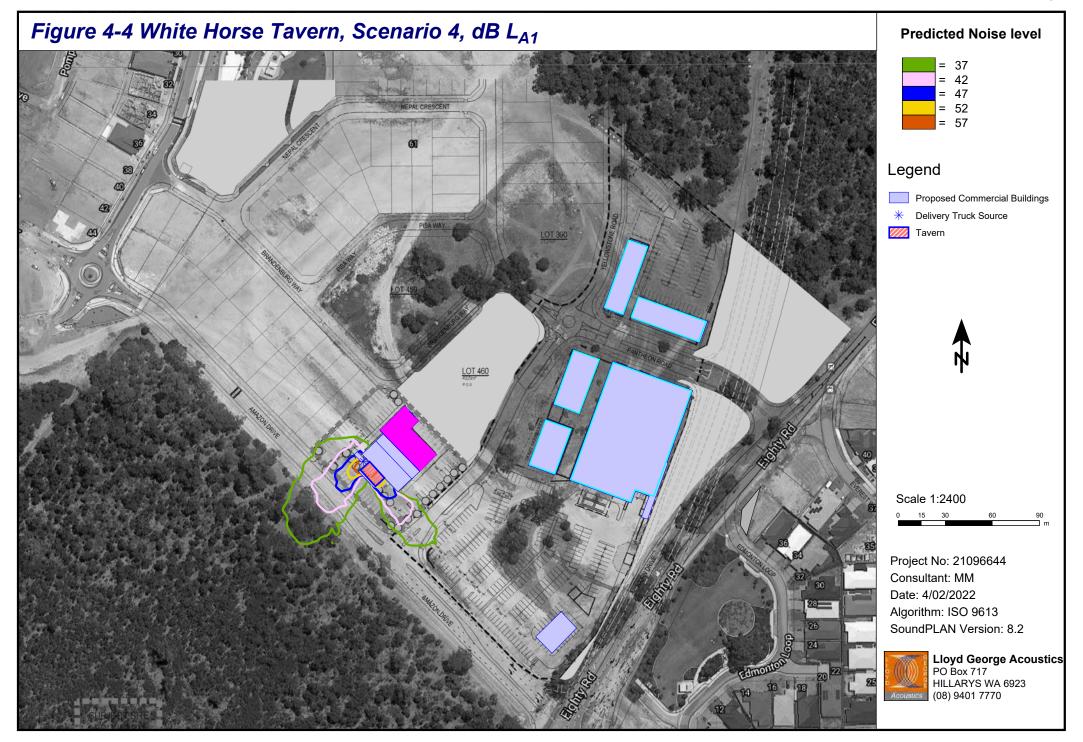
4.4 Scenario 4 - Delivery Truck

The noise modelling results of car door noise is shown in *Table 4-4*. Note that this is considered an intermittent noise event. The noise levels are shown as a contour plot in *Figure 4-4*.

Table 4-4 Predicted Noise Levels, dB LA1

Receiver	Delivery Truck Idling
Future R1 (West)	30
Future R2 (North)	25
Existing R3 (East)	14
Existing R4 (North West)	17





5 ASSESSMENT

The noise modelling results are discussed for each time period described in Table 2-4.

5.1 Scenario 1 - Open Bifold Doors

The results for this scenario are compared against the assigned levels and displayed in *Table 5-1*. Note where there are multiple receivers in the same vicinity, the highest level is reported. Where patron noise is concerned, no intrusive characteristics are considered applicable.

Receiver	Predicted Level	Dominant Source	Day Assigned Level	Evening Assigned Level	Night Assigned Level	Exceedance, dB
Future R1 (West)	37	Mech Plant	47	42	37	Complies (all)
Future R2 (North)	44	Tavern (via Bifolds)	47	42	37	Complies/+2/+7
Existing R3 (East)	32	Mech Plant	47	42	37	Complies (all)
Existing R4 (North West)	29	Mech Plant	46	41	36	Complies (all)

Table 4-1 Assessment of Scenario 1 Noise Levels, dB LA10

The results indicate that the L_{A10} scenario is compliant at all existing receivers.

At future residential receivers to the west (R1), should this be approved in the ultimate outcome, this scenario is compliant at all times.

At location R2 to the north, across Brandenburg Way, is an area with potential for noise sensitive land use. With the bifold doors fully open and at full capacity, compliance is achieved during the day, with a marginal exceedance in the Evening (also Sundays/Public Holidays), and a larger exceedance at Night.

It is assumed that the intent of the bifold doors is primarily for day time use. The modelling demonstrates that noise via the fully open bifold doors is the cause of potential exceedences outside of this time, from a full capacity venue (480 people inside). The noise model demonstrates that by reducing the opening size of the bifold doors to approximately $27m^2$ and keeping the remaining bifold doors closed the noise level can be reduced by at least 2 dB which achieves compliance on Sundays and the during evening time period. Such a running mode should be incorporated as part of a noise management plan.

It is further recommended that should noise sensitive development occur at R2, consideration is taken of potential noise intrusion from the tavern, including façade treatments, glazing requirements, position of balconies etc.

It should be noted that final plant selections and positions of all plant may vary this outcome however, the proposed positioning and screening is considered adequate.

5.2 Scenario 2 - Closed Bifold Doors

The results for this scenario are compared against the assigned levels and displayed in *Table 5-2*. Note where there are multiple receivers in the same vicinity, the highest level is reported. Where patron noise is concerned, no intrusive characteristics are considered applicable.

Receiver	Predicted Level	Dominant Source	Day Assigned Level	Evening Assigned Level	Night Assigned Level	Exceedance, dB
Future R1 (West)	36	Mech Plant	47	42	37	Complies (all)
Future R2 (North)	33	Alfresco Patrons	47	42	37	Complies (all)
Existing R3 (East)	28	Mech Plant	47	42	37	Complies (all)
Existing R4 (North West)	32	Mech Plant	46	41	36	Complies (all)

Table 5-2 Assessment of Scenario 2 Noise Levels, dB LA10

The results indicate that the L_{A10} scenario is compliant at existing and future receivers.

The closing of the bifold doors is therefore demonstrated to be an effective measure for reducing tavern patron noise, noting that the model assumes the door systems achieve an R_w rating of 36 dB when shut. Based on the outcome of Scenario 1 (Bifolds open) it is identified that compliance on Sundays and Evenings may be achievable with a depending on the number of patrons inside the hall and how the bifold doors are managed. Therefore, this measure should be considered as part of an operational noise management plan where future dwellings are developed in the locations assessed.

5.3 Scenario 3 - Car Door Noise

Results for this noise source are provided in *Table 5-3*. Where car door noise is dominant and especially during the night, a + 10 dB adjustment for impulsiveness is applied.

Evening and Predicted Adjusted Day Assigned Receiver Night Assigned Exceedance, dB Level Level Level Level Future R1 (West) 43 53 67 57 Complies Future R2 (North) 44 54 67 57 Complies Existing R3 (East) 27 37 67 57 Complies Existing R4 (North West) 22 32 66 56 Complies

Table 5-3 Assessment of Scenario 3 Noise Levels, dB L_{Amax}

The results demonstrate that car park noise from car doors complies at all times.

5.4 Scenario 4 - Delivery Truck Noise

Results for this noise source are provided in *Table 5-3*. Where the truck noise is dominant and especially during the night, a + 5 dB adjustment for tonality is conservatively applied.

Table 5-4 Assessment of Scenario 4 Noise Levels, dB LA1

Receiver	Predicted Level	Adjusted Level	Day Assigned Level	Evening Assigned Level	Night Assigned Level	Exceedance, dB
Future R1 (West)	30	35	57	52	47	Complies
Future R2 (North)	25	25	57	52	47	Complies
Existing R3 (East)	14	19	57	52	47	Complies
Existing R4 (North West)	17	22	56	51	46	Complies

The results demonstrate that delivery truck noise complies at all times.

6 RECOMMENDATIONS

As the assessment is for DA approval only at this stage, the following recommendations are indicative only. However, they do indicate that noise emissions will need to be carefully considered in the detailed design where applicable –

Tavern Building Elements

- \circ Fixed and opening glazed elements of the tavern area to have total glass/frame/seal acoustic performance of be $R_w \ge 36$.
- Where not glazed or of mass construction, wall systems (cladding, frame, insulation, plasterboard) to be constructed to have total acoustic performance of $R_w + C_{tr} \ge 48$.
- o Bifold door systems (glass, frame and seals) to have acoustic performance rating of $R_w \ge 36$ dB.
- Western entry door airlock type design utilising a second door to be fitted with automatic closers and to incorporate acoustic perimeter and astragal seals.
- No base construction requirements for bottleshop or drive-thru, although an acoustically absorptive ceiling can be considered;

Roof/ceiling of the Tavern

- o Metal deck roof with Anticon insulation below roof sheeting and above purlins;
- Ceiling to be 13mm thick sound-rated plasterboard with minimum 75mm thick, 14kg/m³ insulation above (or approved equivalent). Underside of ceiling (minimum 60%) to be acoustically absorptive by way of acoustic panels (minimum NRC 0.7).

Mechanical Plant

- Mechanical plant to be selected to be as quiet as reasonably available with detailed design including low speed mode at night and including attenuators fitted in ductwork of fan systems such as the kitchen supply/exhaust.
- o Sound levels to be in line with those assumed in Table 3-2.
- o Plant to be mounted using vibration isolators.
- Local screening barriers (acoustic louvers or solid) to be planned for inclusion in detailed design along north west edge of tavern Kitchen/toilet building (shown to have a flat roof and understood to be the intended location of all external plant). Final height and compliance to be verified by a qualified acoustical consultant.

Site General

- Waste collection to occur during daytime hours, defined as:
 - 07:00 to 19:00 Monday to Saturday (excluding public holiday), or
 - 09:00 to 19:00 on a Sunday or public holiday
- o Patrons leaving the tavern should be encourage by staff to leave quietly in a courteous manner where possible, signs should also be utilised in the car park, especially on the western end of the lot where residences may exist in future.

 Noise wall to the north west to be of material with minimum surface mass of 15 kg/m² such as masonry, limestone block.

Music and Events

- A noise management plan must be prepared to encompass all aspects of noise that are operational in nature and with regard to patron numbers, seating configurations and times of day. This should include events and functions as well as day to day operations.
- o It is understood that the tavern license does not allow for live music events where the level is above normal conversation.

Delivery Vehicles

- Where a safe workplace can be provided, audible reversing alarms shall be turned off and alternative methods used such as spotters etc. Audible 'beeper' reversing alarms are only acceptable if it is deemed there is no other way to provide a safe workplace.
 Where an audible alarm is required, consideration should be given to the suitability of broadband type alarms, as these have less environmental noise impacts.;
- Where possible normal (non-refrigerated) delivery trucks to turn engines off whilst unloading;
- o Delivery companies are to be advised of the above requirements.

• Future Residential

o It is recommended that any residential parts of new lots under the current structure plan (in particular those directly opposite Brandenburg Way) incorporate notifications on title and increased construction standards in order to ensure a satisfactory internal acoustic amenity whilst also allowing the tavern some flexibility. Whilst this may minimise complaints, it must be acknowledged by the tavern operator that the onus of compliance is on the noise emitter.

7 CONCLUSION

The analysis undertaken is preliminary at this stage, however it highlights that as the tavern building enters detailed design, noise emissions must be considered in further detail considering final equipment selections, operating hours, operational noise management measures etc. For initial guidance, *Section 6* discusses possible noise mitigation requirements, noting these would be subject to change depending on the outcome(s) of the detailed analysis.

It is recommended that an environmental noise assessment report forms a condition of Building License and as information regarding mechanical plant becomes known in greater detail, such an assessment is undertaken by a suitably qualified acoustical consultant (member firm of the Association of Australasian Acoustical Consultants).

Lloyd George Acoustics

Appendix A

DA Plans

Lot 9005 Nairn Drive, Baldivis WA





Location Plan - 1:2000 @ A3

The Whitehorse Tavern

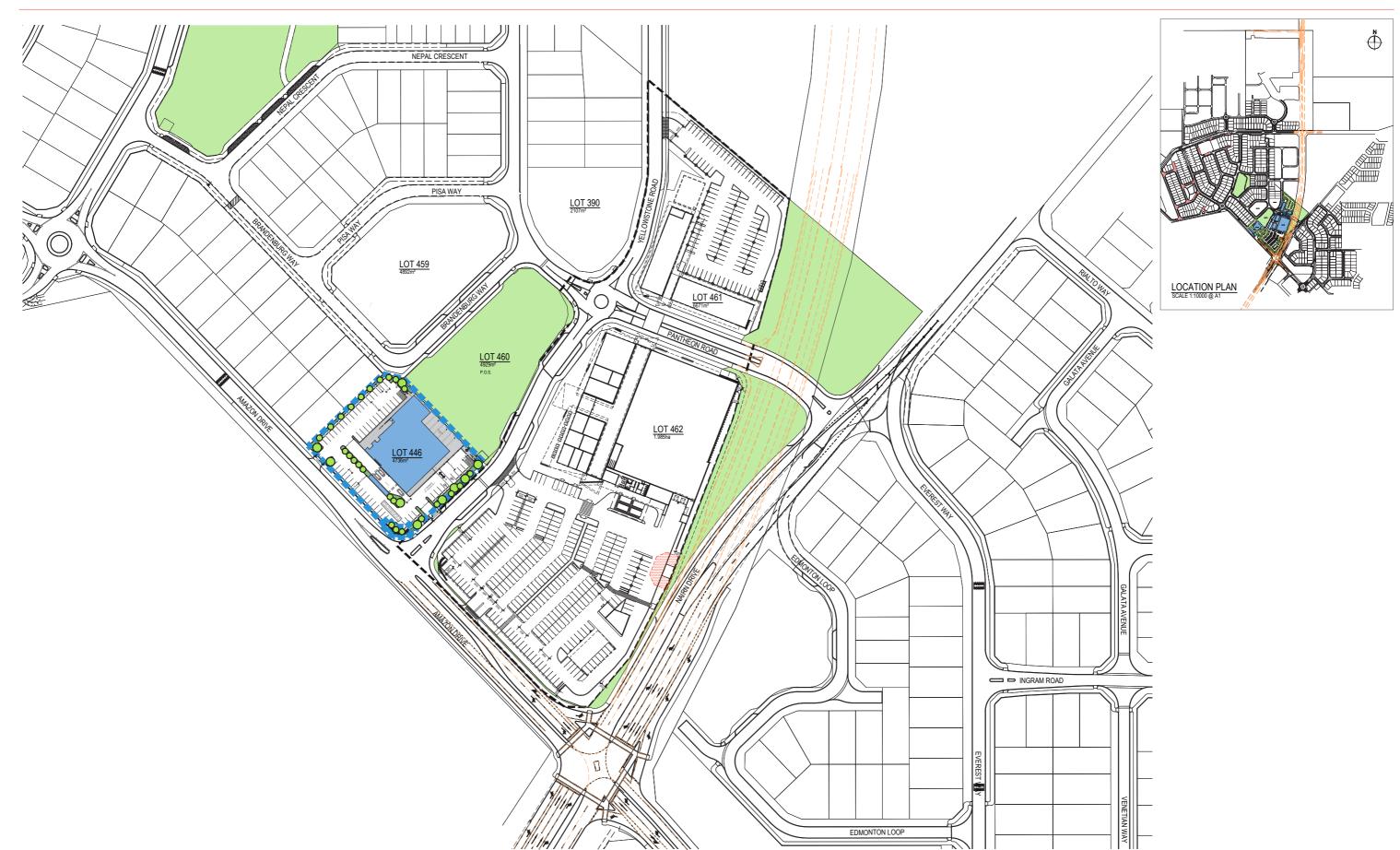




Site Plan - 1:2000 @ A3

 $The \,Whitehorse \,Tavern$

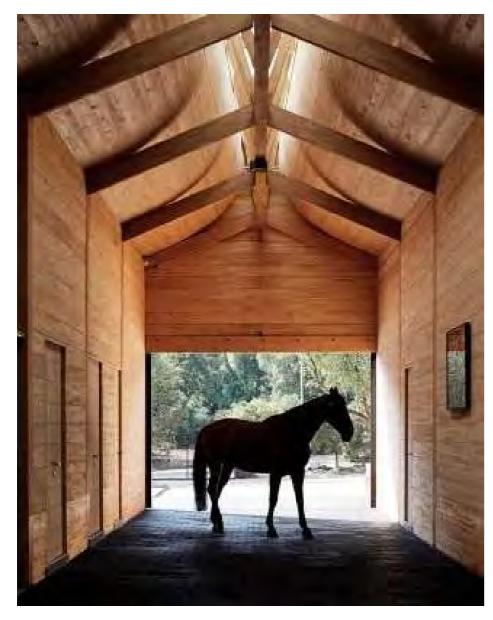




Key Idea The Whitehorse Tavern



The design concept is inspired by the aesthetic of the 'stable'; a building in which horses are sheltered and fed, grounding the design back to the history of the Baldivis region. A balance of a hardy, industrial form and warm, tactile finishes and detailing to the interior tavern fitout.















Sanitary Facilities Calculation:

Male patrons (306)					
No. of closet pans required	3	No. of closet pans provided	4		
No. of urinals required	6	No. of urinals provided	5		
No. of washbasins required	3	No. of washbasins provided	4		

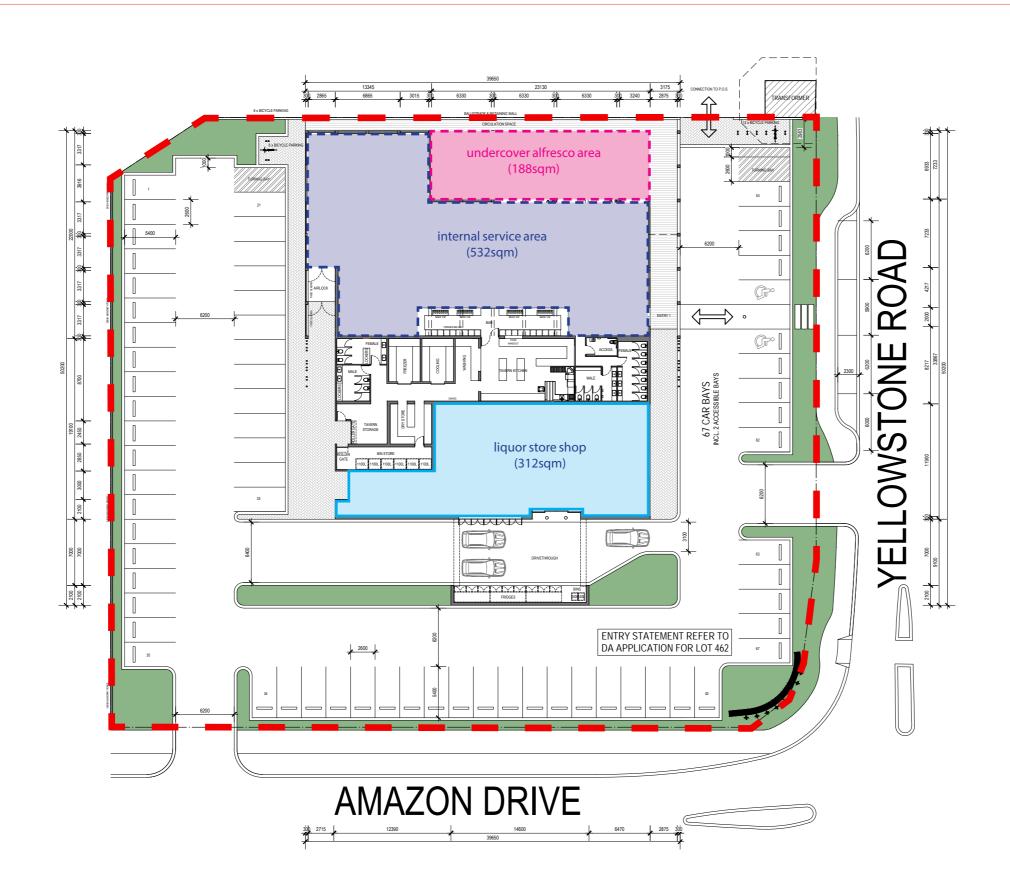
F(206)					
Fe	Female patrons (306)				
No. of closet pans required	7	No. of closet pans provided	8		
No. of urinals required	N/A	No. of urinals provided	N/A		
No. of washbasins required	3	No. of washbasins provided	4		

Male employees (20)					
No. of closet pans required	1	No. of closet pans provided	2		
No. of urinals required	1	No. of urinals provided	0		
No. of washbasins required	1	No. of washbasins provided	2		

Fen	Female employees (20)				
No. of closet pans required	2	No. of closet pans provided	2		
No. of urinals required	N/A	No. of urinals provided	N/A		
No. of washbasins required	1	No. of washbasins provided	2		



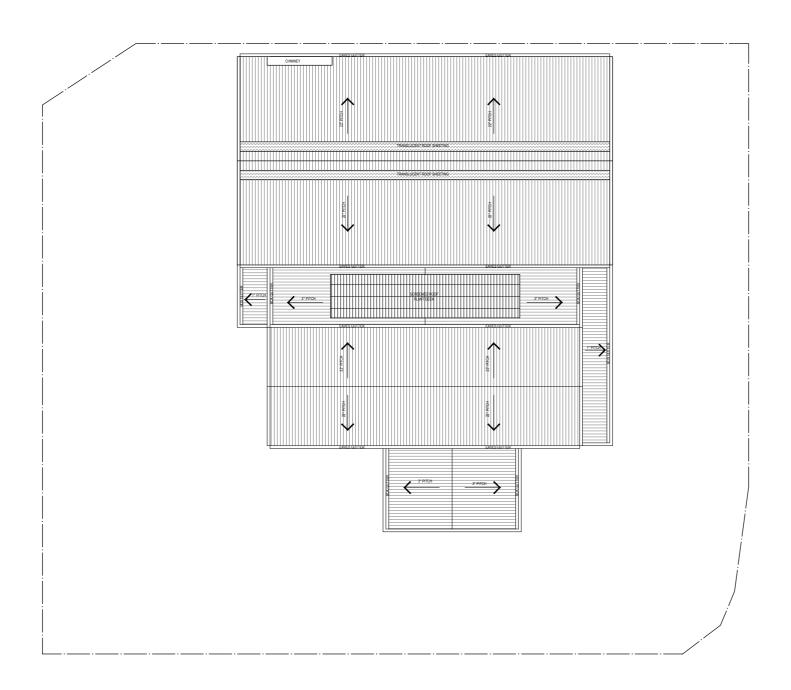












YELLOWSTONE ROAD

AMAZON DRIVE

Elevations - 1:200 @ A3

The Whitehorse Tavern







Elevations - 1:200 @ A3

The Whitehorse Tavern





NORTH EAST ELEVATION



Materials Palette Legend

The Whitehorse Tavern





Perspective - View from Yellowstone Road

The Whitehorse Tavern





Lloyd George Acoustics

Appendix B

Terminology

The following is an explanation of the terminology used throughout this report.

Decibel (dB)

The decibel is the unit that describes the sound pressure and sound power levels of a noise source. It is a logarithmic scale referenced to the threshold of hearing.

A-Weighting

An A-weighted noise level has been filtered in such a way as to represent the way in which the human ear perceives sound. This weighting reflects the fact that the human ear is not as sensitive to lower frequencies as it is to higher frequencies. An A-weighted sound level is described as L_A dB.

Sound Power Level (Lw)

Under normal conditions, a given sound source will radiate the same amount of energy, irrespective of its surroundings, being the sound power level. This is similar to a 1kW electric heater always radiating 1kW of heat. The sound power level of a noise source cannot be directly measured using a sound level meter but is calculated based on measured sound pressure levels at known distances. Noise modelling incorporates source sound power levels as part of the input data.

Sound Pressure Level (Lp)

The sound pressure level of a noise source is dependent upon its surroundings, being influenced by distance, ground absorption, topography, meteorological conditions etc and is what the human ear actually hears. Using the electric heater analogy above, the heat will vary depending upon where the heater is located, just as the sound pressure level will vary depending on the surroundings. Noise modelling predicts the sound pressure level from the sound power levels taking into account ground absorption, barrier effects, distance etc.

LASIOW

This is the noise level in decibels, obtained using the A frequency weighting and the S (Slow) time weighting as specified in IEC 61672-1:2002. Unless assessing modulation, all measurements use the slow time weighting characteristic.

LAFast

This is the noise level in decibels, obtained using the A frequency weighting and the F (Fast) time weighting as specified in IEC 61672-1:2002. This is used when assessing the presence of modulation only.

LAPeak

This is the greatest absolute instantaneous sound pressure in decibels using the A frequency weighting as specified in IEC 61672-1:2002.

LAmax

An L_{Amax} level is the maximum A-weighted noise level during a particular measurement.

L_{A1}

An L_{A1} level is the A-weighted noise level which is exceeded for one percent of the measurement period and is considered to represent the average of the maximum noise levels measured.

L_{A10}

An L_{A10} level is the A-weighted noise level which is exceeded for 10 percent of the measurement period and is considered to represent the "intrusive" noise level.

LAeg

The equivalent steady state A-weighted sound level ("equal energy") in decibels which, in a specified time period, contains the same acoustic energy as the time-varying level during the same period. It is considered to represent the "average" noise level.

L_{A90}

An L_{A90} level is the A-weighted noise level which is exceeded for 90 percent of the measurement period and is considered to represent the "background" noise level.

One-Third-Octave Band

Means a band of frequencies spanning one-third of an octave and having a centre frequency between 25 Hz and 20 000 Hz inclusive.

L_{Amax} assigned level

Means an assigned level which, measured as a LA Slow value, is not to be exceeded at any time.

L_{A1} assigned level

Means an assigned level which, measured as a L_{A Slow} value, is not to be exceeded for more than 1% of the representative assessment period.

L_{A10} assigned level

Means an assigned level which, measured as a L_{A Slow} value, is not to be exceeded for more than 10% of the representative assessment period.

Tonal Noise

A tonal noise source can be described as a source that has a distinctive noise emission in one or more frequencies. An example would be whining or droning. The quantitative definition of tonality is:

the presence in the noise emission of tonal characteristics where the difference between -

- (a) the A-weighted sound pressure level in any one-third octave band; and
- (b) the arithmetic average of the A-weighted sound pressure levels in the 2 adjacent one-third octave bands,

is greater than 3 dB when the sound pressure levels are determined as $L_{Aeq,T}$ levels where the time period T is greater than 10% of the representative assessment period, or greater than 8 dB at any time when the sound pressure levels are determined as $L_{A Slow}$ levels.

This is relatively common in most noise sources.

Modulating Noise

A modulating source is regular, cyclic and audible and is present for at least 10% of the measurement period. The quantitative definition of modulation is:

a variation in the emission of noise that —

- (a) is more than 3 dB L_{A Fast} or is more than 3 dB L_{A Fast} in any one-third octave band;
- (b) is present for at least 10% of the representative.

Impulsive Noise

An impulsive noise source has a short-term banging, clunking or explosive sound. The quantitative definition of impulsiveness is:

a variation in the emission of a noise where the difference between $L_{A peak}$ and $L_{A Max slow}$ is more than 15 dB when determined for a single representative event;

Major Road

Is a road with an estimated average daily traffic count of more than 15,000 vehicles.

Secondary / Minor Road

Is a road with an estimated average daily traffic count of between 6,000 and 15,000 vehicles.

Influencing Factor (IF)

$$=\frac{1}{10}\big(\%\ {\rm Type}\ {\rm A}_{100}+\%\ {\rm Type}\ {\rm A}_{450}\big)+\frac{1}{20}\big(\%\ {\rm Type}\ {\rm B}_{100}+\%\ {\rm Type}\ {\rm B}_{450}\big)$$
 where :

% Type A_{100} = the percentage of industrial land within

a100m radius of the premises receiving the noise

% TypeA₄₅₀ = the percentage of industrial land within

a 450m radius of the premises receiving the noise

% Type B_{100} = the percentage of commercial land within

 $a\,100m$ radius of the premises receiving the noise

 $\%\, TypeB_{450} = the\, percentage\, of\, commercial\, land\, within$

a 450m radius of the premises receiving the noise

+ Traffic Factor (maximum of 6 dB)

= 2 for each secondary road within 100m

= 2 for each major road within 450m

= 6 for each major road within 100m

Representative Assessment Period

Means a period of time not less than 15 minutes, and not exceeding four hours, determined by an inspector or authorised person to be appropriate for the assessment of a noise emission, having regard to the type and nature of the noise emission.

Background Noise

Background noise or residual noise is the noise level from sources other than the source of concern. When measuring environmental noise, residual sound is often a problem. One reason is that regulations often require that the noise from different types of sources be dealt with separately. This separation, e.g. of traffic noise from industrial noise, is often difficult to accomplish in practice. Another reason is that the measurements are normally carried out outdoors. Wind-induced noise, directly on the microphone and indirectly on trees, buildings, etc., may also affect the result. The character of these noise sources can make it difficult or even impossible to carry out any corrections.

Ambient Noise

Means the level of noise from all sources, including background noise from near and far and the source of interest.

Specific Noise

Relates to the component of the ambient noise that is of interest. This can be referred to as the noise of concern or the noise of interest.

Peak Component Particle Velocity (PCPV)

The maximum instantaneous velocity in mm/s of a particle at a point during a given time interval and in one of the three orthogonal directions (x, y or z) measured as a peak response. Peak velocity is normally used for the assessment of structural damage from vibration.

Peak Particle Velocity (PPV)

The maximum instantaneous velocity in mm/s of a particle at a point during a given time interval and is the vector sum of the PCPV for the x, y and z directions measured as a peak response. Peak velocity is normally used for the assessment of structural damage from vibration.

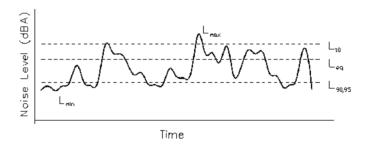
RMS Component Particle Velocity (PCPV)

The maximum instantaneous velocity in mm/s of a particle at a point during a given time interval and in one of the three orthogonal directions (x, y or z) measured as a root mean square (rms) response. RMS velocity is normally used for the assessment of human annoyance from vibration.

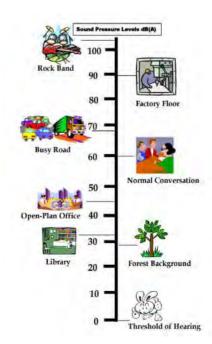
Peak Particle Velocity (PPV)

The maximum instantaneous velocity in mm/s of a particle at a point during a given time interval and is the vector sum of the PCPV for the x, y and z directions measured as a root mean square (rms) response. RMS velocity is normally used for the assessment of human annoyance from vibration.

Chart of Noise Level Descriptors



Typical Noise Levels







Contents

1.0 Landscape Masterplan	4
2.0 Character Images	5
3.0 Material Palette	6
4.0 Furniture Palette	7
5.0 Planting Palette	8

ISION	DATE	ISSUE OR AMENDMENT	BY	REVIEWED
А	24/08/2021	ISSUE FOR DEVELOPMENT APPLICATION	IA	SC
В	04/11/2021	AMENDMENT TO COUNCIL COMMENTS	IA	SC
С	03/02/2022	AMENDMENT TO COUNCIL COMMENTS	JW	MM
D	14/02/2022	AMENDMENT TO COUNCIL COMMENTS	JW	MM

1.0 Landscape Masterplan



LEGEND

EXTENT OF WORKS

— — — RETAINING WALL (UNDER DECK)

1 ENTRY STATEMENT

2 FEATURE PLANTING

3 TREES TO PARKING

4 TAVERN ALFRESCO DINING ON TIMBER DECKING

5 FEATURE POT PLANTING TO TIMBER DECKING

6 TAVERN SCREENING

7 SCREEN PLANTING TO MEDIAN

8 SHRUB PLANTING TO PARKING SURROUNDS

9 FEATURE PAVING

10 BIKE RACKS

11 FUTURE TIMBER DECK RAMP TO POS

12 ASSET PROTECTION ZONE PLANTING

13 BIORETENTION BASIN

2.0 Character Images









5 10 m

4 Emerge Associates WHITE HORSE TAVERN | DA REPORT WHITE HORSE TAVERN | DA REPORT Emerge Associates 5

3.0 Material Palette

EXPOSED AGGREGATE CONCRETE TREATMENT



CHARCOAL EXFOLIATED





LAKESIDE EXFOLIATED GRAPHITE EXFOLIATED



FEATURE GRANITE PAVING Granite Paving to Pedestrian Areas Size: 600x300x40mm Finish: Exfoliated

DECKING TREATMENT



DECKING & TIMBER FURNITURE Spotted Gum Timber. Finish: Natural Oiled



ALFRESCO ACCENT WALL Recycled Red Brick

4.0 Furniture Palette







PIETRO GIANT WOK PLANTER BOWL



CUSTOM LASERCUT CORTEN STEEL TREE GRATE 1200mm x 1200mm Final Design TBC



BIKE RACKS by MMCITE ELK110 Bicylce Stands

6 Emerge Associates WHITE HORSE TAVERN | DA REPORT WHITE HORSE TAVERN | DA REPORT Emerge Associates 7

5.0 Planting Palette





Alpinia caerulea 'Native Ginger'



Alocasia

'Elephant Ears'

Rhapis excelsa 'Rhapis Palm'

Philodendron

'Xanadu'



'Bird's Nest Fern'



'Cardboard Palm'

Lomandra confertifolia

'Seascape'





'Creeping Boobialla'



Oleria lanuginosa

'Ghost town'

canopy (refer figure 7 Bushfire Managment Plan).
Shrubs (0.5 metres to 5 metres in height): should not be located under trees or within 3 metres of buildings, should not be planted in clumps greater than 5m2 in area, clumps of shrubs should be separated from each other and any exposed window or door by at least 10 metres. Shrubs greater than 5 metres in height are to be treated as trees.

Ground covers (<0.5 metres in height): can be planted under trees but must be properly maintained to remove dead plant material and any parts within 2 metres of a structure, but 3 metres from windows or doors if greater than 100 millimetres in height. Ground covers greater than 0.5 metres in height are to be treated as shrubs.

the ground and or surface vegetation, canopy cover should be less than 15% with tree canopies at maturity well spread to at least 5 metres apart as to not form a continuous

'Big Red'

• Grass should be managed to maintain a height of 100 millimetres or less.

WHITE HORSE TAVERN | DA REPORT WHITE HORSE TAVERN | DA REPORT 8 Emerge Associates Emerge Associates 9

Level 1, 251 St Georges Tce, Perth WA

CoR Ref: 20.2021.262.1 - D22/7602

PS Ref: 7687

10 March 2022

David Banovic, Senior Projects Officer City of Rockingham

Via email: customer@rockingham.wa.gov.au

Attention: Casey Gillespie

Dear Sir/Madam,

LOT 9005 NAIRN DRIVE, BALDIVIS PROPOSED TAVERN - RESPONSE TO ADDITIONAL COMMENTS

We refer to the City's additional comments on the above matter provided on 22 February 2022, and are pleased to provide a response in the following table.

City's additional comments

Land use comments

Pursuant to clause 1.6.3 of TPS2, in considering applications for Development Approval, the City shall have regard to the general and specific objectives of the TP2S (cl. 1.6.1 and cl.1.6.2). The proposed development is in direct conflict with objectives of the Scheme. The endorsed SESP has established the preferred use of land as part of a co-ordinated planning process to promote the orderly and proper development of land. This therefore ensures that the amenity, health and convenience of the local community is considered and protected. The proposed development is inconsistent with the current SESP.

The proposed development can only be considered if the Western Australian Planning Commission (WAPC) approve of the modifications to the Spires Estate Structure Plan, where a Tavern and incidental Liquor Store (small) land use is contemplated for the site.

The City invites further discussion in respect of the land uses and the scale of same under the TPS2 - Tavern, Liquor Store (small), Shop, and the envisaged land use under the SESP amendment being Special use – Tavern and incidental Liquor Store.

It could be argued that a Tavern with incidental liquor store would imply ancillary packaged liquor sales over the Tavern counter, and possibly a drive through component.

Applicant response

We have agreed to an extension of time to allow the structure plan modifications requested by WAPC to be made, resubmitted, and approved.

Under clause 27(1) of the Deemed Provisions the current structure plan is not binding. So it is possible for the JDAP to depart from the current structure plan.

The draft amended structure plan is a 'seriously entertained planning proposal' which has been supported by both Council and WAPC, and is pending final and known modifications. It therefore has a high degree of certainty and finality, and in having due regard to it a strong level of weight should be applied. So in the event the structure plan amendment has not received approval prior to the JDAP meeting, the JDAP nonetheless has authority under clause 27(1) of the Deemed Provisions to approve the development. The JDAP has previously exercised its discretion in very similar circumstances (refer for example the JDAP decisions of 9 March 2020 and 12 January 2021). Land use classification is bound by the definitions in TPS2. Given the liquor store component comes under the 'tavern' licence under the licensing regime, it can only be classified as a 'tavern' under TPS2. This remains the case regardless of whether it is an incidental activity or a use in its own right.

Acoustic Assessment comments

The amended noise report is very similar to the original noise report provided, in that

 It still indicates that exceedances will occur with bifold doors open on Sunday and Public Holidays and after 7pm on any night.

Correct, this is the case as expected, hence to provision of the compliant solution is provided in section 5.1, 5th paragraph, to close doors partially during these time periods.

City's additional comments	Applicant response
Unsure whether tonality has been added to the mechanical plant predicted noise (this would then create further exceedances)	Tonality is considered undetectable where suitable physical screening is implemented, which is the intent in the design. This is to be verified at detailed design stage - especially since the DA assessment has had to make basic assumptions about plant specs.
Breakout noise from the alfresco bifolds has not been included for the scenario when these doors are closed	Yes it has. Scenario 2 addresses this situation. The noise "via bifolds" in Table 4-2 provides this component of the resulting noise level.
 A range of restrictions have been suggested for future residential – eg single storey only, increased construction standards and notification on title. Not equitable to burden these premises with additional cost to control noise produced by the tavern. 	These are provided as suggestions, not restrictions, which could be implemented to improve the amenity of nearby future residential areas. But they are not necessary to achieve compliance – the proposed measures introduced for the tavern itself will achieve compliance.
Potentially noise from patrons has been underestimated (particularly as alcohol will be available to patrons)	This is the standard of noise prediction consistent with Lloyd George's professional experience on other similar projects. The source levels and methodology is based on measurements of similar establishments, eg. function centres, wedding venues and the like where alcohol is consumed.
Refrigerated delivery truck noise has not been considered – only standard delivery truck	This is in fact a refrigerated delivery truck, not a supermarket size, but a medium sized truck. The report details that source height is 2.1m AGL and on top of the cabin, where the condenser units are typically placed. Note that compliance of this scenario is comfortable (at least 12 dB), and that is including an assumption of tonality.
Condensers / air-conditioning units will need to be able to provide compliance with AS 1668 – proposed size of condensers / air conditioners may not be suitable – again leading to further exceedances.	This would need to be verified with the aid of a full mechanical services design and specification. Noise mitigation strategies exist, and the design of the tavern permits high screening barriers or enclosures around the intended plant locations.
The Acoustic Assessment indicates that compliance with the Noise Regulations cannot be achieved. The proposed measures for mitigation (noise management plan etc and limiting the open area of the bifold doors to a particular area) to achieve compliance are not considered to be practical or operationally reasonable. The report itself indicates that careful consideration in regards to Tavern building elements (including glazing, walls, entry requirements, ceilings, roofs and mechanical plant) will be required just to achieve this 'almost' level of compliance. With the uncertainties in regards to the report parameters and with the acknowledged exceedances in the report – it does not appear that the development can presently comply with the requirements of the Noise Regulations.	The tavern building elements are indeed critical but the performance recommendations are not considered excessive for glazing, walls etc for a commercial-grade building. The report identifies potential exceedances and demonstrates compliance can be achieved where the detailed recommendations are adopted (this would form a condition of approval).
TIA comments	
The City questions the validity of the traffic report because the analysis had considered the land use area however it has not taken into account the maximum number of patrons to be accommodated within the Tavern which would be more critical in this particular case (i.e. 834 patrons). There are also a number of adopted assumptions which are considered to be unreasonable. If the TIA presented is based on assumptions in the TIA associated with the SESP amendment process, this TIA needs to be provided to the City to finalise the assessment and justify the TIA submitted.	The TIA assessment used the land use area because the ITE trip rates based on number of seats are not considered to be accurate because no surveys have been undertaken for more than 300 seats. Applying ITE trip rated for GFA of similar uses such as "Drinking Place" or "Quality Restaurant" generates similar trip rates. Further, SIDRA analysis results documented in the TIA indicate significant spare capacity at the proposed development crossovers and the intersection of Yellowstone Road/ Amazon Drive in 2031 which can be used if the proposal generates higher than expected trips reported in the TIA.

City's additional comments

The TIA has adopted a high passing trade component (i.e. 89%) for the bottle shop without justifications therefore the validity of this assumption could not be assessed. The traffic consultant mentioned that it is based on passing trade for a coffee shop which is likely to operate differently when compared with a bottle shop.

Considering the discussions required under land use, this identifies that the Liquor Store component is not incidental or ancillary to the Tavern as envisaged by the SESP amendment, and further justifies that car parking for this component be assessed at the Shop rate.

Applicant response

Assuming a high passing trade percentage similar to coffee shop with drive through facility is reasonable. It should be noted that conservatively, the passing trade component of the development trip generation was not removed from the 2031 traffic projections (as reflected in Figure 9 of the TIA). The 2031 traffic projections have been sourced from Transcore's TIA for the Spires Baldivis Shopping Centre (June 2021). The proposed development traffic manually was added to the 2031 traffic projections with no discount for passing trade. Therefore the assessments are conservative.

Notwithstanding the liquor store is properly classified as a 'tavern' land use under TPS2, we have considered the implications if it were to be assessed as a standalone 'shop' (there being no parking rate for a liquor store – large under TPS2).

Under TPS2 a 312m² NLA 'shop' requires 19 car parking bays. The review of the PMP indicates that there are minimum parking surpluses of about 107 and 44 bays during the typical Friday and Saturday and therefore the 19 bay shortfall associated with the proposed Liquor Store would not change the outcome of the PMP. However, according to table 6 of the PMP there is only 1 bay surplus during the Saturday lunch time for Tavern and Shop (regardless of the commercial site bays) and therefore during these hours (12:00 noon and 13:00pm) the parking supply of the tavern and shopping centre may not be sufficient and it may be necessary for some reciprocal parking with the commercial site (which is in any event already a requirement of the approval for the shopping centre and commercial development).

The parking demand for the liquor store would not be significant during Saturday lunch time and the drive-through lane of the bottle shop would also provide space for queueing and purchasing cars within the site which would be sufficient to address the parking shortfall during the Saturday lunch time. Therefore there would be limited reliance on the commercial site for parking during the Saturday lunch time.

Car parking comments

The City is concerned that the proposed shared parking arrangement would significantly increase traffic safety risks (i.e. large number of pedestrian crossings expected) and may impact upon the intersection level of service at Yellowstone Road/Amazon Drive. There is no pedestrian link between the proposed development and footpath infrastructure along Amazon Drive.

It should be noted that the peak hour of Tavern is different to the road network and the shopping centre peak hours. Therefore, the pedestrian/ vehicle conflict would be minimal. Pedestrians would be able to walk along the existing pedestrian path on Amazon Drive via the link to the shopping centre's pedestrian path network and the crossing point in the median at the Yellowstone Road / Amazon Drive intersection.

The City questions the validity of the Parking Control and Management Plan (i.e. critical assumptions adopted without justifications). It is mentioned that there are many Taverns with similar arrangements within a shopping centre however no real life examples where it has worked has been provided, therefore an assessment to justify this assumption can be made. Furthermore, the City is of the view that parking demand should be based on traffic survey data of similar land use or established references for parking demand instead. The traffic consultant mentioned that estimated percentage of parking demand is based on the consultant's experience however provided no information to substantiate the claim therefore its validity could not be verified

The percentage of parking demand used for the PMP is very conservative. Each individual land use was assumed to reach its 100% parking utilisation during the peak operation time of the land use which is not the case in reality. The percentage of parking demand then gradually was decreased for the off peak operation of each land use.

The parking demand analysis for a late night shopping scenario (i.e. Thursday) is required unless it can be demonstrated that all parking demand can be accommodated within the site. It should be noted that with a shared parking arrangement comes the possibility for late night shopping patrons to use the bays within the Tavern site, which has not been considered.

Shopping centre peak operation time happens on Saturday lunch time. The late night shopping scenario (i.e. Thursday) is not happening anymore as most of the shops are open till late every weekday evening.

City's additional comments	Applicant response
Vehicle access	
The proposed vehicle crossover is located less than 6.0m away from the Tangent Point. In this particular case the Tangent Point (TP) is located to the north of the proposed vehicle crossover off Yellowstone Road therefore does not comply. It should also be noted that the sketch provided by the applicant suggests that the TP is located to the north of the proposed vehicle crossover, clearly demonstrating that the proposed vehicle crossover is located within the prohibited location.	The plan Sk08 provided by Transcore shows that the crossover is located about 12m away from the Tangent Point.
Commercial vehicles using the proposed vehicle crossover off Yellowstone Road when exiting the site (i.e. instead of reversing from the drive-thru and exit onto Amazon Drive) will have restricted sight distance due to the on-street parallel car parking bay at the proposed vehicle crossover off Yellowstone Road.	Commercial vehicles exit to Amazon Drive not Yellowstone Road. Commercial vehicles do not exit through the drive-through lane.
Landscape and Public Open Space (POS) interface	
With regards to the indicative 'future timber deck ramp to the POS' and 'Timber decking 'which extends across the retaining wall on the boundary into the POS, the City has not received detailed landscape plans for this POS to ensure that this connection will be installed, however the bridge is included on initial concept drawings submitted to the City for information purposes only.	Noted. The ramp forms part of the POS and is not part of the development application for the tavern. It is shown for information purposes only.
There appears to be no detail on how the interface will operate, will the access from the POS to the Tavern be managed from the ramp into the POS, or is this gated and only for Tavern guests, if so what times, or is the area open 24/7 for public access route? It also remains unclear on the management, maintenance, security of the infrastructure (balustrades, decking), who will be responsible long term, given the decking and balustrade overhang into POS land (see image).	The ramp will connect to the path in front of the tavern building and will not be access-restricted. The ramp itself will be subject to separate approval from the City and design and maintenance dealt with through that process. The current proposal is for balustrading of the alfresco adjacent to the POS will be contained wholly within the tavern site, as shown on the development plans submitted with the application – refer the floor plan. The project team has been investigating cantilevering the alfresco deck (as shown on the landscape concept), but at this stage the overhang is conceptual only and does not form part of the proposal. Further detail on this aspect will be provided as part of the detailed landscape plan that we anticipate will be required as a condition of approval.
Additionally no information is provided on the retaining wall extent of the balustrade, at either end of the wall (see image below). The Developer has not provided any information on this in terms of the Engineering Approval (it is currently outstanding).	Construction details for retaining walls will be provided at the building permit stage for the tavern, if not subdivisional works approvals.
The landscape plan states 'Tavern Screening' however no further details are provided to understand what this will look like.	The screening relates to the Dulux Monument painted posts included as architectural features on the northwest and southeast elevations of the building, as shown on the development plans.
The plant list includes an 'Asset protection Zone' list, of which 3 of the 4 plants grow 500mm high or more, which means they cannot be planted under trees (as they will be classified as a shrub). Additional consideration will be necessary to the APZ zone and additional low growing planting species will likely be required.	Noted.
Design review panel	
Limited detail has been provided to address comments from the Design Review Panel:	
 It does not appear that consideration to integrating street furniture around the liquor store or shade structures/covered walkways has occurred; 	Ample seating is provided for patrons within the tavern; it would not be desirable to locate seating around the liquor store as it may encourage loitering.
	A canopy is included along the southeast elevation above the liquor store entrance as shown on the roof plan and elevations.
 No further evidence or detail of stormwater treatment with the carpark, 	Stormwater treatment will be included in the design development (building permit) stage.

City's ad	ditional comments	Applicant response
•	Footpath on Yellowstone Road should be given priority across the vehicle crossover in the Town Centre	Acknowledged.
•	Signage/wayfinding has not been addressed	Wayfinding and signage detail will be developed in design development (i.e. building permit) stage.
•	Timing of works with the POS, shopping centre, car park has not been provided	As the tavern relies on availability of car parking within the shopping centre, the tavern will not commence operations until the shopping centre has been completed. Yellowstone Road and Amazon Drive will also be constructed and open to traffic. It is expected the POS landscaping works will be completed prior to the tavern commencing operations.
•	The interface to the POS is noted as critical to the design and pedestrian movement intent of the proposal	Noted.
•	Contextual elevations were suggested to assist in demonstrating the overall form within the context of the residential area	Much of the surrounding and adjacent sites is undeveloped - remaining as open paddocks and stands of eucalypt. Built context is generally small single storey residential across the main road of Nairn Drive so contextual elevations do not help to convey final context.

Should you have any queries or require further clarification in regard to the above matter please do not hesitate to contact the writer.

Yours sincerely

ROSS UNDERWOOD SENIOR ASSOCIATE

220310 7687 Response to additional comments.docx

evel 1, 251 St Georges Tce, Perth WA

PS ref: 7687

11 April 2022

David Banovic, Senior Projects Officer City of Rockingham Via email: customer@rockingham.wa.gov.au

Attention: Casey Gillespie

Dear Sir/Madam,

LOT 9005 NAIRN DRIVE, BALDIVIS SUBMISSION IN SUPPORT OF AMENDED DEVELOPMENT PLANS PROPOSED TAVERN

Planning Solutions acts on behalf of Baltavern Pty Ltd, the proponent of the proposed development of a tavern on Lot 9005 Nairn Drive, Baldivis (**subject site**).

We refer to our development application of 1 October 2021, and the subsequent meeting, held with the City of Rockingham (**City**) on 31 March 2022, to discuss a proposed redesign of the Tavern and associated car parking. In this regard, we are pleased to present amended plans for the City's consideration.

Planning Solutions has prepared the following submission discussing the amended development plans and assessing the changes against the relevant planning provisions.

With regard to the above, please find enclosed the updated development plan package and updated technical reporting as required. The enclosed documents are as follows:

- Amended development plans, including significant changes to the car parking arrangements on site and minor changes to the internal layout of the Tavern building.
- Amended landscape concept plan reflecting the amended plans.
- An Acoustics Technical Note, prepared by Lloyd George Acoustics, addressing potential impacts relating to acoustics.
- A revised Transport Impact Assessment, prepared by Transcore, considering the amendments to the development plans.

The following submission addresses various matters pertaining to the proposal, including:

- Background.
- Proposal.
- Town planning considerations.



BACKGROUND

On 31 March 2022, Planning Solutions met with the City to propose and discuss updated development plans, including the provision of further car parking. It is understood the City generally accepted the amended development plans pending receipt of the following:

- A formal submission of a revised Spires Estate Structure Plan Map to the Department of Planning,
 Lands and Heritage. With the City providing comment on the revised Structure Plan.
- Updated proposal plans, technical reports and planning justifications.

The City required submission of the updated plans and reporting by 11 April 2022 to meet the responsible authority report deadline of 25 May 2022.

PROPOSED AMENDMENTS

The purpose of the proposed amendments is to primarily address the parking provision and position the proposed development as an independent development, rather than as the previously proposed reciprocal parking arrangement. Various amendments to the development plans are proposed, technical reporting has been updated where required. The amendments include:

- Expanded car parking area to accommodate a total of 153 bays. The total site area of the proposed development has increased from ~4,736m² to ~6,502m².
- Moving the Tavern building southeast to the Yellowstone Road frontage as per the Design Review Panel recommendation.
- The internal layout of the Liquor Store and Tavern back of house is mirrored to address the modifications to the drive through aspect of the Liquor Store, which is accessed to the west and egressed to the east and demonstrate operational arrangements so as to show the use is clearly a tavern use rather than two separate land uses.
- Internal layout modifications, including a shared dry store, and internal access arrangements. The size of the liquor store component of the tavern has been reduced to 280m².
- Increased landscaping provision to accommodate the expanded car parking arrangement.
- Improved interface with the adjoining public open space, reflected in the overlaid landscaping plan.

Refer Appendix 1 for a copy of the amended development plans.

Operational aspects

Liquor Licensing

The proposed development is intended to operate as a Tavern with incidental Liquor Store offering the sale of packaged liquor for consumption off the premises. This is supplemented through the definition of the applicable Tavern licence under the *Liquor Control Act 1988*. Noting that a Hotel Licence is known as a Tavern Licence:

- 41 (2) Subject to this Act, during permitted hours the licensee of a hotel licence is authorised to keep open the licensed premises, or part of those premises, and, while those premises are open
 - a) may sell liquor on the premises to any person for consumption on the premises; and



b) may, unless the licence is a hotel restricted licence or a tavern restricted licence, sell packaged liquor on and from the premises to any person.

Pursuant to this definition, packaged liquor for consumption off the premises is allowed under a Tavern Licence. The Liquor Store component of the proposed premises allows for the efficient sale of packaged liquor, while the Tavern component of the proposed development focuses on food and beverage related services for consumption on the premises. While these operations are considered separate, noting that packaged liquor sold at the Liquor Store will not be consumed within the Tavern, both components of the proposed development operate in conjunction to provide services pursuant of a Tavern Licence.

Shared operational aspects

The proposed premises is considered to operate as a single facility as opposed to a Tavern and a Liquor Store for the following reasons:

- The amended development plans propose a shared dry store area for use by the Tavern and Liquor Store, integrating the back-of-house operations of both forms of liquor sale.
- Both uses will utilise the same serving and loading arrangements.

While both uses offer different goods and services, they operate as supplementary components of the greater Tavern facility. This is to ensure the operations within the facility occur in an efficient manner.

Potential amenity impacts

The City has raised concerns regarding potential amenity impacts as a result of the goods offered by the Liquor Store component of the development. This was addressed as a component of the Public Interest Assessment, submitted as a component of the original development application.

It is considered that the proposed development, including both components, will make a positive contribution to the amenity of the prevailing neighbourhood centre through the high-quality provision of goods and services not otherwise available within the locality.

TOWN PLANNING CONSIDERATIONS

Where applicable, a review of the proposed amendments against the relevant planning frameworks has been provided below.

State Planning Framework

State Planning Policy 3.7 Planning in Bushfire Prone Areas

As the site location has not changed, the site is subject to the provisions of *State Planning Policy 3.7 – Planning in Bushfire Prone Areas* (SPP3.7). The proposed building has been moved to the south east slightly to accommodate the proposed changes. As such, the building itself is moved parallel in relation to the bushland and the BAL rating for the tavern does not change from BAL-19 in the existing Bushfire Management Plan.

Accordingly, it would be appropriate for a condition of approval to be imposed requiring the Bushfire Management Plan to be updated to reflect the minor changes to the development plans.



State Planning Policy 4.2 Activity Centres for Perth and Peel

As previously, the proposed development is located adjacent to a 'Neighbourhood Centre' in the Activity Centres Hierarchy of *State Planning Policy 4.2 Activity Centres for Perth and Peel* (**SPP4.2**). As outlined within Table 3 of SPP4.2 "Neighbourhood centres provide for daily and weekly household shopping needs, community facilities and a small range of other convenience services.

The proposed amendments improve the Tavern's compliance with the provisions and intent of SPP4.2. The Tavern building has been realigned to address the primary street frontage of Yellowstone Road. Pursuant to the provisions of the Spires Neighbourhood Centre Local Development Plan (LDP), which specifies Yellowstone Road as a 'Main Street' environment. The intent of the 'Main Street' environment is to prioritise pedestrian movements and maximise walkability and amenity. The proposed relocation of the Tavern building will improve the interface of the building with Yellowstone Road, providing outcomes more consistent with the intent of the LDP. Furthermore, a majority the car parking expansion is located behind the proposed building, effectively screening the expanded car park from activity on Yellowstone Road. The proposed amendments improve the Tavern's compliance with SPP4.2.

City of Rockingham Town Planning Scheme No. 2

The proposed amendments trigger the requirement for revised review against the relevant provisions of the City of Rockingham Town Planning Scheme No. 2 (**TPS2**).

Car parking

A key issue addressed as a component of the amended plans is the further provision of car parking in lieu of the previously proposed reciprocal arrangement. Further, to provide robustness to the calculation, the liquor store component of the tavern has been assessed as if it were a stand-alone liquor store. Queuing bays have been included in the drive-through of the liquor store component.

The increased provision and inclusion of liquor store has been assessed against the requirements of Clause 4.15 and Table 2 of TPS2. Refer to Table 1 below.

Table 1 - Car parking assessment

Use	Provision	Requirement	Provided	Surplus (+) / Shortfall (-)	
Tavern (720m² of public areas)	1 bay for every 5m ² of bar and public areas, including lounges, beer gardens and restaurants.	144	150 on-site (including 10 queuing bays) 16 on-street bays in the vicinity (per E7	+5	
Liquor Store (per Shop) (280m² NLA)	6 per 100 m² NLA	17	R40 of Liveable Neighbourhoods)		

As is evident, the proposed car park expansion addresses any issues with car parking provision and allows the tavern to operate self-sufficiently without reliance on excess car parking bays within the adjacent shopping centre.



Matters to be considered

The proposed amendments to development plans have been assessed against the provisions of Clause 67(2) of the Deemed Provisions. These are addressed in Table 2 below, noting that matters which are not affected by the proposed amendments have been omitted.

Table 2 - Matters to be considered

Mat	ter to be considered	Response
(a)	the aims and provisions of this Scheme and any other local planning scheme operating within the Scheme area;	Refer above for a review against the applicable provisions as required by the amended plans. Matters not discussed are consistent with the original development application submission.
(b)	the requirements of orderly and proper planning including any proposed local planning scheme or amendment to this Scheme that has been advertised under the Planning and Development (Local Planning Schemes) Regulations 2015 or any other proposed planning instrument that the local government is seriously considering adopting or approving;	This submission addresses the considerations that may have changed as a result of the proposed amendments to the development plans.
(c)	any approved State planning policy	Refer above for a review against the applicable provisions as required by the amended plans.
(g)	any local planning policy for the Scheme area;	Refer below for a review against the applicable provisions as required by the amended plans.
(h)	any structure plan or local development plan that relates to the development;	Updated structure plan mapping reflecting the moderately increased site extent for the Tavern will be submitted. As previously noted, the structure plan is a 'due regard' document and is not binding under Clause 27(1) of the Deemed Provisions. There is discretion available to depart from the structure plan. Accordingly, it is not necessary for the structure plan to be amended for the extent of the subject site to be modified through the development approval process.
(m)	the compatibility of the development with its setting, including — (i) the compatibility of the development with the desired future character of its setting; and (ii) the relationship of the development to development on adjoining land or on other land in the locality including, but not limited to, the likely effect of the height, bulk, scale, orientation and appearance of the development;	 (i) The subject site is located in a new growth residential area; the proposed development will form part of the future character of the area. The scale, appearance and orientation of the proposal is consistent with the City's desired outcomes for the development and its future role as an entertainment venue. (ii) The development has been designed to integrate with the adjacent Public Open Space, while also providing a focal point and community hub. The proposed realignment of the building better orients the development in relation to the desired Yellowstone Road environment.



		-
Mati	ter to be considered	Response Lloyd George Acoustics have reviewed the updated development plans and have prepared a technical note, refer Appendix 3, which concludes that the proposed changes to the development plans are not expected to result in any significant changes to the previously prepared report. However, where detailed analysis may be required, we respectfully request that this be imposed as a condition of development approval.
(n)	the amenity of the locality including the following — (i) environmental impacts of the development; (ii) the character of the locality; (iii) social impacts of the development;	 (i) The development does not introduce anything which would be detrimental to the environment. (ii) The subject site is located in a new growth residential area. The proposed development will help to establish the character of area by providing much need social and entertainment hub for the residents of North Baldivis. (iii) Social impacts associated with the development are addressed through consulting reporting and through the provision of management plans. Conversely, the proposal will positively contribute to the locality, through the creation of an engaging development as well as the creation of jobs and the provision of essential services to support the local community.
(p)	whether adequate provision has been made for the landscaping of the land to which the application relates and whether any trees or other vegetation on the land should be preserved;	Indicative landscaping in the form of street trees has been provided fronting Yellowstone Road, Amazon Drive, and within the car park. As the car park has expanded, further trees have been provided. Refer to Appendix 2 for an updated copy of the landscape concept plan, reflecting the amended development plans. A detailed landscaping plan can be provided as a condition of development approval.
(q)	the suitability of the land for the development taking into account the possible risk of flooding, tidal inundation, subsidence, landslip, bushfire, soil erosion, land degradation or any other risk	Refer above for consideration of the amended plans in relation to bushfire planning.
(s)	the adequacy of — (i) the proposed means of access to and egress from the site; and	The Traffic Impact Assessment (TIA) concludes that the means of access and egress to the site remains safe and efficient. Traffic modelling indicates satisfactory arrangements for movements of patron and service vehicles within the site.



Ma	tter to be considered	Response
	(ii) arrangements for the loading, unloading, manoeuvring and parking of vehicles;	Refer Appendix 4 for a copy of the updated TIA prepared by Transcore which addresses the impacts of the proposed development plan amendments.
(t)	the amount of traffic likely to be generated by the development, particularly in relation to the capacity of the road system in the locality and the probable effect on traffic flow and safety;	Updated traffic analysis indicates the anticipated traffic generation of the proposed development is considered low and would not have an adverse impact on the surrounding road network. Refer Appendix 4 for a copy of the updated TIA prepared by Transcore which addresses the impacts of the proposed development plan amendments.

Local Planning Policies

As above, a review of the proposed amendments is provided below regarding the City's local planning policies where relevant.

Planning Policy 3.3.14 Bicycle Parking and End of Trip Facilities

To provide a robust calculation, the Liquor Store component of the tavern has been reassessed as though it were a separate land use, Refer to Table 3 below for a review of bicycle parking provisions.

Table 3 - Bicycle parking calculations

Use	Туре	Calculation	Particular	Required	Provided
Food and Drink Premises (Tavern	Short-term	0.1 spaces per five seats	730 seats	14.6 (15)	18 spaces
	Long-term	0.1 spaces per staff	25 staff	2.5 (3)	
Shop- Neighbourhood Centre (Liquor Store)	Short-term	0.3 spaces per 100m ² NLA	280m²	0.84 (1)	
	Long-term	0.12 spaces per 100m² NLA	280m²	0.334(1)	

It is evident there is a 2-bay shortfall regarding bicycle parking when considering the Liquor Store component as separate. However, there are opportunities for informal bike parking on-site and in the area.

CONCLUSION

This submission addresses the planning considerations which are impacted as a result of the proposed amendments to the development plans. The proposed amendments to the development plans are considered to improve compliance with the relevant planning framework for the following reasons:



- The expanded car park improves compliance with the required provision and establishes compliance
 when the proposed development is considered as separate from the original reciprocal parking
 arrangement.
- The Liquor Store floor area has been reduced to 280m² to ensure that the Liquor Store component of the proposed development is consistent with the 'Liquor Store Small' land use definition under TPS2. This component of the proposed development can therefore be considered against the relevant provisions of TPS2.
- The realignment of the proposed building better situates the built form in relation to the desired 'main street' environment, improving the proposed developments contribution to the pedestrian environment, walkability and amenity.
- The various updated technical reporting demonstrates the proposed development is still compliant with the relevant provisions.

Having regard to the above, the proposed amendments to the development plans improve the overall outcomes of development and warrants approval from the DAP accordingly.

Should you have any queries or require further clarification in regard to the proposal, please do not he sitate to contact the writer.

Yours faithfully,

PAUL KOTSOGLO MANAGING DIRECTOR

220411 7687 Amended Plans Submission - Whitehorse Tavern



APPENDIX 1 UPDATED DEVELOPMENT PLANS

The Whitehorse Tavern

Lot 9005 Nairn Drive, Baldivis WA





Location Plan - 1:2000 @ A3

The Whitehorse Tavern

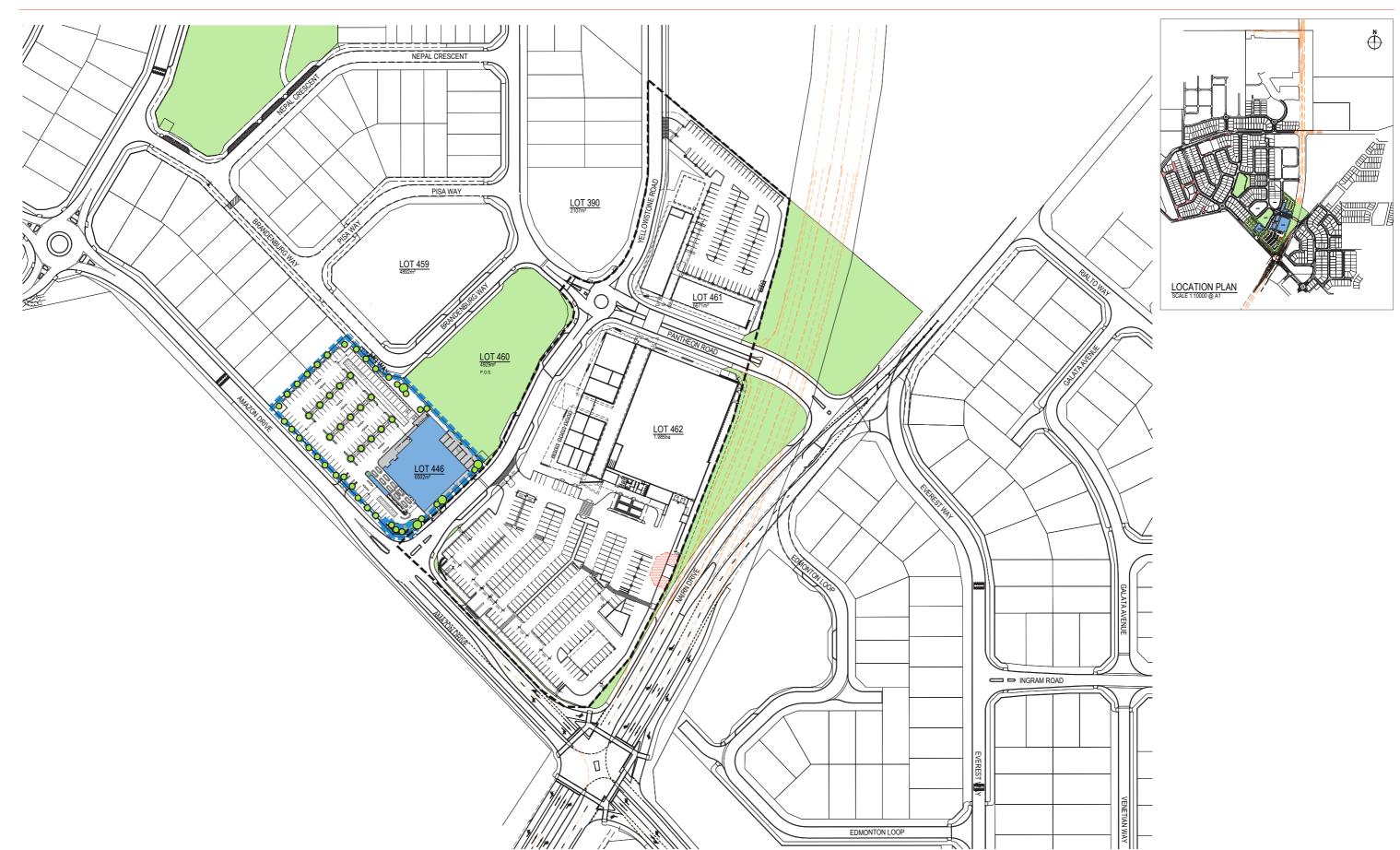




Site Plan - 1:2000 @ A3

The Whitehorse Tavern

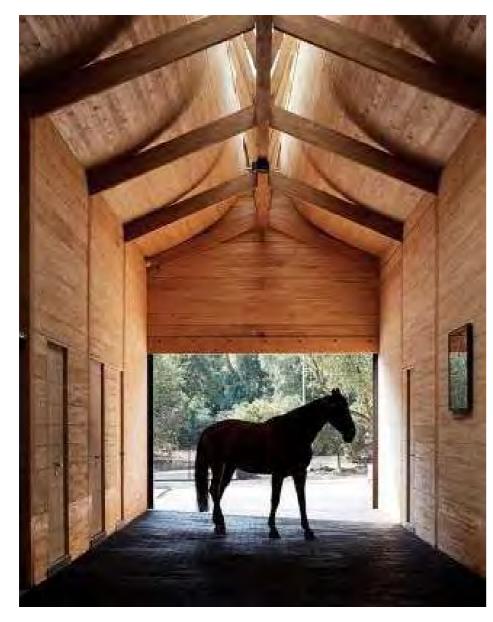




Key Idea The Whitehorse Tavern



The design concept is inspired by the aesthetic of the 'stable'; a building in which horses are sheltered and fed, grounding the design back to the history of the Baldivis region. A balance of a hardy, industrial form and warm, tactile finishes and detailing to the interior tavern fitout.









Floor Plan - 1:400 @ A3



The Whitehorse Tavern





Sanitary Facilities Calculation:

Male patrons (306)				
No. of closet pans required	3	No. of closet pans provided	4	
No. of urinals required	6	No. of urinals provided	5	
No. of washbasins required	3	No. of washbasins provided	4	

Female patrons (306)				
No. of closet pans required	7	No. of closet pans provided	8	
No. of urinals required	N/A	No. of urinals provided	N/A	
No. of washbasins required	3	No. of washbasins provided	4	

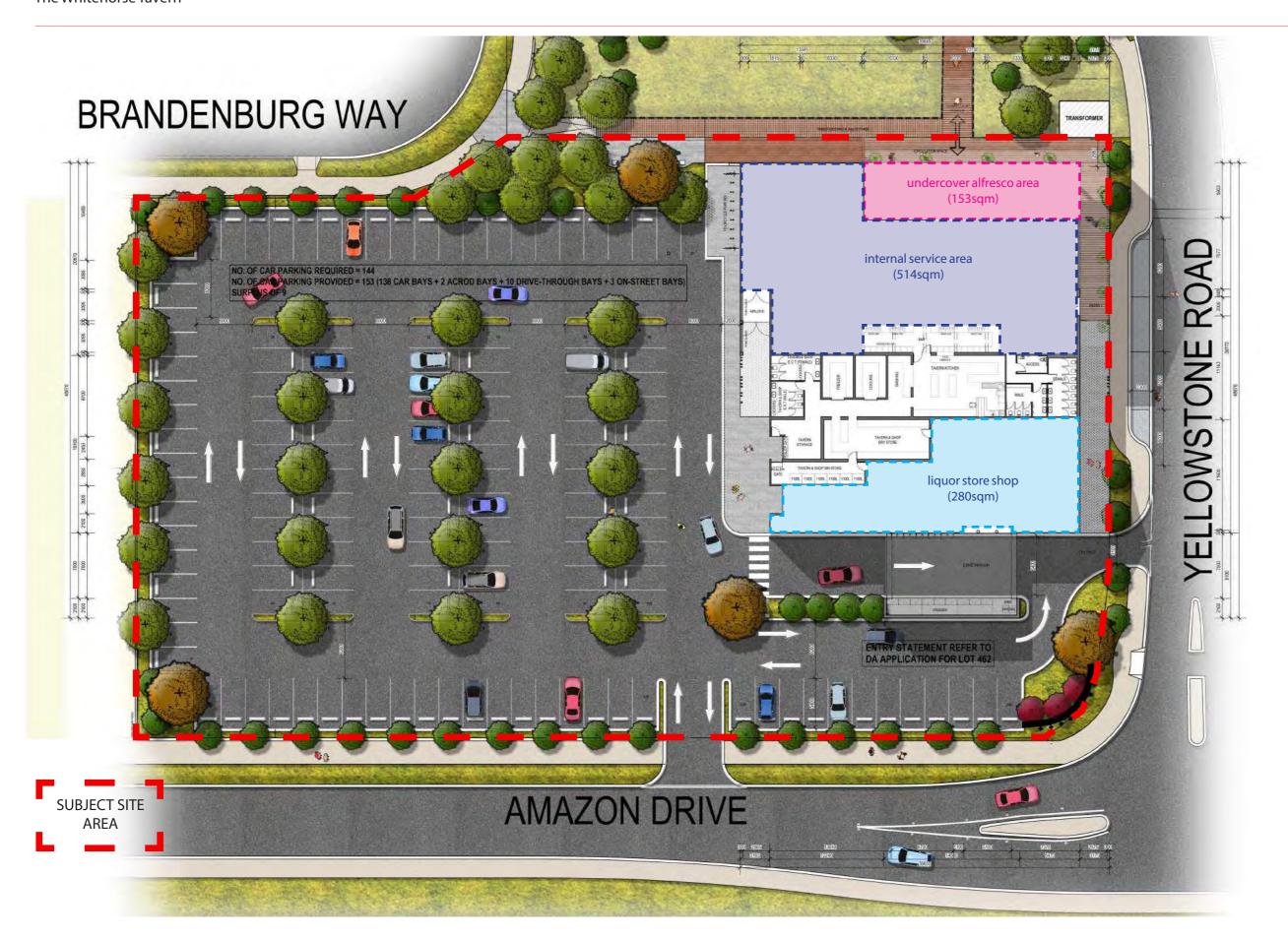
Male employees (20)				
No. of closet pans required	1	No. of closet pans provided	2	
No. of urinals required	1	No. of urinals provided	0	
No. of washbasins required	1	No. of washbasins provided	2	

Female employees (20)				
No. of closet pans required	2	No. of closet pans provided	2	
No. of urinals required	N/A	No. of urinals provided	N/A	
No. of washbasins required	1	No. of washbasins provided	2	



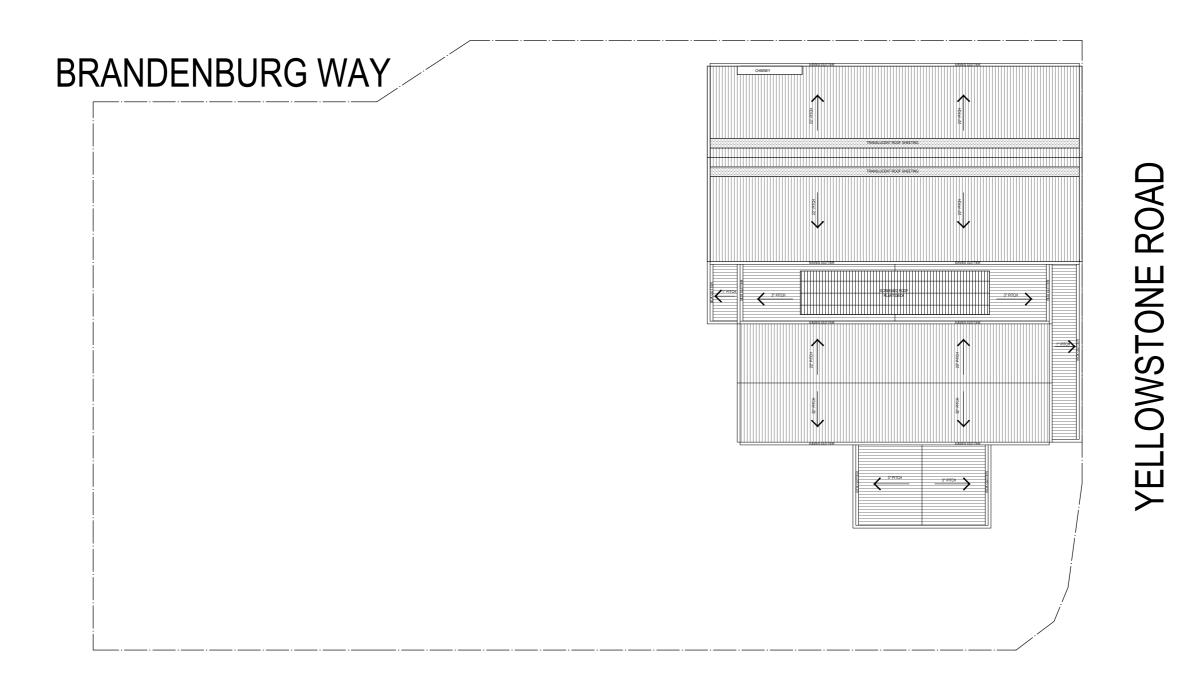
The Whitehorse Tavern





The Whitehorse Tavern





AMAZON DRIVE

Elevations - 1:200 @ A3

 $The \,Whitehorse \,Tavern$





NORTH WEST ELEVATION SCALE 1:100



Elevations - 1:200 @ A3

The Whitehorse Tavern





NORTH EAST ELEVATION



Materials Palette Legend

The Whitehorse Tavern





Perspective - View from Yellowstone Road

The Whitehorse Tavern





Perspective - View from Yellowstone Road

The Whitehorse Tavern







APPENDIX 2 UPDATED LANDSCAPING CONCEPT REPORT





Contents

1.0 Landscape Masterplan	4
2.0 Character Images	5
3.0 Material Palette	6
4.0 Furniture Palette	7
5.0 Planting Palette	8

ISION	DATE	ISSUE OR AMENDMENT	BY	REVIEWED
А	24/08/2021	ISSUE FOR DEVELOPMENT APPLICATION	IA	SC
В	04/11/2021	AMENDMENT TO COUNCIL COMMENTS	IA	SC
С	03/02/2022	AMENDMENT TO COUNCIL COMMENTS	JW	MM
D	14/02/2022	AMENDMENT TO COUNCIL COMMENTS	JW	MM

1.0 Landscape Masterplan



LEGEND

EXTENT OF WORKS

- - - RETAINING WALL (UNDER DECK)

1 ENTRY STATEMENT

2 FEATURE PLANTING

3 TREES TO PARKING

4 TAVERN ALFRESCO DINING ON TIMBER DECKING

5 FEATURE POT PLANTING TO TIMBER DECKING

6 TAVERN SCREENING

7 SCREEN PLANTING TO MEDIAN

8 SHRUB PLANTING TO PARKING SURROUNDS

9 FEATURE PAVING

10 BIKE RACKS

11 FUTURE TIMBER DECK RAMP TO POS

12 ASSET PROTECTION ZONE PLANTING

13 BIORETENTION BASIN

2.0 Character Images









4 Emerge Associates WHITE HORSE TAVERN | DA REPORT WHITE HORSE TAVERN | DA REPORT Emerge Associates 5

3.0 Material Palette

EXPOSED AGGREGATE CONCRETE TREATMENT



CHARCOAL EXFOLIATED

LAKESIDE EXFOLIATED GRAPHITE EXFOLIATED



FEATURE GRANITE PAVING Granite Paving to Pedestrian Areas Size: 600x300x40mm Finish: Exfoliated

DECKING TREATMENT



DECKING & TIMBER FURNITURE Spotted Gum Timber. Finish: Natural Oiled



ALFRESCO ACCENT WALL Recycled Red Brick

4.0 Furniture Palette



SERRALUNGA LISCIO SIENNA PLANTER POT



PIETRO GIANT WOK PLANTER BOWL



CUSTOM LASERCUT CORTEN STEEL TREE GRATE 1200mm x 1200mm Final Design TBC



BIKE RACKS by MMCITE ELK110 Bicylce Stands

6 Emerge Associates WHITE HORSE TAVERN | DA REPORT WHITE HORSE TAVERN | DA REPORT Emerge Associates 7

5.0 Planting Palette

Alpinia caerulea

'Native Ginger'

Alocasia

'Elephant Ears'

TREES Lagerstroemia indica x L. fauriei Bauhinia blakeana Delonix regia Pyrus calleryana 'Royal Poinciana' 'Hong Kong Orchid Tree' 'Natchez' 'Bradford' **GROUNDCOVERS** Myoporum parvifolium 'Creeping Boobialla' Dichondra repens Senecio mandraliscae Casuarina glauca Hibbertia scandens Trachelospermum jasminoides 'Silver Falls' 'Chinese Star Jasmine' 'Blue Chalk Sticks' 'Golden Guinea Vine' SHADE PLANTING **FEATURE**

Rhapis excelsa

'Rhapis Palm'

Philodendron

'Xanadu'

Asplenium nidus

'Bird's Nest Fern'

Zamia furfuracea

'Cardboard Palm'

SHRUBS Lomandra confertifolia Pittosporum 'Miss Muffet' Lomandra longifolia Leucospermum cordifolium Strelitzia reginae 'Seascape' 'Tanika' Nodding Pincushion 'Bird of Paradise' Westringia fruticosa 'Coastal Rosemary'

ASSET PROTECTION ZONE

Viburnum odoratissimum

'Sweet Viburnum'





Banksia ashbyi dwarf

'Ashby's Banksia'





'Ghost town'

Ensure that any planting in this zone as outlined in Bushfire Managment Plan meets the following criteria:

• Trees (> 5 metres in height): trunks at maturity should be a minimum distance of 6

Olearia lanuginosa 'Ghost Town'

- metres from all elevations of the building, branches at maturity should not touch or overhang the building, lower branches should be removed to a height of 2 metres above the ground and or surface vegetation, canopy cover should be less than 15% with tree canopies at maturity well spread to at least 5 metres apart as to not form a continuous canopy (refer figure 7 Bushfire Managment Plan).
 Shrubs (0.5 metres to 5 metres in height): should not be located under trees or within 3 metres of buildings, should not be planted in clumps greater than 5m2 in area, clumps
- of shrubs should be separated from each other and any exposed window or door by at least 10 metres. Shrubs greater than 5 metres in height are to be treated as trees.

Syzygium australe

'Big Red'

Melaleuca incana

- Ground covers (<0.5 metres in height): can be planted under trees but must be properly maintained to remove dead plant material and any parts within 2 metres of a structure, but 3 metres from windows or doors if greater than 100 millimetres in height. Ground covers greater than 0.5 metres in height are to be treated as shrubs.
- Grass should be managed to maintain a height of 100 millimetres or less.

Lomandra confertifolia Lomandra longifolia 'Seascape'

Myoporum parvifolium Oleria lanuginosa 'Creeping Boobialla'

WHITE HORSE TAVERN | DA REPORT WHITE HORSE TAVERN | DA REPORT 8 Emerge Associates Emerge Associates 9



APPENDIX 3 ACOUSTICS TECHINCAL NOTE



Lloyd George Acoustics

PO Box 717 Hillarys WA 6923 T: 9401 7770 www.lgacoustics.com.au

То:	Carcione Group c/- Planning Solutions	From:	Matt Moyle		
Attention:	Ross Underwood	Date:	11 April 2022		
Email:	ross@planningsolutions.com.au	Pages:	2		
Our Ref:	21096644-02 Memo				
Re:	White Horse Tavern – Revised Plans (DMG Issue E)				

Ross,

This memorandum refers to the supplied drawings for White Horse Tavern, Issue E, dated 5/4/22, via DMG Architecture.

Lloyd George Acoustics prepared an environmental noise assessment for the tavern development application, based on a previous design. Our report was completed in February 2022, Ref 21096644-01. One of the outcomes of that assessment was that the noise impact from tavern patrons, car park, and vehicle noise was determined to be compliant with management of the alfresco area.

The Issue E drawings alter the design of the site such that the following are noted with respect to noise impacts previously assessed:

- Basic form and layout of the building and patron areas is maintained and no change in patron numbers or alfresco area is noted.
- The building has been moved in the southeast direction closer to Yellowstone Road by approximately 15 metres.
- The expansion of the car park further increases the buffer between the tavern and future noise sensitive premises to the northwest.
- Noise from the carpark, while notably larger in area, is not expected to increase the maximum noise levels of car doors, as distances from car bays to receivers is maintained.

In essence, the new plans are not expected to result in any significant change in noise emissions to those previously reported and as such the previous noise management requirements are still applicable.

Note that the above review is not based on noise modelling or detailed calculations but on acoustic theory and experience alone and is meant as a preliminary appraisal to support presentation of the concept to local government. It is recommended that where a detailed analysis is required, a follow-up revision to the original noise assessment be carried out.

Reference: 21096644-02 Memo Page 1

The outcomes of the previous assessment demonstrated that noise from the tavern could be managed such that compliance with the requirements of the *Environmental Protection (Noise) Regulations 1997* is practically achievable. As stated previously, this outcome is not expected to change with the latest site design.

We trust the above is satisfactory. Should you require further information, please do not hesitate in contacting us.

Regards,

Matt Moyle

Reference: 21096644-02 Memo Page 2



APPENDIX 4 UPDATED TRAFFIC IMPACT ASSSESSMENT



Proposed Tavern, Amazon Drive, Baldivis

Lot 446 North Baldivis

Revised Transport Impact Assessment PREPARED FOR: **Carcione Nominees** April 2022

Document history and status

Author	Revision	Approved by	Date approved	Revision type
M Rasouli	r01	B Bordbar	16/09/2021	Draft
M Rasouli	r01a	B Bordbar	22/09/2021	Final
M Rasouli	r01b	B Bordbar	22/09/2021	Minor adjustments
M Rasouli	r01c	B Bordbar	14/02/2022	Revised Final
M Rasouli	r01d	B Bordbar	11/04/2022	Second Revised Final

File name: t21.227.mr.r01d

Author: Mohammad Rasouli

Project manager: Mohammad Rasouli

Client: Carcione Nominees

Project: Lot 446 North Baldivis

Document revision: r01d

Project number: t21.227

TABLE OF CONTENTS

1	INTRODUCTION AND BACKGROUND	5
2	EXISTING SITUATION	7
2.1	Existing Land Use	7
2.2	Existing Road Network	7
2.3	EXISTING TRAFFIC VOLUMES	9
2.4	Crash Data	9
2.5	Public Transport	
2.6	PEDESTRIAN AND CYCLIST FACILITIES	10
3	PROPOSED DEVELOPMENT	11
3.1	Proposed Site Use	11
3.2	PROPOSED ACCESS FOR ALL MODES	11
4	CHANGES TO THE SURROUNDING ROAD NETWORK	13
5	INTEGRATION WITH SURROUNDING AREA	14
6	TRAFFIC ASSESSMENT	15
6.1	ASSESSMENT PERIOD	15
6.2	TRIP GENERATION AND DISTRIBUTION.	15
6	.2.1 EXISTING TRIP GENERATION	15
6	2.2.2 PROPOSED DEVELOPMENT TRAFFIC GENERATION	
6.3	Traffic distribution	
6.4	TRAFFIC FLOWS	
6.5	ANALYSIS OF DEVELOPMENT'S CROSSOVERS AND INTERSECTIONS	
6.6 6.7	IMPACT ON NEIGHBOURING AREAS	
6.8	TRAFFIC NOISE AND VIBRATION	
7	PROVISION FOR HEAVY VEHICLES	
_		
8	PARKING	
9	PUBLIC TRANSPORT ACCESS	27
10	PEDESTRIAN AND CYCLIST ACCESS	28
11	CONCLUSIONS	29
APPE	NDIX A: PROPOSED DEVELOPMENT PLAN	
APPE	NDIX B: SIDRA ANALYSIS	
APPE	NDIX C: TURN PATH ANALYSIS	

REPORT FIGURES

Figure 1: Spires LSP with Proposed Amendment	6
Figure 2: Existing land use (April 2021)	7
Figure 3: Existing Nairn Dr / Eighty Rd / Amazon Dr intersection	8
Figure 4: Existing public transport	9
Figure 5: Perth Bike Map	10
Figure 6: Proposed development crossovers	12
Figure 7: Spires Estate Structure Plan	13
Figure 8: Weekday PM peak hour traffic generated by the proposed development	18
Figure 9: 2031 total weekday PM peak hour traffic	19
Figure 10: Network model – SIDRA layout	21
Figure 11: 2031 weekday PM peak hour network analysis – queue storage ratio	23

REPORT TABLES

Table 1: Proposed Land use	11
Table 2: Trip generation of the proposed development	17
Table 3: Passing and non-passing component of the trip generation	17

1 Introduction and Background

This Revised Transport Impact Assessment (TIA) has been prepared by Transcore on behalf of Carcione Nominees. The subject of this report is the proposed tavern and bottle shop to be located at Lot 446 North Baldivis.

This Revised TIA reflects the updated development plan which was prepared by dmg architects to address the City's comments outlined in City's letter of 18th January 2022 to Planning Solutions and include the following modifications to the original plan:

- The site has been extended to the northeast to provide additional car parking for the tavern;
- The building has been pushed up to Yellowstone Road;
- Minor internal changes to the bottle shop; and,
- Modify the Yellowstone Road crossover to exit only crossover.

Transcore on behalf of Carcione Nominees Pty Ltd prepared a Transport Impact Assessment (TIA) report in June 2012 and a final version in April 2014 for the Spires Estate Local Structure Plan (LSP) in the City of Rockingham. The LSP area includes various lots east and west of Eighty Road in Baldivis, south of Fifty Road and west of Baldivis Road.

The LSP area also includes a neighbourhood activity centre located on the western side of Nairn Drive, north of Amazon Drive. Current plans indicate this neighbourhood centre would entail approximately 6,200m2 floor area (NLA), plus a proposed tavern and bottle shop of approximately 1,200m2 floor area as a proposed expansion of this neighbourhood activity centre northwest along Amazon Drive. **Figure 1** shows the location of the proposed tavern within the amended Spires LSP.

Transcore prepared a TIA for the Spires Baldivis Shopping Centre in June 2021. The purpose of this Revised TIA is the proposed tavern and bottle shop. The site currently is vacant and will be located to the west of the proposed Spires Shopping Centre.

This Revised TIA will review the traffic generation and distribution of the proposed development and will assess the impact of the development traffic on the surrounding road network and the development crossovers on Yellowstone Road and Amazon Drive. A SIDRA network model was developed for the development crossovers and the proposed priority-controlled T-intersection of Yellowstone Road and Amazon Drive for year 2031.

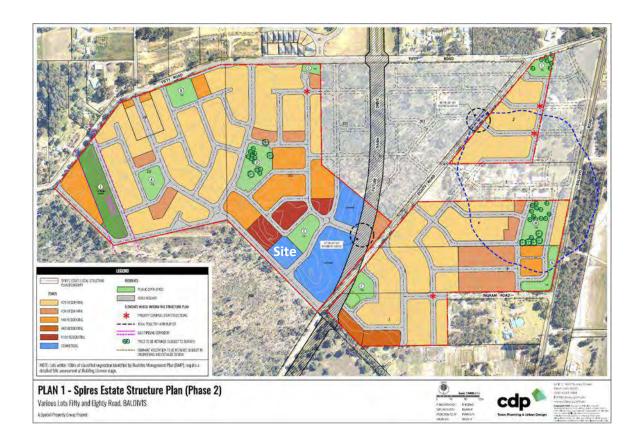


Figure 1: Spires LSP with Proposed Amendment

2 Existing Situation

2.1 Existing Land Use

The subject site is vacant and does not generate any traffic. As shown in **Figure 2** substantial residential development has already occurred east of Eighty Road and residential subdivision development is progressing to the northwest of the subject site. The vegetated land south of Amazon Drive / west of Nairn Drive is a Bush Forever site and will not be developed, whereas the land north of the subject site is planned for future residential subdivision development.



Figure 2: Existing land use (April 2021)

2.2 Existing Road Network

Nairn Drive is covered by an Other Regional Roads reservation in the MRS and is planned as a future dual carriageway road with two lanes in each direction. Nairn Drive is currently constructed south of Amazon Drive with one lane each way as the first carriageway of that future dual carriageway standard. This section of Nairn Drive has a posted speed limit of 70km/h and no direct driveway access from abutting residential or commercial properties.

Eighty Road connects to Nairn Drive north of Amazon Drive and currently operates as the continuation of this through route until future construction of the future Nairn Drive extension. It is constructed as a two-lane rural road and has a posted speed limit of 70km/h.

Amazon Drive is constructed east of Nairn Drive but not yet constructed on the western side of Nairn Drive. It is constructed as a two-lane, single-carriageway urban road and the default built up area speed limit of 50km/h applies.

The Nairn Dr / Eighty Rd / Amazon Dr intersection is currently constructed as a Give Way controlled T-intersection with left and right turn lanes provided on each approach as appropriate, as shown in **Figure 3**.



Figure 3: Existing Nairn Dr / Eighty Rd / Amazon Dr intersection

2.3 Existing Traffic Volumes

A 7-day traffic count (7-13 December 2020) of existing traffic volumes on Eighty Road south of Fifty Road recorded average weekday traffic flows of 5,338 vehicles per day (vpd) with 4,513vpd on Saturday and 3,908vpd on Sunday.

2.4 Crash Data

Information available on the Main Roads WA website indicates that no crashes were recorded at the Nairn Dr / Eighty Rd / Amazon Dr intersection during the 2016 - 2020 five-year period.

2.5 Public Transport

The closest existing bus route to the subject site is bus route No. 568 from Warnbro Train Station, which currently travels along Eighty Road in the vicinity of the subject site, as shown in **Figure 4**. It currently provides hourly service every day and more frequent service (up to 3 per hour) during weekday AM and PM peak periods.

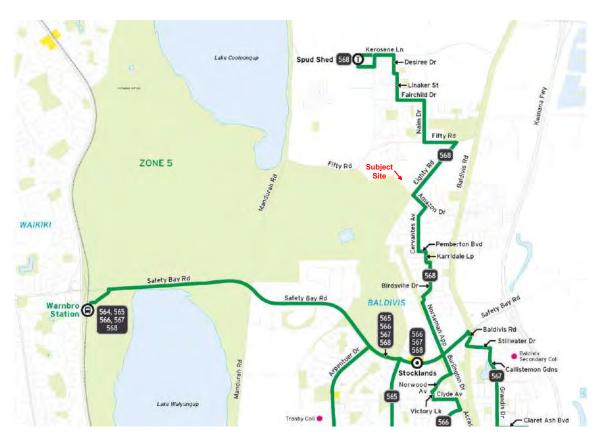


Figure 4: Existing public transport

2.6 Pedestrian and Cyclist Facilities

There is an existing footpath on the southern side of Amazon Drive east of Nairn Drive, as can be seen in **Figure 3**. Nairn Drive and Eighty Road do not have footpaths in the vicinity of the subject site. However, Nairn Drive south of Amazon Drive has been constructed with on-road cycle lanes or hard shoulders suitable for use by cyclists.

The Perth Bike Maps (see **Figure 5**) published by the Department of Transport indicate that Nairn Drive, Eighty Road, Fifty Road and Baldivis Road are considered as good road riding environment.

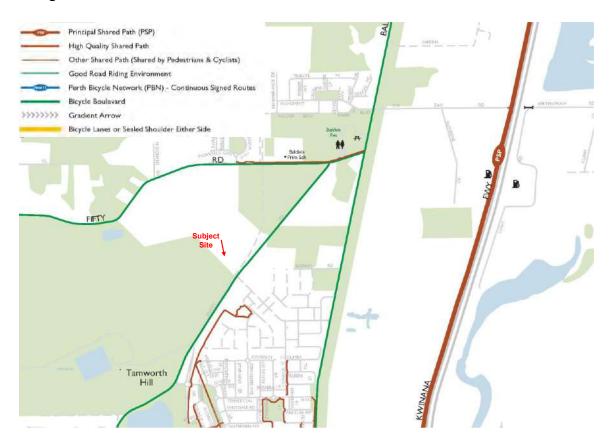


Figure 5: Perth Bike Map

3 Proposed Development

3.1 Proposed Site Use

Appendix A shows the proposed development plan. The development entails a tavern and a bottle shop as detailed in **Table 2**.

Table 1: Proposed Land use

Land use	Quantity (GFA) m ²
Tavern	760
Bottle shop	460

Deliveries and waste collections will be accommodated within the development site. The proposed delivery and service vehicles (up to 8.8m long) would utilise the bottle shop drive thru outside the peak operating time of the bottle shop for delivery and servicing.

Pedestrians will access the development from the proposed pedestrian paths provided on Yellowstone Road and Amazon Drive.

The development plan provides 140 parking bays including two accessible bays. Three on-street parking bays are also provided on Yellow Stone Road fronting the site. The bottle shop drive thru also entails 10 bays. It is understood that the proposed parking supply is satisfactory.

3.2 Proposed Access for all Modes

The proposed development provides one full movement crossovers on Amazon Drive and an exit only crossover on Yellowstone Road as shown in **Figure 6**.

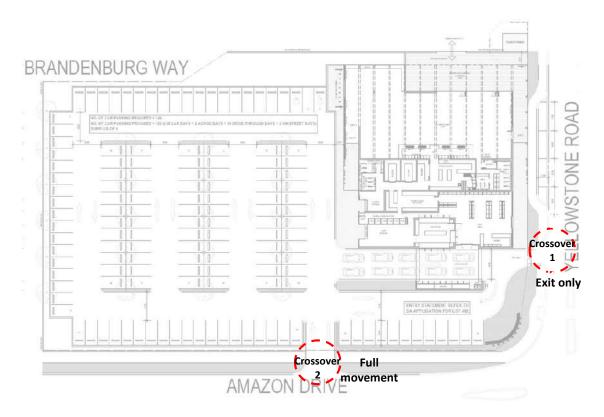


Figure 6: Proposed development crossovers

4 Changes to the Surrounding Road Network

Nairn Drive will ultimately be extended northwards from the Amazon Drive intersection and Eighty Road will then connect to Amazon Drive further east through the local road network, as shown in the Spires Estate structure plan at **Figure 7**. Amazon Drive will be constructed north-westwards from Nairn Drive as part of the development of the structure plan area.

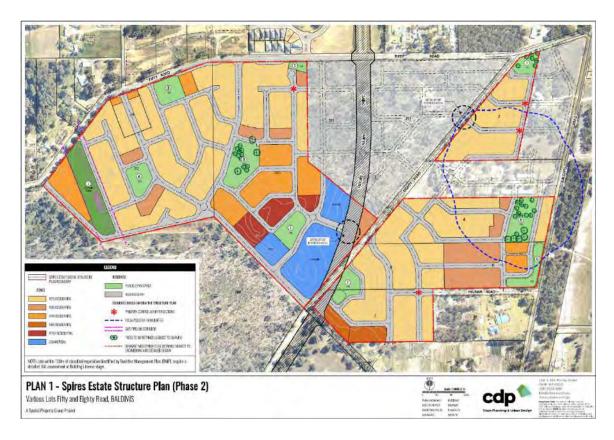


Figure 7: Spires Estate Structure Plan

The applicant is currently liaising with Main Roads WA for final approval of the proposed signalised intersection at Nairn Drive / Eighty Rd / Amazon Rd. This signalised intersection is to be constructed concurrently with the proposed development on the subject site.

5 Integration with Surrounding Area

The proposed development is consistent with the planning of the Spires Estate Structure Plan.

6 Traffic Assessment

6.1 Assessment Period

An assessment year of 2031 has been adopted for this TIA, which is consistent with recent analysis undertaken for a proposed amendment to the Spires Estate structure plan.

The combined peak of the development and road network traffic would occur during the weekday PM peak period. Accordingly, traffic analysis has been undertaken for 2031 weekday PM peak periods.

It should be noted that the level of background traffic on surrounding roads are much less during the post development compared with 10-year post development scenario and therefore, the 2031 traffic analysis is the key analysis for the purpose of this TIA. The transport modelling and analysis undertaken in this TIA confirms that the proposed standard of the surrounding road network will accommodate the 2031 (10-year post development) traffic projections and therefore the road network should also accommodate the post development traffic projections.

6.2 Trip Generation and Distribution

6.2.1 Existing trip generation

The site is currently vacant and would not generate any traffic.

6.2.2 Proposed Development Traffic Generation

The traffic volumes likely to be generated by the proposed development have been estimated in accordance with ITE Trip Generation Manual 10th Edition.

Accordingly, the trip rates which were used to estimate the trip generation of the proposed development are as follows:

<u>Liquor Store (899) – 1000 Sq. Ft. GFA (used for bottle shop)</u>

- Daily vehicle trips = 101.49 per 1000 Sq. Ft. GFA.
- Evening peak hour vehicle trips = 16.37 per 1000 Sq. Ft. GFA.

High Turnover (Sit-Down) Restaurant (932) - 1000 Sq. Ft. GFA (used for restaurant)

- Daily vehicle trips = 112.18 per 1000 Sq. Ft. GFA.
- Morning peak hour vehicle trips = 9.94 per 1000 Sq. Ft. GFA.
- Evening peak hour vehicle trips = 9.77 per 1000 Sq. Ft. GFA.

It should be noted that the restaurant associated with the proposed tavern and liquor would not generate significant traffic during the AM road network peak hour. Therefore, conservatively a lower trip rate was used for the AM peak hour. Also, the trip rates for the high turnover restaurant were established using the GFA of the development rather than number of seats. The ITE trip rates based on number of seats are not considered to be accurate because no surveys have been undertaken for high turnover restaurant of more than 300 seats.

The catchment area of the proposed tavern is expected to be mainly local residents and therefore some non-motorised patronage including walking is expected for the patrons. Other patrons who are not within walking distance may use their vehicles (including ride share), Uber or taxis. Therefore, the proposed ITE trip rates are expected to be conservative for the proposed Tavern however, in order to provide a robust traffic assessment, the ITE trip rates were used for the purpose of this TIA.

Further, cross trade between the bottle shop and the restaurant is expected. This will include patrons who purchase drinks from bottle shop for their meals at the restaurant, or patrons who purchase drinks to take home after eating at the restaurant. Again, in order to provide a robust assessment, zero cross trade was assumed for the proposed development.

Accordingly, it is conservatively estimated that the proposed development would generate a total of approximately 1,420 daily vehicle trips with about 6 and 160 trips during the AM and PM peak hours respectively (outlined in **Table 2**).

Considering that the development would not start operation during the morning road network peak hours, therefore very little traffic (6vph) was assumed during the AM road network peak hour (7:00-8:00) mainly for staff and for operational purposes.

Table 3 illustrates the passing and non-passing traffic component of the trips generated by the proposed development sourced from ITE guidelines. As evident, the development would add about 86 trips to the surrounding road network traffic during the PM peak hour when taking into account the passing trips of the development. This level of traffic increase is relatively insignificant and would not impact the traffic operation of the proposed road network and intersections significantly.

Table 2: Trip generation of the proposed development

Land use	Quantity	Daily Rate	AM Peak	PM Peak	Cross Trade Daily Trips AM Trips PM Trips	AM		PM				
Land use	Qualitity	Daily Nate	AIVIPEAN	PIVIPEAR	Closs Hade	Daily IIIps	Alvi IIIps	rivi IIIps	IN	OUT	IN	OUT
Liquor Store	460	1.09	0.00	0.18	0%	503	0	81	0	0	41	40
High Turnover Restaurant	760	1.21	0.01	0.11	0%	918	6	80	3	3	54	26
Total					1421	6	161	3	3	95	66	

Table 3: Passing and non-passing component of the trip generation

Passing Trade Component

Passing Trade		AN	И	P	M
	Daily Trips	IN	OUT	IN	OUT
50%	252	0	0	21	20
43%	395	1	1	23	11
	647	1	1	44	31

Non Passing Trade Component

	А	M	P	М
Daily Trips	IN	OUT	IN	OUT
251	0	0	20	20
523	2	2	31	15
774	2	2	51	35

6.3 Traffic distribution

The distribution of traffic to and from the proposed development for year 2031 has been estimated by considering access and egress routes to and from the subject site. Development traffic distribution on surrounding roads and intersections during the PM peak hour is illustrated in **Figure 8**.

As evident the traffic distributed on surrounding roads and intersections (in particular the proposed signalised intersection of Nairn Drive/ Amazon Drive) are relatively minimal, and the road network around it is designed specifically to service and accommodate the development and the surrounding structure plan traffic. SIDRA analysis was undertaken for the development crossovers and intersection of Yellowstone Road/ Amazon Drive to confirm satisfactorily operations with no blockage of the crossovers during the PM peak hour.

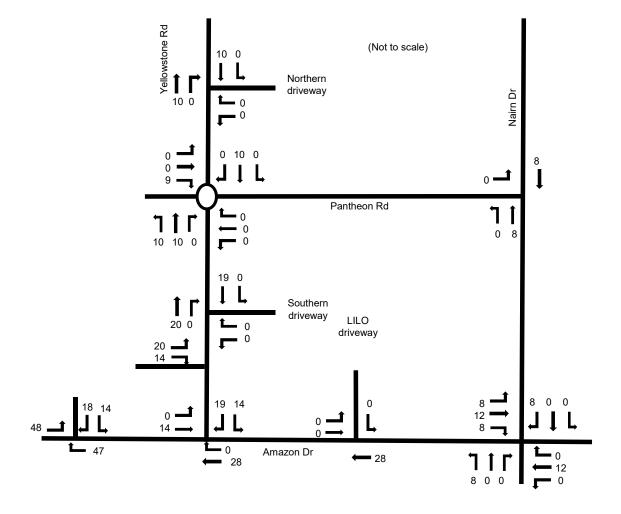


Figure 8: Weekday PM peak hour traffic generated by the proposed development

6.4 Traffic Flows

The 2031 traffic projections have been sourced from Transcore's TIA for the Spires Baldivis Shopping Centre (June 2021). The proposed development traffic manually was added to the 2031 traffic projections and illustrated in **Figure 9**.



Figure 9: 2031 total weekday PM peak hour traffic

6.5 Analysis of Development's Crossovers and Intersections

A SIDRA Network model was developed for the proposed development crossovers and the intersection of Yellowstone Road/ Amazon Drive in order to assess their operations in 2031 scenario for PM peak hour. Relevant heavy vehicle settings and parameters were updated and incorporated in the SIDRA model in accordance with Main Roads WA's latest requirements.

Capacity analysis using the SIDRA computer software package was undertaken. This package is a commonly used intersection-modelling tool by traffic engineers for all types of intersections. SIDRA outputs are presented in the form of Degree of Saturation, Level of Service, Average Delay and 95% Queue. These items are defined as follows:

- ♣ Degree of Saturation: is the ratio of the arrival traffic flow to the capacity of the approach during the same period. The Degree of Saturation ranges from close to zero for varied traffic flow up to one for saturated flow or capacity.
- **Level of Service:** is the qualitative measure describing operational conditions within a traffic stream and the perception by motorists and/or passengers. In general, there are 6 levels of service, designated from A to F, with Level of Service A representing the best operating condition (i.e. free flow) and Level of Service F the worst (i.e. forced or breakdown flow).
- **Average Delay:** is the average of all travel time delays for vehicles through the intersection.
- **95% Queue:** is the queue length below which 95% of all observed queue lengths fall.

The results of the SIDRA analysis are attached in **Appendix B**. A conceptual diagram of the SIDRA model coded for the analysis is shown in **Figure 10**.



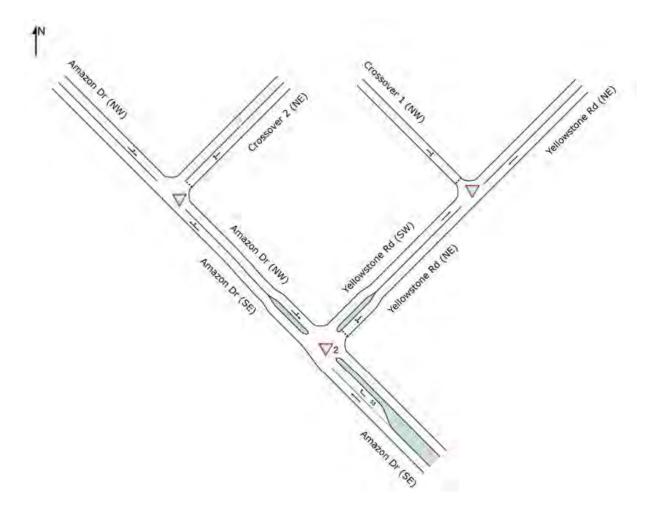


Figure 10: Network model – SIDRA layout

SIDRA analysis results indicate that the proposed development crossovers on Yellowstone Road and Amazon Drive and the intersection of Yellowstone Road/ Amazon Drive would operate satisfactorily with good level of services and with moderate queues and delays during weekday PM peak hour for year 2031.

Relevant SIDRA network outputs were reviewed for analysed peak hour to assess the operation of the proposed development crossovers on Yellowstone Road and Amazon Drive and the intersection of Yellowstone Road/ Amazon Drive as a network.

As detailed in **Figure 11** no queue back from the intersection to the development crossovers is reported during 2031 PM peak hour. Additionally, no queuing from the development crossovers back to the intersection is reported in 2031 PM peak hour.



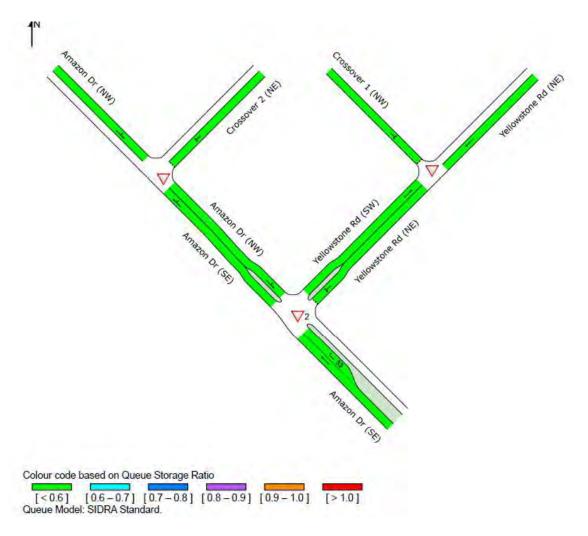


Figure 11: 2031 weekday PM peak hour network analysis – queue storage ratio

6.6 Impact on Surrounding Roads

The WAPC *Transport Impact Assessment Guidelines (2016)* provides guidance on the assessment of traffic impacts:

"As a general guide, an increase in traffic of less than 10 per cent of capacity would not normally be likely to have a material impact on any particular section of road, but increases over 10 per cent may. All sections of road with an increase greater than 10 per cent of capacity should therefore be included in the analysis.

For ease of assessment, an increase of 100 vehicles per hour for any lane can be considered as equating to around 10 per cent of capacity. Therefore, any section of road where the structure plan traffic would increase flows by more than 100 vehicles per hour for any lane should be included in the analysis."

The increase in traffic flows as a result of the proposed development is estimated to be below the quoted WAPC threshold and therefore no further detailed analysis is warranted. As detailed in **Figure 8**, the proposed development will not increase traffic on any lanes on the surrounding road network by more than 100vph.

6.7 Impact on Neighbouring Areas

The traffic generated by the proposed development would have insignificant impact on surrounding areas and the road network has been designed to accommodate this level of additional traffic.

6.8 Traffic Noise and Vibration

Due to the location of the proposed development with respect to the surrounding land uses traffic noise and vibration are relevant only to the residential areas directly fronting major local and regional roads which, at this location, are limited.

It generally requires a doubling of traffic volumes on a road to produce a perceptible 3dB(A) increase in road noise. The proposed development will not increase traffic volumes or noise on surrounding roads anywhere near this level.



7 Provision for Heavy Vehicles

Smaller trucks (service vehicles up to 8.8 long) are planned to undertake delivery and waste collection on site. Service vehicles would enter the site from Amazon Drive crossover and park at the entry of the bottle shop drive thru facility and then exit via the same crossover after servicing in forward gear.

Turn path analysis undertaken for 8.8m service truck confirm satisfactory access, egress and circulation within the site. Turn path analysis also confirms satisfactory traffic circulation of a passenger car with trailer using the bottle shop drive thru facility.

The turn path plans are included in Appendix C.



8 Parking

The proposed development will provide 140 parking bays inclusive of 2 ACROD bays. Three on-street bays on Yellowstone Road are also proposed plus 10 drive thru bays for the proposed bottle shop. It is considered that the parking provision will adequately meet the parking demand of the proposed development.

It should be noted that the restaurant is expected to experience its highest car patronage later in the evenings (for dinner around 6-8pm) while the bottle shop would have a higher proportion of customers during the road network PM peak period (around 4-6pm) when more traffic is passing the site.



9 Public Transport Access

The existing public transport services within the vicinity of site are described in **Section 2.6** of this report.



10Pedestrian and Cyclist Access

Pedestrian and cyclist's facilities are described in **Section 2.7** of this report.



11 Conclusions

This Transport Impact Assessment (TIA) has been prepared by Transcore on behalf of Carcione Nominees. The subject of this report is the proposed tavern and bottle shop to be located at Lot 446 North Baldivis.

The traffic analysis undertaken in this report shows that the traffic generation of the proposed development is relatively low and as such would not have any significant impact on the surrounding road network.

Turn path analysis undertaken indicates that 8.8m service vehicles can access and egress the site satisfactorily. Turn path analysis also confirms satisfactory traffic circulation of a passenger car and trailer using the bottle shop drive thru facility.

There are 140 parking bays proposed on site inclusive of 2 ACROD bays. The drive thru of the proposed bottle shop will also provide additional 10 bays. Further three on-street bays are proposed on Yellow Stone Road fronting the proposed development. It is considered that the parking provision will adequately meet the parking demand of the proposed development.

A SIDRA Network model was developed for the proposed development crossovers and the intersection of Yellowstone Road/ Amazon Drive in order to assess their operations in 2031 scenario for PM peak hour.

The SIDRA network results indicate satisfactory operations of the intersection of Yellowstone Road/ Amazon Drive and development crossovers with minimal queues and delays.

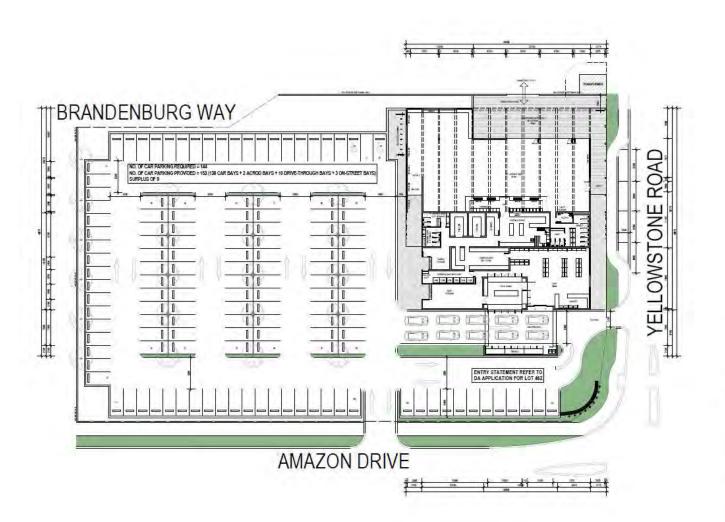
It is concluded that the findings of this Transport Impact Assessment are supportive of the proposed development.



Appendix A

PROPOSED DEVELOPMENT PLAN





sales Contractor in create and you'd all increases. Joseph, and Jodge on othe british demonstrate, all increases with the or macroscian with the sales your of wanteds, specifying decountary and releases Augelian Gordania.



PRELIMINARY ISSUE



FLOOR PLAN

1200 P.A. SM BE

Appendix B

SIDRA ANALYSIS

MOVEMENT SUMMARY

V Site: [Amazon Dr-Crossover 2- 2031PM (Site Folder: 2031 - PM Network: N101 [2031 - PM (Network Folder: General)]

Site Category: (None) Give-Way (Two-Way)

Vehi	cle Mo	vement	Perfo	rmano	e									
Mov ID	Tum	DEMA FLOV [Total veh/h		ARRI FLO [Total veh/h	WS HV]	Deg. Satn v/c		Level of Service		ACK OF JEUE Dist] m	Prop. Que	Effective A Stop Rate	ver. No. Cycles	Aver. Speed km/h
South	East: A	mazon D	r (SE)											
5	T1	204	3.3	204	3.3	0.143	0.3	LOSA	0.4	2.9	0.16	0.11	0.16	48.2
6	R2	49	3.3	49	3.3	0.143	5.4	LOSA	0.4	2.9	0.16	0.11	0.16	37.3
Appro	oach	254	3.3	254	3.3	0.143	1.3	NA	0.4	2.9	0.16	0.11	0.16	47.4
North	East: C	rossover	2 (NE)										
7	L2	15	3.3	15	3.3	0.034	5.1	LOS A	0.1	0.9	0.32	0.57	0.32	25.2
9	R2	19	3.0	19	3.0	0.034	6.5	LOSA	0.1	0.9	0.32	0.57	0.32	42.4
Appro	oach	34	3.1	34	3.1	0.034	5.9	LOSA	0.1	0.9	0.32	0.57	0.32	39.7
North	West: A	Amazon D	r (NW)										
10	L2	51	3.0	51	3.0	0.121	4.6	LOS A	0.0	0.0	0.00	0.12	0.00	41.7
11	T1	177	3.3	177	3.3	0.121	0.0	LOS A	0.0	0.0	0.00	0.12	0.00	48.6
Appro	oach	227	3.2	227	3.2	0.121	1.1	NA	0.0	0.0	0.00	0.12	0.00	46.7
All Ve	hicles	515	3.3	515	3.3	0.143	1.5	NA	0.4	2.9	0.10	0.15	0.10	46.7

MOVEMENT SUMMARY

V Site: 2 [Amazon-Yellowstone 2031PM T-intersection (Site Folder: 2031 - PM)] ■■ Network: N101 [2031 - PM (Network Folder: General)]

Amazon Dr / Yellowstone Rd T-intersection 2031 PM peak hour Site Category: (None) Give-Way (Two-Way)

Vehic	cle Mo	vement	Perfo	rmano	:e									
Mov ID	Tum	DEMA FLOV [Total veh/h		ARRI FLO [Total veh/h	WS HV]	Deg. Satn v/c		Level of Service		BACK OF JEUE Dist] m	Prop. Que	Effective A Stop Rate	ver. No. Cycles	Aver. Speed km/h
South	East: A	mazon D	r (SE)											
5	T1	212	3.3	212	3.3	0.112	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	50.0
6	R2	240	3.3	240	3.3	0.162	4.8	LOS A	0.8	6.0	0.33	0.56	0.33	23.9
Appro	oach	452	3.3	452	3.3	0.162	2.6	NA	8.0	6.0	0.18	0.30	0.18	31.5
North	East: Y	ellowston	e Rd (l	NE)										
7	L2	29	3.3	29	3.3	0.101	3.2	LOS A	0.4	2.9	0.43	0.63	0.43	22.6
9	R2	42	3.0	42	3.0	0.101	7.6	LOS A	0.4	2.9	0.43	0.63	0.43	14.6
Appro	oach	72	3.1	72	3.1	0.101	5.8	LOSA	0.4	2.9	0.43	0.63	0.43	18.9
North	West: A	Amazon D	r (NW)										
10	L2	1	3.0	1	3.0	0.101	4.6	LOS A	0.0	0.0	0.00	0.00	0.00	49.8
11	T1	191	3.3	191	3.3	0.101	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	49.8
Appro	oach	192	3.3	192	3.3	0.101	0.0	NA	0.0	0.0	0.00	0.00	0.00	49.8
All Ve	hicles	715	3.3	715	3.3	0.162	2.2	NA	0.8	6.0	0.15	0.25	0.15	35.8

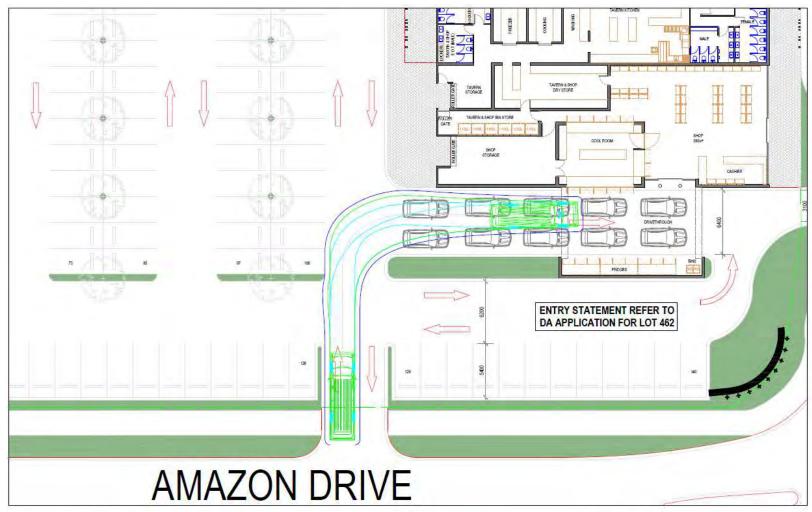
MOVEMENT SUMMARY

Site Category: (None) Give-Way (Two-Way)

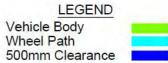
Vehi	cle Mo	vement	Perfo	rmano	e									
Mov ID	Tum	DEMA FLOV [Total veh/h	NS	ARRI FLO [Total veh/h	WS IHV]	Deg. Satn v/c		Level of Service	95% BA QUE [Veh. veh		Prop. Que	Effective A Stop Rate		Aver. Speed km/h
North	East: Ye	ellowston	ne Rd (l	NE)										
2	T1	72	3.0	72	3.0	0.037	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	50.0
Appr	oach	72	3.0	72	3.0	0.037	0.0	NA	0.0	0.0	0.00	0.00	0.00	50.0
North	West: C	Crossove	r 1 (NV	V)										
27	L2	21	0.0	21	0.0	0.031	5.5	LOS A	0.1	0.8	0.32	0.59	0.32	33.8
29	R2	15	0.0	15	0.0	0.031	6.1	LOS A	0.1	0.8	0.32	0.59	0.32	27.6
Appr	oach	36	0.0	36	0.0	0.031	5.7	LOSA	0.1	8.0	0.32	0.59	0.32	32.1
South	hWest: \	Yellowsto	ne Rd	(SW)										
8	T1	241	3.3	241	3.3	0.127	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	50.0
Appr	oach	241	3.3	241	3.3	0.127	0.0	NA	0.0	0.0	0.00	0.00	0.00	50.0
All Ve	ehicles	348	2.9	348	2.9	0.127	0.6	NA	0.1	0.8	0.03	0.06	0.03	47.0

Appendix C

TURN PATH ANALYSIS



Proposed Tavern, Amazon Drive, Baldivis Austroads 2013: 8.8m Service Vehicle Servcie vehicle entry



t21.227.sk06b 8/04/2022 Scale: 1:200 @ A3

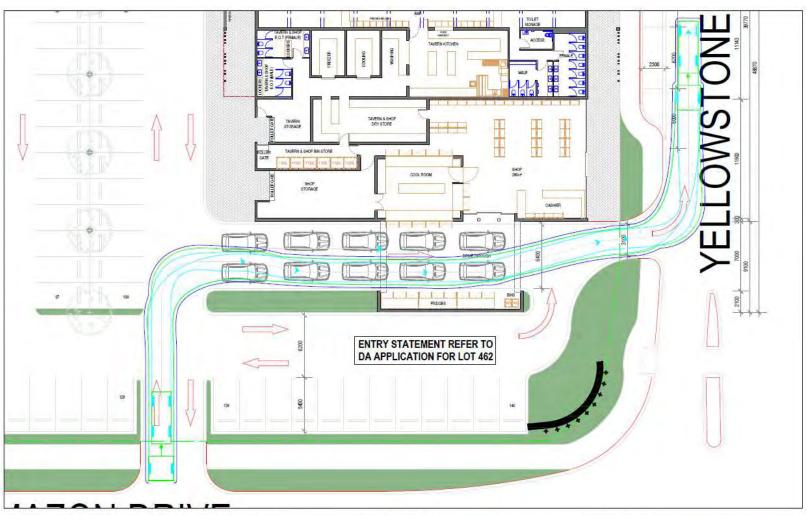




Proposed Tavern, Amazon Drive, Baldivis Austroads 2013: 8.8m Service Vehicle Servcie vehicle exit LEGEND
Vehicle Body
Wheel Path
500mm Clearance

t21.227.sk07b 8/04/2022 Scale: 1:200 @ A3





Proposed Tavern, Amazon Drive, Baldivis Passenger Vehicle with Trailer Vehicle with trailer circulation LEGEND
Vehicle Body
Wheel Path
300mm Clearance

t21.227.sk09a 8/04/2022 Scale: 1:200 @ A3



KWINANA BEACH ROAD, LOT 2 AND LOT 3 KWINANA BEACH – FUEL TANKS TERMINAL

Form 1 – Responsible Authority Report

(Regulation 12)

DAP Name:	Metro O	uter JDAP		
Local Government Area:	City of K	winana		
Applicant:	Coogee	Chemicals Pty Ltd		
Owner:	Lot 2 - C	oogee Chemicals Pty Ltd		
	Lot 3 - T	erminals West Pty Ltd		
Value of Development:	\$60 millio	on		
	⊠ Ma	ndatory (Regulation 5)		
	□ Opt	In (Regulation 6)		
Responsible Authority:	City of K	winana		
Authorising Officer:	Manager	Planning and Development		
LG Reference:	DA10283	3		
DAP File No:	DAP/22/	02189		
Application Received Date:	3 March	2022		
Report Due Date:	31 May 2	2022		
Application Statutory Process	90 Days			
Timeframe:				
Attachment(s):		_ocation Plan		
		all Plan View		
		eral Arrangement Plan View		
		ation Plan		
	_	Falls Plan		
		scape Plan		
		nwater Management Plan		
		Management Plan		
		fire Management Plan		
		ic Impact Assessment and Risk Assessment		
		fire Risk Management Plan		
		c Art Exemption Justification		
		RS Referral Response		
		Referral Response		
		S Referral Response		
		/A Referral Response		
		Referral Response		
	19. DPLH Referral Response			
Is the Responsible Authority	⊠ Yes	Complete Responsible Authority		
Recommendation the same as the	_ N/A	Recommendation section		
Officer Recommendation?	,, .			
	□ No	Complete Responsible Authority		
		and Officer Recommendation sections		

Responsible Authority Recommendation

That the Metro Outer JDAP resolves to:

1. **Approve** DAP Application reference DAP/22/02189 and accompanying plans (Attachments 1 - 6) in accordance with Clause 68 of Schedule 2 (Deemed Provisions) of the *Planning and Development (Local Planning Schemes) Regulations 2015*, and the provisions of the City of Kwinana Local Planning Scheme No.2, subject to the following conditions:

Conditions

- 1. Pursuant to clause 26 of the Metropolitan Region Scheme, this approval is deemed to be an approval under clause 24(1) of the Metropolitan Region Scheme.
- 2. This decision constitutes planning approval only and is valid for a period of two (2) years from the date of approval. If the subject development is not substantially commenced within the specified period, the approval shall lapse and be of no further effect.
- 3. The requirements of Local Planning Policy No.5 Development Contribution towards Public Art (LPP5) must be met through one of the following options:
 - a. Prior to the lodgement of a building permit application, the owner/applicant must submit a Public Art Report in accordance with LPP5 to the City of Kwinana for approval, which must detail the provision of Public Art on site to a minimum value as specified in LPP5. Prior to the use or occupation of the development, the approved Public Art must be installed on site to the satisfaction of the City of Kwinana; or
 - b. Prior to the commencement of works, the owner/applicant shall provide a financial contribution of a minimum value as specified in LPP5 to the City of Kwinana in lieu of installing Public Art on site to the satisfaction of the City of Kwinana.
- 4. Prior to the commencement of works, the applicant shall submit and implement an amended Landscaping Plan that addresses the bush fire mitigation measures as stated in the Bushfire Management Plan to the satisfaction of the City of Kwinana.
- 5. Prior to the commencement of works, the development plans and the submitted Hazard Identification and Risk Assessment must be amended to delete reference to proposed temporary access from Patterson Road (including ramp and existing gate), to the satisfaction of the City of Kwinana in consultation with Main Roads WA.
- 6. Prior to the commencement of works, the submitted Stormwater Management Plan must be updated to include detailed design drawings to demonstrate the onsite retention of stormwater drainage, including:
 - a. Infiltration Areas will have the capacity to cater for the additional impervious area of the concrete bund;
 - terminal concrete will have the capacity as required by Australian Standard AS1940, and will therefore be adequate for a major rainfall event (1 in 100 years);
 - c. details of how water will be discharged from Infiltration Area 1 to Infiltration Areas 2 and 3; and
 - d. confirmation that the wastewater management system will have capacity to cater for the additional tanks;

to the specifications and satisfaction of the City of Kwinana.

7. All vehicle access is to be via the existing crossovers to Kwinana Beach Road, no direct vehicle access is permitted to Patterson Road during either construction or operation of the development.

- 8. All stormwater must be contained and disposed of on the site at all times in accordance with the approved updated Stormwater Management Plan and detailed design drawings, to the satisfaction of the City of Kwinana.
- 9. No stormwater drainage is to be discharged onto the Patterson Road reserve.
- 10. All building works, including earthworks and footings, must be contained within the boundaries of the subject site to the satisfaction of the City of Kwinana. No earth works shall encroach onto the Patterson Road reserve.
- 11. Ground levels on the Patterson Road boundary are to be maintained as existing, to the satisfaction of the City of Kwinana in consultation with Main Roads WA.
- 12. The parking of vehicles in association with the approved development must be contained within the subject site at all times, including during the construction of the development.
- 13. Vehicle barriers must be installed between the storage vessels and trafficable areas to prevent damage to the storage vessels, to the satisfaction of the City of Kwinana.
- 14. The development shall at all times comply with the requirements and recommendations of the Bushfire Management Plan prepared by Nathan Peart (dated 7 April 2022) and the Bushfire Risk Management Plan prepared by Bushfire Smart (dated 25 January 2022) to the satisfaction of the City of Kwinana, including that land within the 13 metre Asset Protection Zone (APZ) is to be managed and maintained in perpetuity.
- 15. The approved fuel storage tanks must be enclosed within concrete bunds sufficient in capacity to contain 110% of the capacity of the largest tank or 25% of the total capacity of all tanks within the bund, whichever is the greater, in accordance with AS1940: The storage and handling of flammable and combustible liquids, to the satisfaction of the City of Kwinana.
- 16. Chemical and liquid storage areas and the bund and gantry loading areas must be constructed with an impervious hardstand that is graded to contain spills and connected to an appropriate treatment and disposal system, to the satisfaction of the City of Kwinana.
- 17. Liquid waste arising from loading or unloading activities must be collected and contained for treatment or disposal at a Department of Water and Environmental Regulation (DWER) licenced wastewater disposal facility.
- 18. The development must not cause a dust nuisance to neighbours. The owner/operator must take effective measures to stabilise dust on the land and ensure dust is not released from the land as a result of the development. Appropriate measures must be implemented by the owner/ operator within the time and in the manner directed by the City of Kwinana in the event that dust is blown or drifts from the site.

Advice Notes

 In regard to the conditions restricting vehicle access onto Patterson Road, the owner/applicant is advised that Patterson Road is a proclaimed Control of Access road pursuant to s.28A of the *Main Roads Act 1930*, and vehicle access between adjacent properties and Patterson Road is not permitted.

- 2. The owner/applicant is advised to submit an application form to undertake works within the road reserve prior to undertaking any works within the Patterson Road reserve. Application forms and supporting information about the procedure can be found on the Main Roads website > Technical & Commercial > Working on Roads. Contact Main Roads WA for further information.
- 3. The owner/applicant is advised that this approval is not a building permit, which constitutes a separate legislative requirement. Prior to any building work commencing on site a building permit or building permit exemption must be obtained from the City of Kwinana. Significant penalties apply under the *Building Act 2011* for any failure to comply with this requirement.
- 4. The owner/applicant should ensure that the proposed development complies with all other relevant legislation, including but not limited to, the *Environmental Protection Act 1986*; *Health (Miscellaneous Provisions) Act 1911*; *Contaminated Sites Act 2003*; the *Dangerous Goods Safety Act 2004* and any associated regulations.
- 5. In regard to Condition 3, the owner/applicant is advised that the City is currently reviewing LPP5 and the contribution amount will be determined at the time that the approval is sought for the public art or that cash in lieu is to be paid as per Condition 3.

Details: outline of development application

Region Scheme	Metropolitan Region Scheme (MRS)
Region Scheme -	Industrial
Zone/Reserve	
Local Planning Scheme	Local Planning Scheme No. 2 (LPS2)
Local Planning Scheme -	General Industry
Zone/Reserve	
Structure Plan/Precinct Plan	N/A
Use Class and	'General Industry' (P)
permissibility:	
Lot Size:	Lot 2 - 8.89 hectares
	Lot 3 - 8.11 hectares
	TOTAL = 17 hectares
Existing Land Use:	'General Industry'
State Heritage Register	No
Local Heritage	⊠ N/A
	☐ Heritage List
	□ Heritage Area
Design Review	⊠ N/A
	□ Local Design Review Panel
	□ State Design Review Panel
	□ Other
Bushfire Prone Area	Yes
Swan River Trust Area	No

Proposal:

An application has been received by the City of Kwinana (the City) for a development proposal of four (4) 30 megalitre fuel storage tanks on an industrial lot at Lot 2 and 3 Kwinana Beach Road, Kwinana Beach (the subject site). The development plans and supporting documents can be seen in Attachments 1 - 13.

The proposed development will be an additional development to the existing land use, which was historically approved as a 'General Industry' land use for the purposes of fuel storage under the City of Kwinana Local Planning Scheme No.2 (LPS2). This approach is also consistent with previous approvals on the site that have been issued for minor additions which have also been classified as a 'General Industry' land use under LPS2. The 'General Industry' land use is a 'P' (permitted) land use under LPS2 within the General Industry zone. Reference should also be made to the Planning Assessment of this report for further interpretation of the land use.

The applicant has advised that the purpose of the proposed development is to improve the fuel storage capacity of the site. The applicant has also advised that the additional 120 megalitres of fuel storage will not create any changes to staff numbers, customer numbers, or hours of operation.

Background:

Site Context

The subject site is located within the Kwinana Industrial Area in Kwinana Beach, and is bound by Kwinana Beach Road and Patterson Road. The site has direct access from Kwinana Beach Road to the north.

The subject site is 17 hectares in total area, with Lot 2 where the fuel tanks are to be located, being 8.89 hectares in area. The proposed development will complement existing infrastructure on Lot 2, utilising approximately 1.37 hectares of the lot in the south-eastern corner. A stormwater basin associated with the development is proposed on Lot 3.

The proposed tanks will be set back 19.5m from Patterson Road, and 21.5m from the adjacent vacant land to the west (Lot 110 Patterson Road), which contains the Dampier to Bunbury Natural Gas Pipeline (DBNGP) corridor. The southern side of Lot 2 and proposed tanks 1 and 2 are partially located in a Bushfire Prone Area.

Site History

Both lots have been subject to a number of development approvals issued by the City over the years, with the predominant land use being 'General Industry' for the purposes of the storage of fuel. The most recent application (City's reference: DA10169) was granted by the City under delegation on 4 January 2022 for site works and a bund wall to accommodate the fuel tanks proposed in this JDAP application.

Legislation and Policy:

Legislation

Planning and Development Act 2005
Planning and Development (Development Assessment Panels) Regulations 2011
Planning and Development (Local Planning Schemes) Regulations 2015

City of Kwinana Local Planning Scheme No. 2

State Government Policies

State Planning Policy 3.7 – Planning in Bushfire Prone Areas (SPP3.7)
Draft State Planning Policy 4.1 – State Industrial Buffer Policy (SPP4.1)
Development Control Policy 4.2 – Planning for Hazards and Safety (DCP4.2)
Draft Development Control Policy 4.2 – Planning for High-Pressure Gas Pipelines

Local Policies

Local Planning Policy 5 - Development Contribution Towards Public Art Local Planning Policy 11 - Site Requirements and Standards for Development within Industrial Zones

Consultation:

Public Consultation

The proposed General Industry – Storage Tanks is a "P" (permitted) land use under LPS2 and therefore does not require advertising. However, due to the heights, scale and proximity to boundaries of the proposed development, it was considered appropriate to advertise to adjacent landowners.

The application was advertised via mailout for a period of fourteen (14) days. At the conclusion of the advertising period, no submissions were received by the City.

Referrals/consultation with Government/Service Agencies

The application was referred to a number of agencies for their comments, including:

- Department of Mines, Industry Regulation and Safety (DMIRS)
- Department of Water and Environmental Regulation (DWER)
- Department of Fire and Emergency Services (DFES)
- Main Roads WA (MRWA)
- Dampier Bunbury Pipeline operator (DBP)
- Department of Planning, Lands and Heritage (DPLH)

A summary of the matters raised in agency responses is provided below:

Department of Mines, Industry Regulation and Safety (DMIRS)

The application was referred to DMIRS due to the proposed development being subject to the compliance with the *Dangerous Goods Safety Act 2004* and associated regulations.

DMIRS advised that the proposal raises no significant issues. The proposed fuel storage will be subject to the *Dangerous Goods Safety Act 2004* and associated regulations. The applicant will be required to make relevant submissions to DMIRS in due course.

An advice note is included advising the applicant to contact DMIRS for further information should the proposed development be conditionally approved. Refer to Attachment 14 for DMIRS's response.

Department of Water and Environmental Regulation

The application was referred to DWER due to the proposed development being subject to the compliance with the *Environmental Protection Act 1986 (EP Act)* and associated regulations.

DWER have advised that the proposed development to construct additional fuel storage tanks on the subject site does not trigger the requirement for a works approval under section 59 of the *EP Act*. However, once the proposed development is constructed, an amendment to the applicant's existing Part V licence will be required to provide the necessary authorisation for increased storage capacity and use of the

new tanks. An advice note is recommended advising the applicant of the above information should the proposed development be conditionally approved. Refer to Attachment 15 for DWER's response.

Department of Fire and Emergency Services

The application was referred to DFES for comment due to the proposed development being located within a Bushfire Prone Area and is defined as a 'high-risk land use' in accordance with State Planning Policy 3.7 (SPP3.7).

DFES advised that the development application and the Bushfire Management Plan (BMP) have adequately identified issues arising from the bushfire risk assessment and considered how compliance with the bushfire protection criteria can be achieved. However, modifications to the BMP are necessary to ensure it accurately identifies the bushfire risk and necessary mitigation measures. DFES has further advised that as these modifications will not affect the development design, these modifications can be undertaken without further referral of the development application to DFES.

DFES's comment has resulted in an amended BMP to include the Asset Protection Zone (APZ) – refer to Attachment 16.

Main Roads Western Australia

The application was referred to MRWA for comment due to the proposed development abutting two (2) Primary Roads – that being Kwinana Beach Road and Patterson Road.

In summary, MRWA has no objection to the development approval, subject to conditions and advice notes being imposed. Refer to Attachment 17 for further information on the advice received from MRWA.

Dampier Bunbury Pipeline

The application was referred to DBP for comment due to the proposed development being within a close proximity to the Dampier to Bunbury Natural Gas Pipeline (DBNGP).

DBP as owners and operators of the DBNGP have advised that they have no objections to the development proposal – refer to Attachment 18.

Department of Planning, Lands and Heritage

The application was referred to DPLH for comment due to the proposed development being within a close proximity to the DBNGP.

DPLH have advised that the proposed development is not expected to materially interfere with the exercise of rights that have been, or might in the future be, conferred under section 34 of the *Dampier to Bunbury Pipeline Act 1997* (DBP Act) as the lots are not encumbered by the DBNGP corridor – refer to Attachment 19.

Design Review Panel Advice

Not applicable.

Other Advice

Planning Assessment:

The proposal has been assessed against all the relevant legislative requirements of the Scheme, and State and Local Planning Policies as outlined in the Legislation and Policy section of this report. The following matters have been identified as key considerations for the determination of this application.

- Land Use
- Public Art
- Environmental Considerations
- Bushfire Planning

These matters are outlined and discussed below.

Use Class and Permissibility

The City considers the proposal represents a 'General Industry' use in the context of LPS2, which is classified as a 'P' (Permitted) land use, provided it complies with the relevant standards and requirements laid down in LPS2 and all conditions (if any) imposed by the responsible authority in granting planning consent.

The City has considered the proposed development against the land use classifications of 'Hazardous Industry', defined in LPS2 as:

"an industry which by reason of the processes involved or the method of manufacture, or the nature of the materials used or produced requires isolation from other buildings."

The development application includes a Hazard Identification and Risk Assessment (HAZID) that outlines potential risk scenarios and risk incident probabilities related to the products proposed to be stored at the facility. Given the information provided in the risk assessment, it is not considered that the proposal meets the definition of a 'Hazardous Industry', rather, it is considered to meet the 'General Industry' use.

Should any variations to the LPS2 be proposed, an assessment against the City's Local Planning Policy 11 – Site Requirements and Standards for Development within Industrial Zones (LPP11) will be required. LPP11 provides clarification for LPS2 provisions and alternative site requirements for when the LPS2 provisions are proposed to be varied.

The City's assessment of the proposal against the other relevant development standards of LPS2 are discussed below.

Table 1 - Local Planning Scheme No. 2

Provision	Requirement	Proposal	Assessment
5.7.4 – Plot Ratio and Site Coverage	0.8 Plot Ratio 65% Site Cover	The plot ratio and site coverage of the lot is well within LPS2 requirements.	Plot Ratio and Site Cover of the proposed development complies with the relevant LPS requirements for a 'General Industry' land use.
5.7.5 - Setbacks	Front – 15m Side – 6m Rear – 9m	Front – Well over 15m Side – 19.5m Rear – 21.5m	Setbacks of the proposed development complies with the

			LPS setback requirements for a 'General Industry' land use.
5.7.6 – Appearance of Buildings, Units of Process and Ancillary Structures	Blend into natural and/or existing development.	The subject site currently has existing storage tanks on site.	It is considered that since the site already has a number of storage tanks, an additional four tanks will blend with the existing development.
5.7.7 – Landscaping	Minimum 5% of the site.	Development is an addition and not a new land use. Development does not impact on existing landscaping.	Not applicable.
5.7.8 – Parking	Car Parking Spaces to be provided in accordance with Table III of LPS2.	Existing – proposal does not trigger additional car parking.	Not applicable.
5.7.9 – Loading and Unloading	Loading / Unloading areas to be maintained in good order.	Loading/unloading areas not impacted via proposed development.	Not applicable.
5.7.10 – Waste Water and Effluent Disposal	Waste water to be managed appropriately to preserve the environment and groundwater.	Stormwater Management Plan submitted with application.	Stormwater Management Plan has been reviewed by the City's Engineering Department. The Engineering Department has deemed the plan insufficient and requires amending. A condition is recommended to this affect (Condition 6).
5.7.11 – Recycled Water	Desirability of use of recycled water.	The development does not generate industrial process water.	Not applicable.

5.7.12 - Fencing	A security fence proposed on a front lot boundary shall be setback 1.5 metres from the front lot boundary and landscaping shall be established and maintained between these lines to the satisfaction of Council.	No additional fencing proposed.	Not applicable.
5.7.13 – Materials Used	The facade on the principal frontage shall be constructed of brick, stone, masonry or such other such material approved by Council.	Development is not the principle frontage.	Not applicable.

In summary of the above assessment, it is considered that the proposed development of the four storage tanks comply with the relevant requirements of the LPS2 and will also not require an assessment against LPP11.

Public Art

The City's Local Planning Policy 5 - Development Contribution towards Public Art (LPP5) consists of the following policy objectives:

- a) To require that a contribution towards public art is provided as a part of certain private developments within the City;
- b) To enhance the legibility of open spaces, buildings and streets by introducing public art that makes these places more identifiable;
- c) To allow for the interpretation of cultural, environmental or built heritage through public art;
- d) To enhance the amenity of the public domain through the use of public art; and
- e) To enhance the sense of place by encouraging public art forms.

LPP5 entails that for new development and "major extensions", a public art contribution is required for a development valued over \$2 million. The eligible cost of any public art contribution provided for under LPP5 shall be no less than one percent (1%) of the construction value of the development, capped at a maximum of \$500,000.

The applicant is seeking an exemption towards the public art contribution and provides the following justification:

- The works to be completed are completely within the boundaries of Coogee lots with no public space impacted, or accessible to the general public.
- With the site classified as a Major Hazard Facility, this does not afford access to the general public.

- This particular project does not involve accessible buildings as part of the design, and is purely industrial process plant and infrastructure.
- Coogee has already obtained exemption from obtaining a Building Permit under Part 5, section 74 of the Building Act 2011, pertaining to "buildings incidental to industrial plant.
- Coogee spend significant money on an ongoing basis towards art and keeping the gardens around the facility in mint condition. Some of these costs expended over the last few years are as follows:
 - o Coogee donated over \$30,000 to the well-known sculptures by the sea over the last few years.
 - Coogee has spent over \$167,000 over the last few years on numerous pieces of art, which are held at Coogee's main administration and gardens in Kwinana.
 - Coogee is currently trying to locate a laser projector that is capable of projecting images onto the tanks subject of this application. This could include famous and community works of art along with seasonal messages as deemed appropriate.
 - Coogee's ongoing commitment to landscaping and gardening around their Kwinana locations, is also significant and no less than \$500,000 is spent annually to maintain these gardens and lawns.

Although the applicant's justification does not directly address the provisions of the Policy, City Officers have reviewed the request and provide the following comments:

Clause 3 of LPP5 outlines where development is exempt from either providing public art on the development site or providing a monetary contribution for public art in the vicinity. Clause 3.3 of LPP5 clarifies the exemptions by stating that the requirements to provide for public art will only be "required on new developments or major extensions only in the General Industry zone".

Considering the proposed development is located in the General Industry zone, an assessment to determine whether the proposed development is classified as a 'new development' or a 'major extension' (as per clause 3.3 above), is detailed below. It should be noted that LPP5 defines a "major extension" as follows:

Those extensions that introduce a new plant or physical infrastructure for a process chain and/or significant increases in throughput and production capacity. While not limited to, it may also refer to replacement and/or addition to administration buildings and/or other supporting facilities or buildings'

Exemption Classification	Assessment/Comment
New Development	The proposal is not a new, standalone
	development. The intent of the Policy in
	referring to 'New Development' is clearly for
	developments that introduce a new land
	use (i.e. development on a vacant lot or
	development where the existing use is
	demolished). The proposed development is
	an addition to the fuel storage development
	which has also been approved as a
	'General Industry' land use.
Major Extension:	a. The proposal is for four (4) fuel storage
a. Extension that introduces new	tanks. As the predominant land use for
plant or physical infrastructure	the subject site is 'General Industry'
for a process chain;	(Fuel Storage), it is considered that an
	addition of four (4) 30 Megalitre storage

- Extension that introduces significant increases in throughput and production capacity;
- may also refer to replacement and/or addition to administration buildings and/or other supporting facilities or buildings.

tanks significantly affects the current process chain of unloading, storing and loading petroleum products by having a significant increase in the storage component of the process.

The proposed additional storage will approximately increase the storage capacity on Lot 3 by 171%. Additionally, the proposed additional storage will increase the storage capacity on Lot 2 and Lot 3 by an estimated 89%.

- b. The proposed development does not produce any substance, and therefore the significant increase in this section is not applicable. Additionally, there will be no increase to any staff numbers or operation hours.
- The proposed development will not replace or add to existing administration buildings or supporting facilities.

Based on the above assessment, City Officers are of the view that due to the impact to the current process chain, the proposed development is not exempt from the requirements of LPP5. In addition to the above, and for the purposes of providing for proper and orderly planning, the following general comments are also made regarding the development and its relationship with LPP5:

The proposed development is highly visible from the public realm as it is located less than 35 metres from a public road (19.5m to the street boundary of Patterson Road). Notwithstanding the fact that the development will be within a close proximity to the public road, the development proposes two (2) 27.9m high, 37m wide tanks to be located within this area that fronts Patterson Road, which is considered to be high in bulk and scale as viewed from the street.

In summary from the above, the requirements of LPP5 are relevant to the proposal as the development is defined as a major extension under LPP5 and the development is therefore not exempt under clause 3 of LPP5. City staff recommend that the Public Art contribution be imposed as a condition of approval.

Under the current LPP5, as the proposed development is valued at \$60 million, the Policy requires a maximum public art contribution of \$500,000 for the development. It should be noted however that the City has initiated an amendment to LPP5 which, amongst other things, proposes to reduce the contribution from the current 1% to 0.75% for industrial development and to cap the maximum contribution to \$375,000 for industrial development. At the time of writing this report, Council is expected to consider this policy amendment at the meeting scheduled for 11 May 2022 for support for it to be advertised for public comment.

It is quite possible then that the amount of the contribution for public art determined as part of the review of the current policy may differ from the amounts specified at present and may be less than that presently. As such, the condition relating to a requirement for public art for this development (Condition 3) has been stated in a manner which

would enable the public art contribution to be made based on the adopted LPP5 of the day.

Environmental Considerations

The City's Environmental Health Officers have advised that the development is subject to compliance with the *Contaminated Sites Act 2003* and the *Environmental Protection Act*. Subject to the compliance with these Acts, as well as stormwater management, no adverse environmental impacts have been identified.

The City's Engineering Officers support the proposed Stormwater Management Plan, however require detailed design drawings to demonstrate the onsite retention and treatment of stormwater in accordance with the City's specifications. This is recommended as a condition of approval.

Traffic and Access

The applicant has submitted a Traffic Impact Assessment (TIA) to support the proposal. City staff have reviewed the TIA and are satisfed that there will be no adverse traffic impacts subject to conditions.

Bushfire Planning

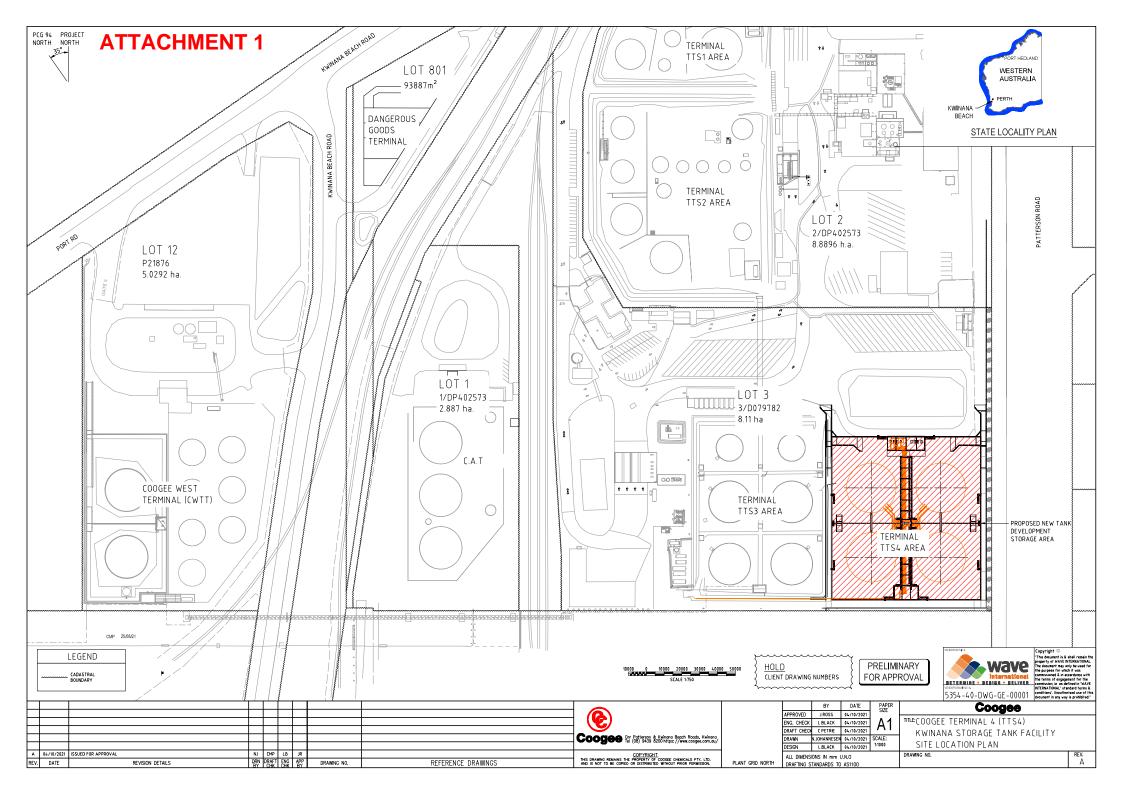
As previously stated, a portion of the proposed development is located within a Bushfire Prone area. Given that the BAL rating has been identified as BAL-Low with acceptable bushfire planning measures as determined by DFES, the location and the proposed use of the development is considered acceptable, subject to conditions.

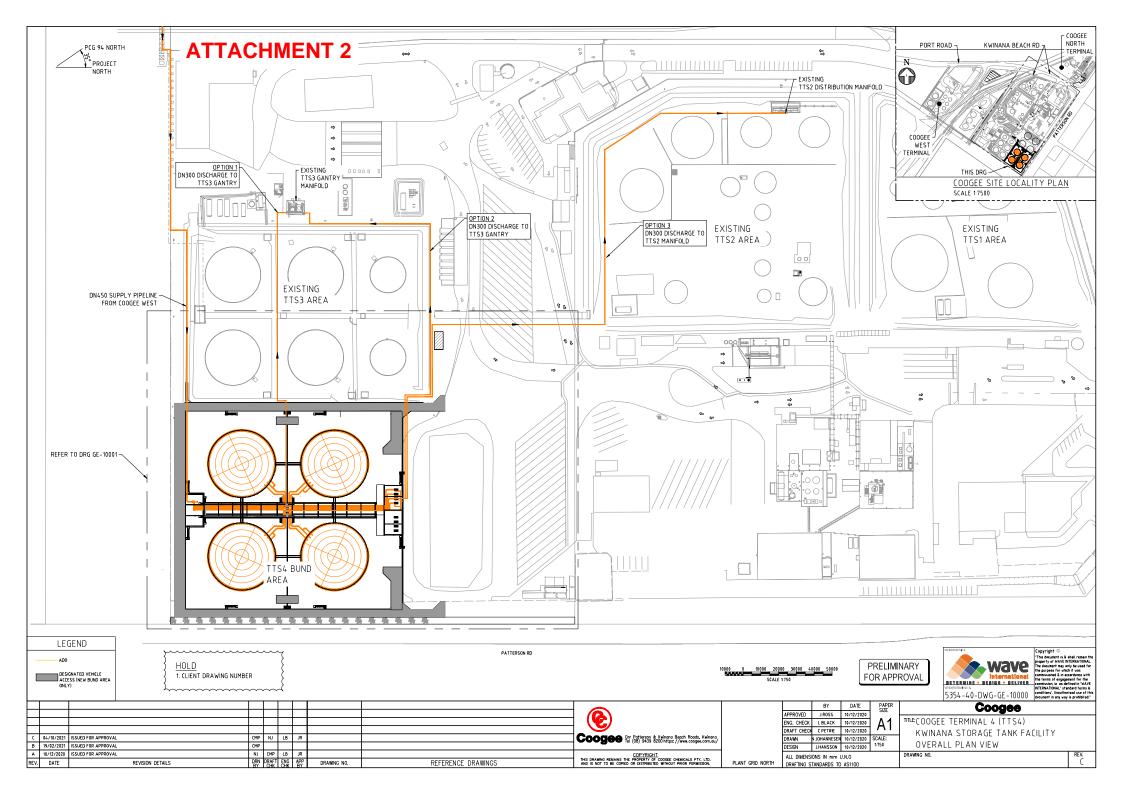
DFES commented that in order to address bush fire risk and meet Asset Protection Zone (APZ) requirements, small portions of the screening vegetation along Patterson Road will require removal (although low risk landscaping can be provided). Given the high risks associated with this land use, the City is satisfied with the reduction in screening but have included a condition requesting that a revised Landscape Management Plan be provided to the City to enable the portions of screened area to be landscaped to a high amenity but a low bush fire threat level.

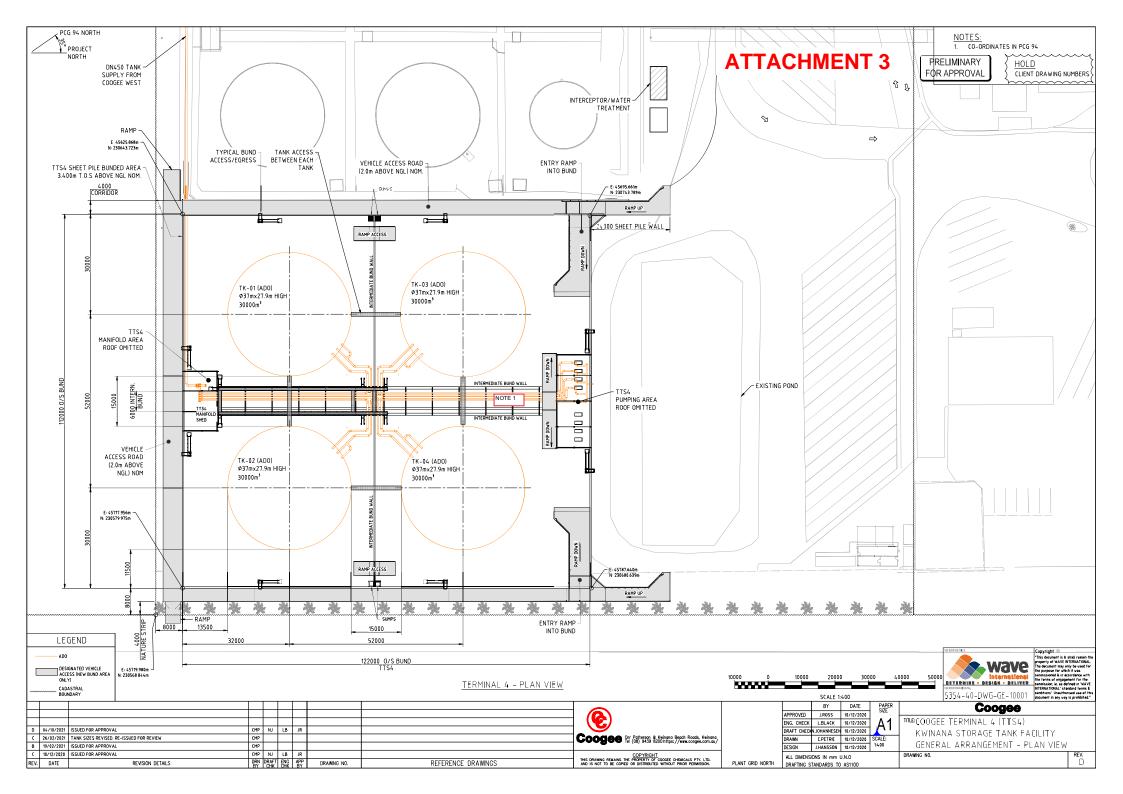
Conclusion:

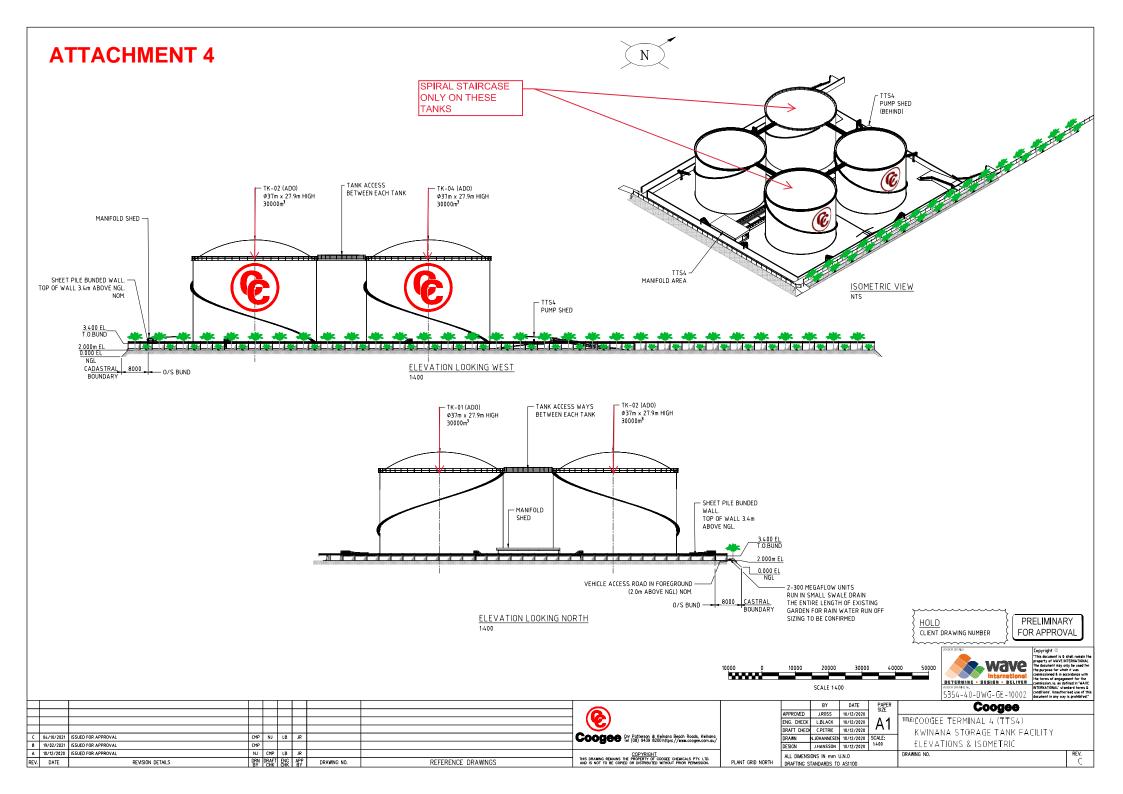
The proposed development adequately addresses relevant planning objectives and is considered to be an effective use of currently underutilised land within the lot – subject to the recommended conditions and advice notes.

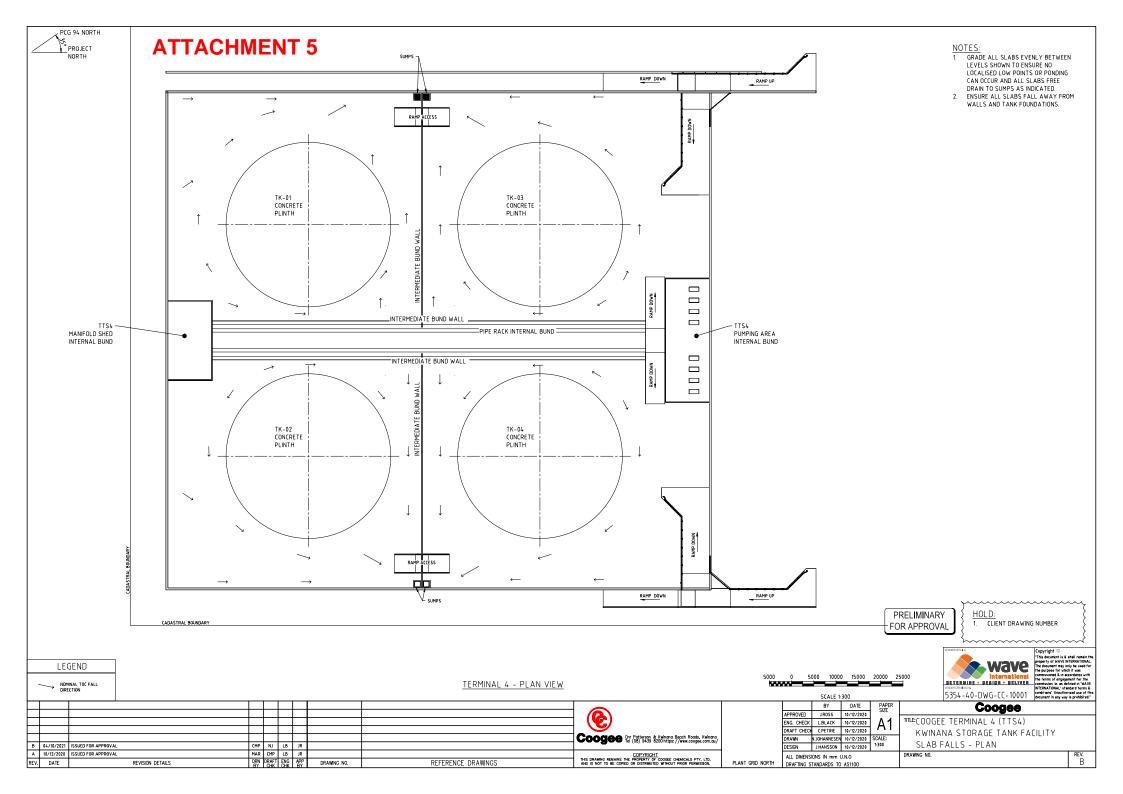
The proposed additional fuel storage significantly increases the amount of fuel that can be stored on site, allowing for greater economic growth within the region. In this regard, the proposed development is consistent with the overarching planning principles of the City's draft Local Planning Strategy, incorporating economic principles that seek to ensure the Western Trade Coast is developed with maximum leverage being gained from investments in new infrastructure.

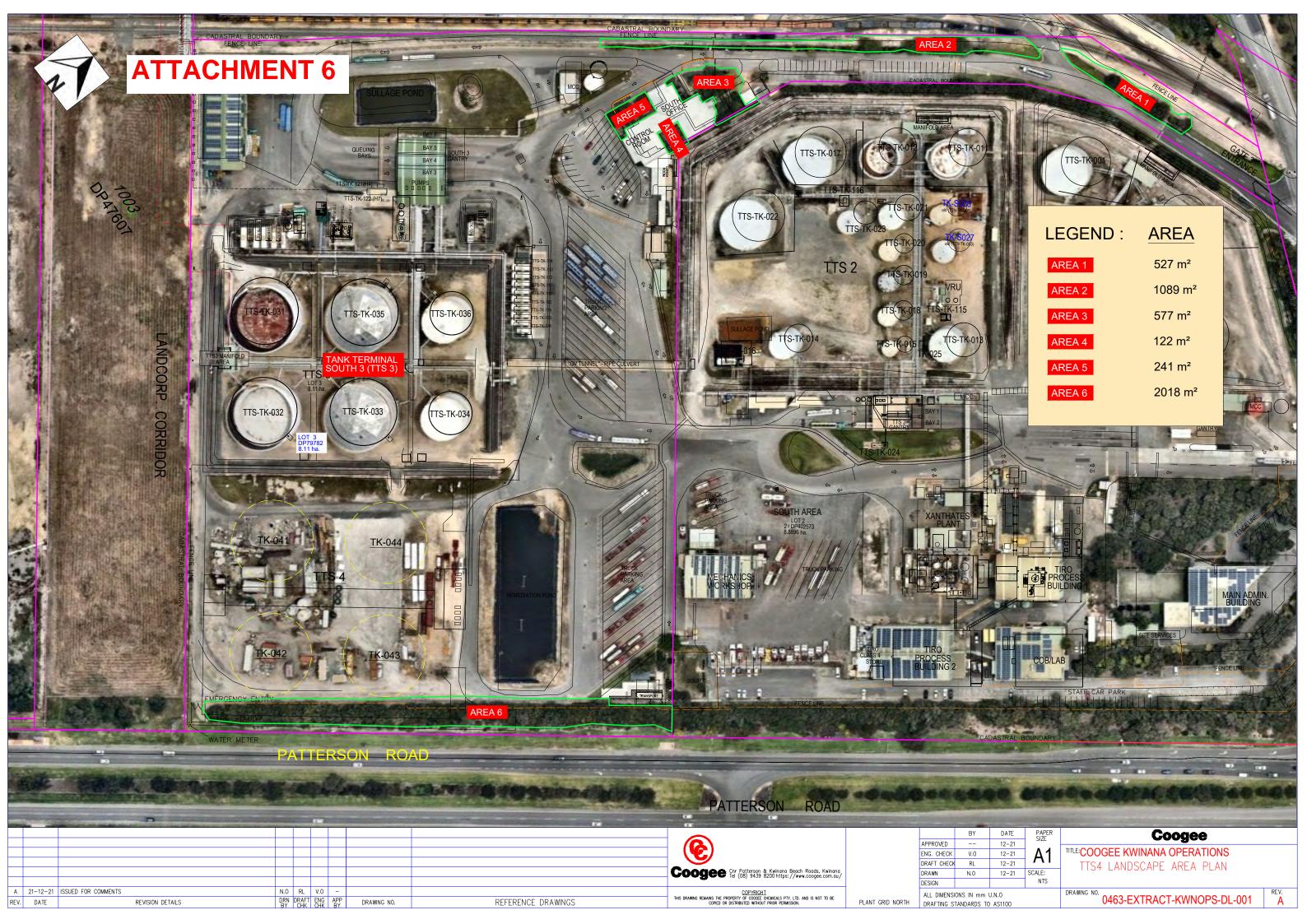












ATTACHMENT 7



Coogee Chemicals Pty Ltd

ABN 37 008 747 500

COOGEE SOUTH 4 TANK TERMINAL STORMWATER MANAGEMENT PLAN

PREMISE DETAILS

LICENSEE AND OCCUPIER

Name Coogee Chemicals Pty Ltd

PO Box 5051

Rockingham Beach Road, Kwinana, WA, 6969

ABN: 008 747 500

PREMISES

Name: Coogee Chemicals Pty Ltd

Lot 3 on Diagram 79782

Corner of Rockingham Beach and Patterson Roads.

Kwinana, WA, 6167

1. INTRODUCTION

Coogee Chemicals Pty Ltd (Coogee) is an Australian owned company that produces a wide range of industrial, agricultural and mineral processing chemicals for supply to both Australian and international markets.

Coogee Chemicals Kwinana operations is located on a coastal plain, zoned for industrial use under planning scheme No. 2. Coogee Chemicals is a prescribe premises category from Schedule 1 of the Environmental Protection Regulations 1987 operating under Department of Water Environmental Regulation (DWER) Licence number L5109/1990/13 FILE NUMBER: DEC5802/2

2. DESCRIPTION OF PROCESS/PROPOSAL

Coogee Chemicals plans to construct a new 120 ML hydrocarbon storage and handling tank terminal. The purpose of this project is to construct and commission four tanks (30 ML each) to receive, store and distribute bulk liquid fuels to meet customer and industry demands. The tanks will be constructed to the requirements of API 650 Welded Steel Tanks for Oil Storage. The proposed facility location can be found in Appendix A; located on a cleared section of Lot 3; land owned by Coogee Chemicals.

The Construction Site is adjacent to the existing facility (South 3 Tank Terminal) at Lot 3, Kwinana Beach Road, Kwinana Beach; on Diagram 79782; Volume /Folio 1909/130.

The construction work includes the following:

- Bulk earthworks;
- Concrete bunding work;
- On site Tank construction;
- Service Testing in Accordance with API 650 for settlement checks;
- Mechanical & Piping General work;
- Electrical and Instrument work and other.

3. STORMWATER MANAGEMENT DURING CONSTRUCTION

During the construction stage direct or intentional water discharges from the project are not anticipated. However, during a heavy rain event the site is expected to accumulate storm water and this water will be dealt with care as per Table 1 below:

<u>Table 1:Storm Water Management – Terminal Construction</u>

Activity	Hazard	Controls	Preventative maintenance
Initial Bulk Earth work	Storm Water	Grade the earth so that there is no runoff to adjacent sites. Water that accumulates in the stockpile area will be soaked into the ground. Site not contaminated therefore no impacts identified	Civil contractor to ensure storm water pooling is directed within site to an area that does not risk erosion or undermining of existing/ new infrastructure.
Final Earth work and compaction	Storm Water	Rain water will infiltrate slowly without impact to any foundations. If any excess water accumulates in the TTS4 site profiled low points it shall be tested in accordance with Coogee procedure WAO-HSEQ-PRO 1400 prior to being discharged to Infiltration Area 1 shown in Figure 1 below. Infiltration Areas 2 and 3 can be used if there is spare capacity in these collection sumps. Waste water shall be disposed offsite utilising established disposal Contractors.	Civil contractor to ensure storm water pooling is directed within site to an area that does not risk erosion or undermining of existing/ new infrastructure.
Concrete Bund work	Storm Water, Waste Water	Rain water that accumulates in the new TTS4 sumps/new bund floor areas it shall be tested in accordance with Coogee procedure WAO-HSEQ-PRO 1400 prior to being discharged to Infiltration Area 1 shown in Figure 1 below. Infiltration Areas 2 and 3 can be used if there is spare capacity in these collection sumps. Waste water shall be disposed offsite utilising established disposal Contractors.	Civil contractor to ensure storm water pooling is directed within site to an area that does not risk erosion or undermining of existing/ new infrastructure.
Detail Tank Construction work	Storm Water, Waste Water	Rain water that accumulates in the new TTS4 tanks prior to the installation of the roofs shall be tested in accordance with Coogee procedure WAO-HSEQ-PRO 1400 prior to being discharged to Infiltration Area 1 shown in Figure 1	Civil contractor to ensure storm water pooling is directed within site to an area that does not risk erosion or undermining of existing/ new infrastructure.

Activity	Hazard	Controls	Preventative maintenance
		below. Infiltration Areas 2 and 3 can	
		be used if there is spare capacity in	
		these collection sumps. Waste	
		water shall be disposed offsite	
		utilising established disposal	
		Contractors.	

Infiltration (Storm Water Diversion) Areas

There are designated infiltration areas adjacent to the construction site.

They are designated as follows. Refer to Figure 1:

- Infiltration Area 1: This is the primary storm water diversion area. Currently this area contains a garden bed that shall be removed and the area designed/modified to receive and dispose of storm water via ground soakage within the Eastern cadastral boundary of Lot 3 to accommodate the new infrastructure;
- Infiltration Area 2: This is one of two secondary storm water diversion areas only to be used if there is spare capacity following a rain event. This area is located on the South Eastern corner of Lot 2 and is designed to collect stormwater from adjacent hardstand areas:
- Infiltration Area 3: This is the second of two secondary storm water diversion areas only to be used if there is spare capacity following a rain event. This area is located in the middle of the lot 3 limestone layered infiltration area.





During the project work there is no extraction of groundwater proposed. Construction work shall be conducted such that it will not impact the quality of the groundwater table.

All areas outside of the construction zone have established storm water sumps and/or soak well(s).

The table below outlines the discharge criteria of collected non-process water to land specified in the Coogee Licence. The testing and verification process for all Coogee Kwinana Operations collected non-process water is detailed in the Coogee procedure Stormwater Management Plan Kwinana Site document number WAO-HSEQ-PRO-1400.

2.2.6 The Licensee may discharge collected non-process water to land within the premises if this water is tested prior to discharge and deemed compliant with the discharge criteria in Table 2.2.6.

Table 2.2.6: Discharge criteria of collected non-process water to land				
Parameter Licensee's current discharge limit				
Conductivity	< 3000 μS/cm			
Temperature	15 – 25 °C			
рН	4 – 10			
Odour	Mkt			
TPH	< 1 ppm			
Appearance	< 50			

4. STORMWATER MANAGEMENT DURING OPERATION STAGE

The following section identifies the stormwater management infrastructure and management strategies once TTS4 is commissioned and operational. This information will be included in the existing control document Stormwater Management Plan Kwinana Site WAO-HSEQ-PRO-1400.

Storage Tanks Main Concrete Bund

Each tank will be fitted with self-supporting aluminium geodesic domes. Roof water shall be collected for each tank within intermediate concrete bunds.

Foundations for the storage tanks shall consist of a reinforced concrete beam complete with a fully sealed HDPE lined underfloor leak detection system to prevent contamination of the groundwater.

The terminal concrete bunded area will provide sufficient capacity as required by AS1940 in the advent there is loss of containment from an entire tank. It will therefore be more than adequate to collect storm water from an extreme rain event. This will provide storage for stormwater until the water is tested and disposed of appropriately.

Each intermediate bund shall have a sump complete with two independent pumping systems that can only be initiated manually. One system shall be used to dispose of clean storm water to grade at Infiltration Area 1. The other system shall be plumbed to an existing waste water management system (WWMS).

The WWMS capacity shall be checked during the detail design stage of TTS4.

Environmental

The tanks on completion shall be service tested in accordance with API 650 therefore no hydrotest water usage and disposal will be included in the scope of work.

Tank Water Discharge

Water draw offs from storage tanks will be carried out by approved personnel from an 80nb valve connection point. Water will be drained into a tundish beneath the draw off point which will be connected to a subsurface drainage system which will direct the water to a sump which will be regularly emptied into the oil/water separator storage vessel. Potential leak points within the terminal such as pumps and, valves pads will be individually bunded, roofed and connected to this gravity drainage system.

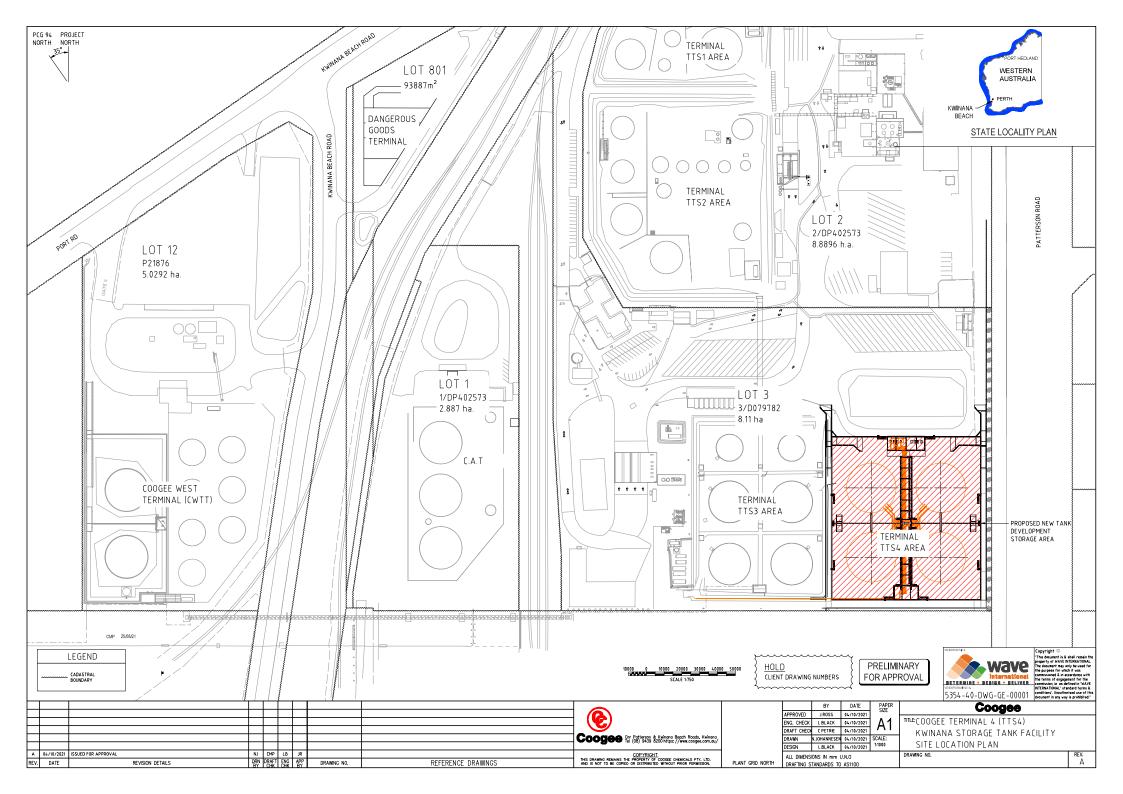
Table 2: Stormwater Management - Terminal Operation

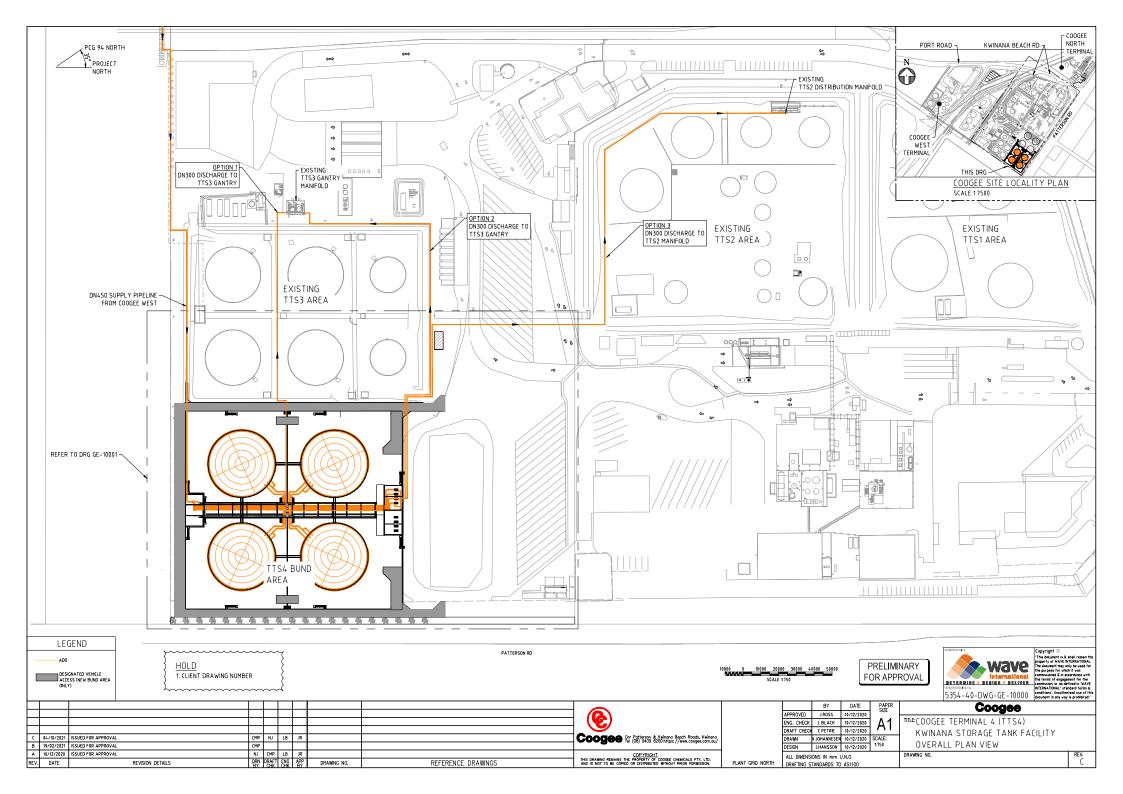
Activity area	Hazard	Controls	Preventative maintenance
Tanks Intermediate Bunds, Sumps	Rain Water, Waste Water	Rain water that accumulates in these areas shall be tested in accordance with Coogee procedure WAO-HSEQ-PRO 1400 prior to being discharged to Infiltration Area 1 shown in Figure 1. Waste water shall be disposed offsite utilising established disposal Contractors.	Periodic inspection to ensure bunds are clean and in good condition with minimal debris. Any hydrocarbon spills discharged to WWMS and bund floor cleaned using spill kits.
Terminal Inlet/ Outlet Manifold Bunds, Sumps	Rain Water, Waste Water	Rain water that accumulates in these areas shall be tested in accordance with Coogee procedure WAO-HSEQ-PRO 1400 prior to being discharged to Infiltration Area 1 shown in Figure 1. Waste water shall be disposed offsite utilising established disposal Contractors.	Periodic inspection to ensure bunds are clean and in good condition with minimal debris. Any hydrocarbon spills discharged to WWMS and bund floor cleaned using spill kits.
Roadways	Rain Water	Diverted to stormwater Infiltration Area 1	Periodic inspection to ensure stormwater infrastructure is in good condition with minimal debris that can cause blockages.

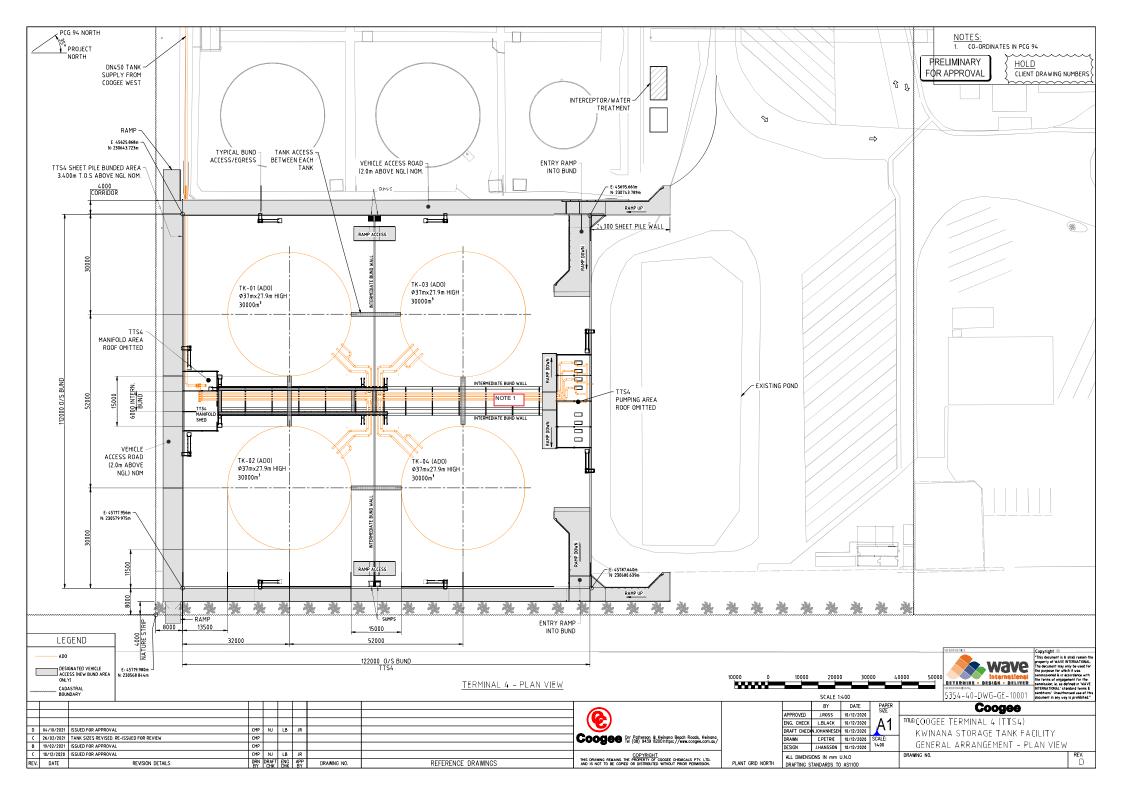


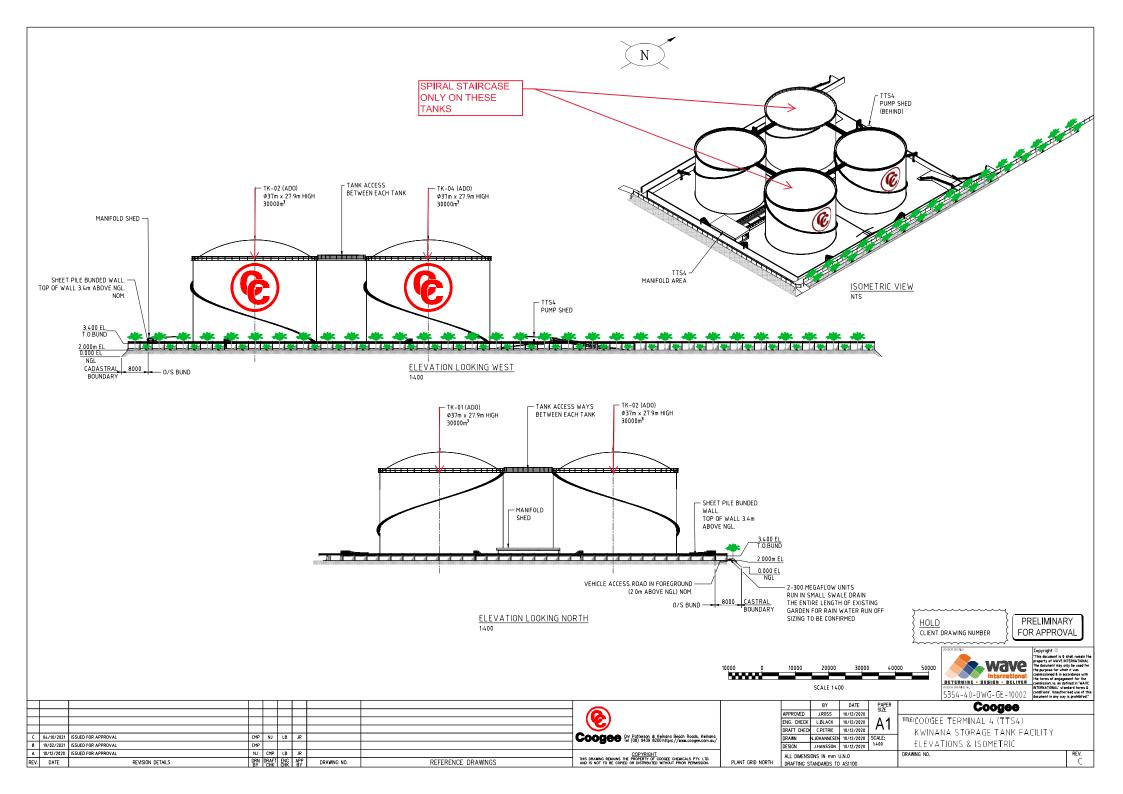
Coogee Chemicals Pty Ltd ABN 37 008 747 500

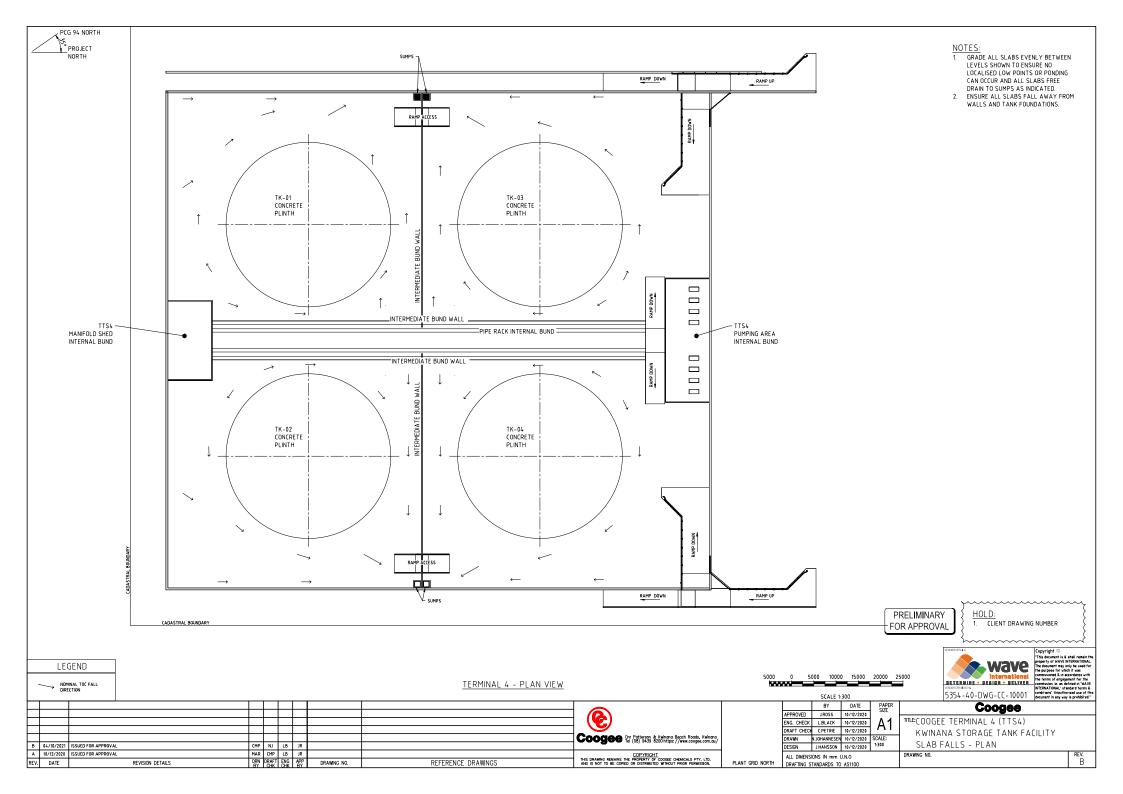
Appendix A: Site Plans











ATTACHMENT 8



Report on

DUST MANAGEMENT PLAN PROPOSED DIESEL STORAGE TANKS COOGEE TERMNINAL 4 (TTS4) COOGEE CHEMICALS, KWINANA

Submitted to:

Coogee Chemicals
Corner Patterson & Kwinana Beach Roads
KWINANA BEACH WA 6167

www.galtenv.com.au 50 Edward Street OSBORNE PARK WA 6017 T: +61 (8) 6272-0200



TABLE OF CONTENTS

1.	Intro	oduction	1
2.	Site	Description and Proposed Development	1
3.	Prev	vious Studies	1
4.	Proj	ect Objectives	2
5.	Sens	sitive Receptors	2
6.	Air (Quality Management	2
6	5.1	Legislative and Regulatory Requirements	2
6	5.2	Assessment Criteria	2
6	5.3	Wind Speed and Direction	3
6	5.4	Monitoring Methodology	3
	6.4.	1 Dust Monitoring	3
6	5.5	Monitoring Locations	3
6	5.6	Dust Management and Mitigation Controls	4
6	5.7	General Requirements	5
	Po	erformance Standards	5
6	5.8		5
7.	Rep	orting	5
8.	Role	es and Responsibilities	5
9.		itations	6
10	C	losure	6

J1901277 007 R Rev2 11 February 2022



TABLES

Table 1: Dust Management Targets	3
Table 2: Prevailing Wind Speed and Direction	3
Table 3: Mitigation Measures	4
Table 4: Roles and Responsibilities	6

FIGURES

FIGURE 1: Site and Location Plan

APPENDICES

APPENDIX A: BUREAU OF METEOROLOGY WIND ROSES

APPENDIX B: UNDERSTANDING YOUR REPORT

ABN: 96 520 810 622



1. INTRODUCTION

This report presents Galt Environmental Pty Ltd's (Galt's) dust management plan (DMP) for the proposed diesel storage tanks located at Coogee Chemicals South Tank Terminal 4 - TTS4 ("the Site"). The location of the site relative to the surrounding area is shown on Figure 1.

2. SITE DESCRIPTION AND PROPOSED DEVELOPMENT

Supplied information indicates a 120 ML diesel storage facility is to be constructed at TTS4 comprising:

- 4 no. 30 ML "cone-down" diesel storage tanks (37 m diameter x 27.9 m shell height), SG=0.85;
- concrete bund walls and floors;
- pipe racks and associated supports;
- pump station and structure; and
- manifold station and structure.

The Site currently consists of hardstand and general storage/laydown (old tanks, sea containers etc.). Publicly available information indicates that the current site surface level is around RL 5 m AHD.

It is expected development of the TTS4 facility will comprise bulk earthworks to prepare a suitable pad for the tanks and trenches/excavations for the associated pipework and infrastructure.

3. PREVIOUS STUDIES

Galt has previously undertaken an environmental (and geotechnical¹) investigation at TTS4 to characterise sub-surface soil and groundwater conditions prior to construction. The findings of the previous investigation are presented in Galt Environmental (2021) *Geotechnical and Environmental Assessment, Proposed Diesel Storage Tanks. Coogee Terminal 4 (TTS4). Coogee Chemicals, Kwinana*. (Ref: J1901277 006 R Rev0 dated 21 December 2021).

The specified environmental objectives of the study were to:

- assess subsurface soil conditions;
- assess groundwater across the site; and
- advise on contaminated soil conditions within the footprint of the works.

Fieldwork was carried out between 6 and 8 December 2021 and comprised:

- ♦ drilling of boreholes at 8 locations (BH01-BH08) extending to a depth of 3 m in each instance; and
- collection of representative soils samples for inspection and laboratory testing.

The subsurface conditions at TTS4 can be summarised as comprising:

- FILL: SAND (SP) fine to coarse medium grained, sub-angular to sub-rounded, brown, trace to with gravel, trace fines, dry, dense, present to a maximum depth of around 0.5 m; overlying
- SAND (SP) fine to coarse grained, sub-angular to sub-rounded, pale yellow to brown, trace fines, trace gravel, moist becoming wet with depth, typically dense with loose zones; overlying
- ♦ Inferred LIMESTONE.

Note: Subsurface conditions were interpreted using borehole and CPT data.

¹ Geotechnical scope and findings have been omitted from this summary.



During the investigation, groundwater was encountered at depths of between 1.8 m and 2.5 m (i.e., at an elevation of around RL 3 m AHD).

Selected soil samples were analysed by NATA accredited laboratories for the following contaminants of potential concern (COPC):

- heavy metals (including leachate);
- total recoverable hydrocarbons (TRH);
- benzene, toluene, ethylbenzene, xylenes and naphthalene (BTEXN);
- phenols; and
- e asbestos.

Based on the findings of the environmental study, it was concluded unlikely that soil presents a risk to human health or the environment in context of the land use at the site.

4. PROJECT OBJECTIVES

The objectives of the DMP are as follows:

- facilitate construction of the diesel storage facility in accordance with relevant air quality guidelines (see section 6.1);
- implement dust control measures during construction commensurate with the nature of the site and prevailing Perth weather conditions;
- ensure dust control measures are protective of environmental and human health values (both on and off-site receptors); and
- validate the effectiveness of dust control measure in accordance with the relevant air quality guidelines.

5. SENSITIVE RECEPTORS

The Coogee Chemicals facility is located in the Kwinana Heavy Industrial Area and is surrounded by industrial facilities/operations on all boundaries. The majority of these surrounding facilities are located less than 100 m downwind of prevailing summer and winter wind conditions. There are no sensitive environmental receptors adjacent to the site.

A summary of prevailing wind conditions are presented in section 6.3.

6. AIR QUALITY MANAGEMENT

6.1 Legislative and Regulatory Requirements

The air emissions management strategy has been developed in accordance with the following guideline document.

Department of Environment and Conservation (DEC) (2011) Guideline for Managing the Impacts of Dust and Associated Contaminants from Land Development Sites, Contaminated Site Remediation and other Related Activities.

6.2 Assessment Criteria

Dust monitoring targets to be adopted during the works are outlined in Table 1. Monitoring will be undertaken on a daily basis during the site works and should be done so at standardised intervals for comparative purposes (i.e. 09:00 and 15:00).



A fundamental qualitative performance standard will be the requirement for no visible dust to be noted crossing the development site boundary.

Table 1: Dust Management Targets

Media	Measured By	Target
Visible dust particles	Visual Observation	None observed

6.3 Wind Speed and Direction

Prevailing wind direction and speeds are summarised in Table 2, utilising publicly available Bureau of Meteorology (BOM) records (1944 to 2019) for the Perth Airport weather station, located approximately 45km northeast of the Site. Wind Roses are presented in Appendix A.

Table 2: Prevailing Wind Speed and Direction

Season	Time	Prevailing Wind Direction	Predominant Wind Speeds (km/h)	Comment
C	9 am	East	>=20 and <30	Conditions are classified as 'calm', 5% of the seasonal average
Summer	3 pm	Southwest	>=20 and <30	Conditions are classified as 'calm', 1% of the seasonal average
Minton	9 am	Northeast	>=0 and <10	Conditions are classified as 'calm', 18% of the seasonal average
Winter	3 pm	West	>=10 and <20	Conditions are classified as 'calm', 7% of the seasonal average

Visual dust monitoring locations should be selected based on the prevailing wind directions above to ensure minimisation of dust generation to all downwind receptors.

6.4 Monitoring Methodology

6.4.1 Dust Monitoring

Dust monitoring will be undertaken daily at standardised intervals during all ground disturbing works at the site.

In the event that visible dust is being generated by earthworks, the following process will follow:

- 1. The Construction Contractor will be advised, and all works will temporarily cease.
- 2. A review of the control measures and site operations will be undertaken, and works will not be permitted to resume until the source of the exceedance is satisfactorily identified and mitigated.
- 3. All exceedances will be documented, and the Principal will be advised immediately of any exceedances.

A detailed breakdown of roles and responsibilities is presented in section 8.

6.5 Monitoring Locations

The following locations are recommended visual dust monitoring locations based on prevailing wind directions.

Summer Construction:



- ★ Location A: west-southwest easement of the proposed TTS4 facility;
- Location B: northeast corner of the site (i.e. adjacent Patterson Road); and
- Location C: located to the west of the proposed TTS4 facility.

Winter Construction

- Location (D): west-southwest easement of the proposed TTS4 facility;
- Location (E): eastern boundary of the site (i.e. adjacent Patterson Road); and
- Location (F) located to the north of the proposed TTS4 facility.

The locations proposed above are applicable based on the proposed construction schedule and should be considered dynamic (i.e. may require adjustment based on construction activities across the site).

Dust monitoring locations are shown in Figure 1 (demarcated by letter as indicated above).

6.6 Dust Management and Mitigation Controls

The proposed construction schedule is not known at this stage, however, works should ideally be undertaken in the winter (or wetter) months when dry and windy conditions are at a minimum. Dust management controls will include the following:

- the site should be wet down² with a water cart at an interval deemed appropriate by the contractor and/or principal (i.e. based on visual observations of soil moisture condition);
- ♦ all internal access tracks will be wetted with a water cart if visible dust is noted;
- application of DustEx (or a similar soil stabiliser) on loose earth stockpiles to reduce windblown dust; and
- a cover will be placed on trucks importing/exporting material (if applicable) to ensure no dust is generated during transport.

Further mitigation measures that will be implemented across the site in the event excessive dust and/or exceedances are identified are outlined in Table 3.

Table 3: Mitigation Measures

Trigger for Action	Mitigation Measure
Visual observation of dust generation by Coogee site personnel and/or the Construction Contractor	 Advise the Construction Contractor Advise the Principal's Site Supervisor Cease works until the determination of the cause of the exceedance is identified and wait to recommence when wind conditions improve Increase dust management measures (water cart and wetting the site)
A dust complaint is received	 Increase dust management controls (water cart and wetting the site) Advise the Principal's Site Supervisor Investigate the reason for the complaint Cease works until the determination of the cause of the exceedance is identified

² If undertaken during the winter months this may not be required.



6.7 General Requirements

The Construction Contractor will be responsible for the following:

- Appropriate management of potential dust-generating activities and undertaking regular inspections of the works to assess the effectiveness of dust control measures. Where the nature of the works or weather conditions is conducive to dust formation, additional dust mitigation controls should be implemented.
- A water cart(s) must be available for the duration of the site works, particularly during bulk earthworks and times of increased vehicle truck movements.
- Water carts must be used to minimise dust emissions in dry or windy conditions but not in a manner that could cause surface runoff.
- A suitable quantity of DustEx (or similar soil stabiliser) will be available at the site commensurate with the proposed earthworks.
- Appropriate speed limits will be imposed on internal access tracks to reduce dust generation (to be enforced by the construction contractor).
- Internal tracks/roads (both sealed and unsealed) will be wetted down to minimise dust generation in transport areas. Water will be applied to the access tracks/internal roads prior to each day or activity. Additional water will be applied to the tracks/roads throughout the day, as required.
- Any complaint from a member of the public relating to dust emissions from the Site should be managed in accordance with the following protocol:
 - A visual inspection of the Site will be made within 30 minutes of receipt of the complaint in normal working hours and four hours out of normal working hours.
 - Where the complaint is substantiated, the work activity contributing to the complaint/s will cease immediately until additional dust mitigation controls have been implemented or weather conditions improve (e.g. reduction in wind speed or change in wind direction) to the extent that dust emissions are not excessive.
 - A register of complaints should be kept on file and include all relevant information (including complainant details and location, nature of complaint, weather conditions at the time and verified site photos demonstrating adequate controls (or otherwise) at the time of the complaint).
 - Where it is determined that unacceptable air emissions are being generated, work will cease immediately until the source of the emissions is contained/ameliorated satisfactorily.
 - o Internal reporting of incidents and exceedances will be undertaken whenever unacceptable air emissions are being generated.

6.8 Performance Standards

7. REPORTING

The progress and management of Site works will be reviewed by the Principal's Site Supervisor and Environmental Representative on a weekly basis and will include:

- a review of incidents/complaints, incident investigation outcomes and proposed actions for mitigation of related potential environmental impacts;
- compliance of the site works with established performance standards; and
- dust and air quality results.

8. ROLES AND RESPONSIBILITIES

The roles and responsibilities for the remedial works are outlined in below.



Table 4: Roles and Responsibilities

Role	Who	Responsibility	Reporting
Principal	Coogee Chemicals	 Engage construction contractor and provide DMP for implementation 	-
Principals Site Supervisor	Justin Sirrell/Dave Lightowler	 Manage earthworks program Oversee construction contractor's implementation of DMP Keep daily site records/diary Document all monitoring works Manage data and provide feedback to Principal 	Principal
Construction Contractor	SVG Construction Pty Ltd / RC Construction Pty Ltd	 Implement dust mitigation measures and controls 	Principal's Site Supervisor
Environmental Consultant	Galt Environmental	◆ Prepare DMP◆ Liaison with Principal	Principal's Site Supervisor

9. LIMITATIONS

We draw your attention to Appendix G of this report, "Understanding Your Report". The information provided within is intended to inform you as to what your realistic expectations of this report should be. This information is provided not to reduce the level of responsibility accepted by Galt, but to ensure that all parties who rely on this report are aware of the responsibilities each assumes in so doing.

10. CLOSURE

We trust this information meets your needs at this time. Please feel free to contact the undersigned if you require any further information.

ABN: 96 520 810 622



GALT ENVIRONMENTAL PTY LTD

Brad Palmer

Michael Carmichael

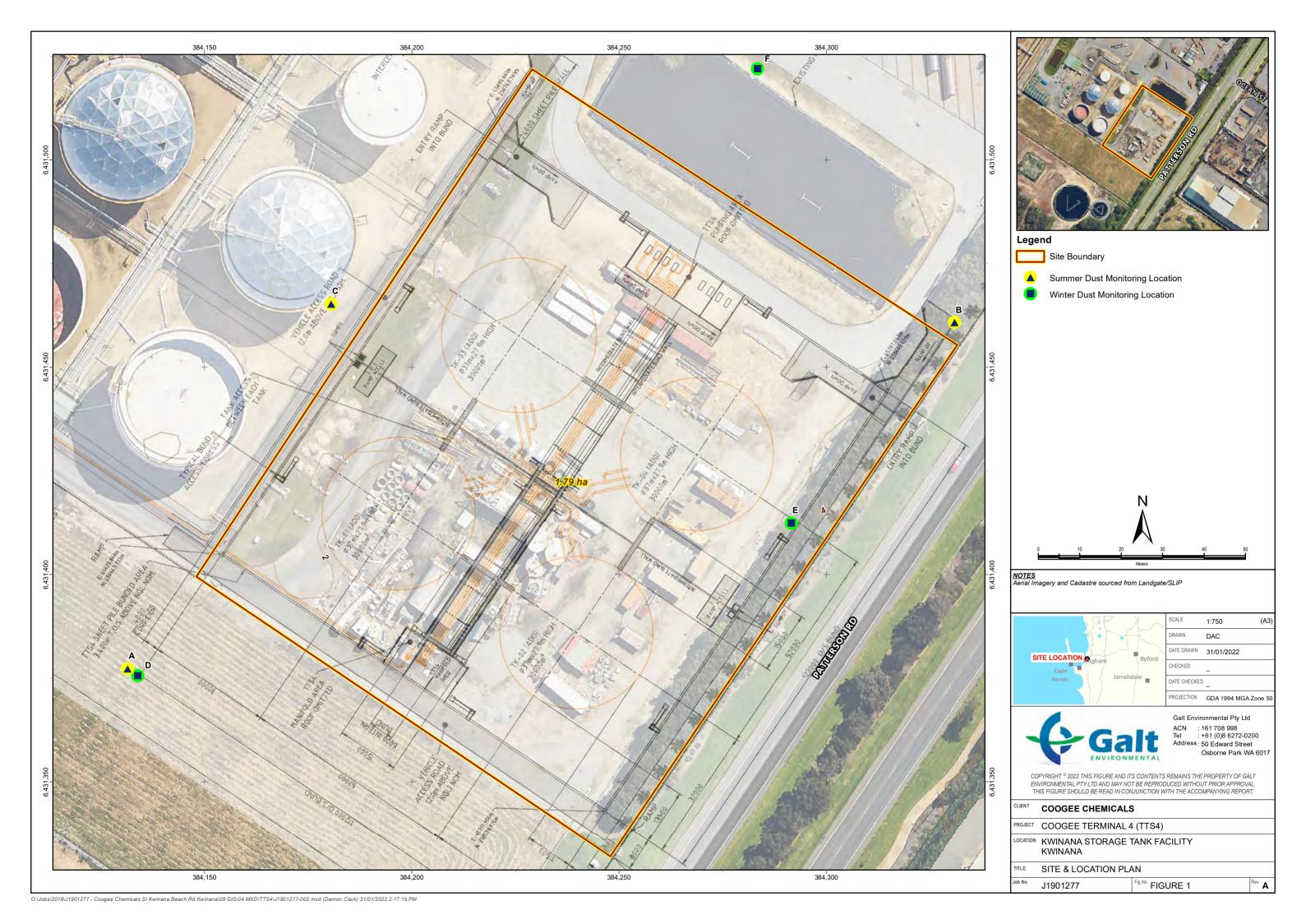
Environmental Scientist

Environmental Scientist

O:\Jobs\2019\J1901277 - Coogee Chemicals SI Kwinana Beach Rd Kwinana\03 Correspondence\J1901277 007 R Rev2.docx



Figures





Appendix A: Bureau of Meteorology Wind Roses

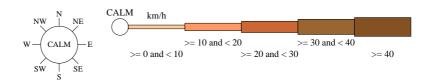
Custom times selected, refer to attached note for details

PERTH AIRPORT

Site No: 009021 • Opened Jan 1944 • Still Open • Latitude: -31.9275° • Longitude: 115.9764° • Elevation 15.m

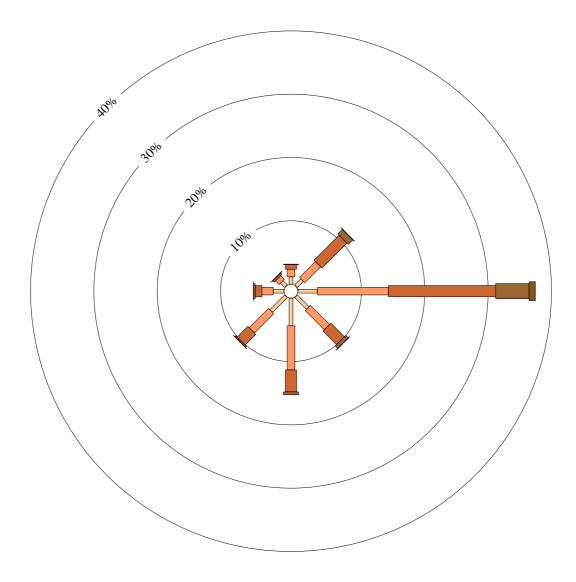
An asterisk (*) indicates that calm is less than 0.5%.

Other important info about this analysis is available in the accompanying notes.



9 am Summer 6765 Total Observations

Calm 5%





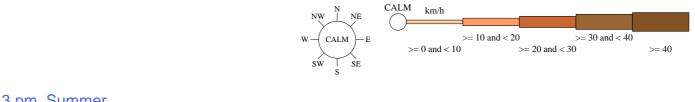
Custom times selected, refer to attached note for details

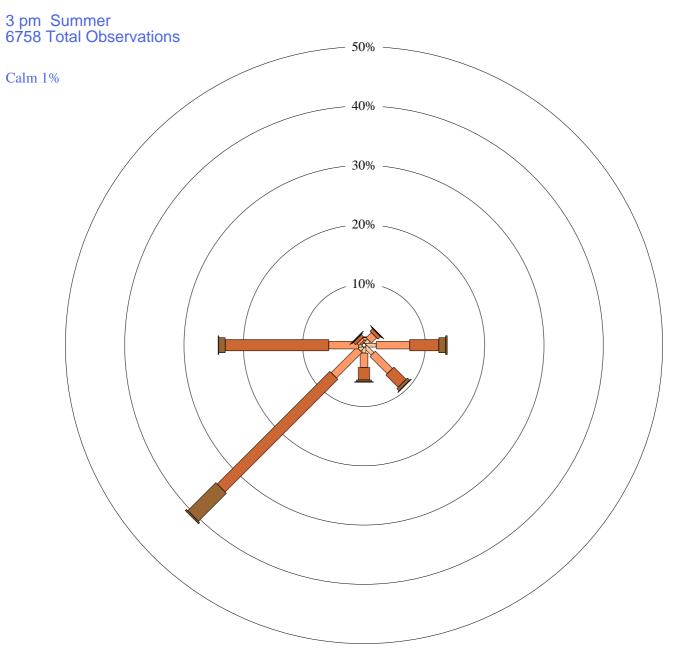
PERTH AIRPORT

Site No: 009021 • Opened Jan 1944 • Still Open • Latitude: -31.9275° • Longitude: 115.9764° • Elevation 15.m

An asterisk (*) indicates that calm is less than 0.5%.

Other important info about this analysis is available in the accompanying notes.





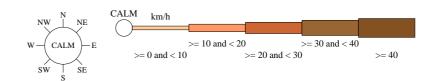
Custom times selected, refer to attached note for details

PERTH AIRPORT

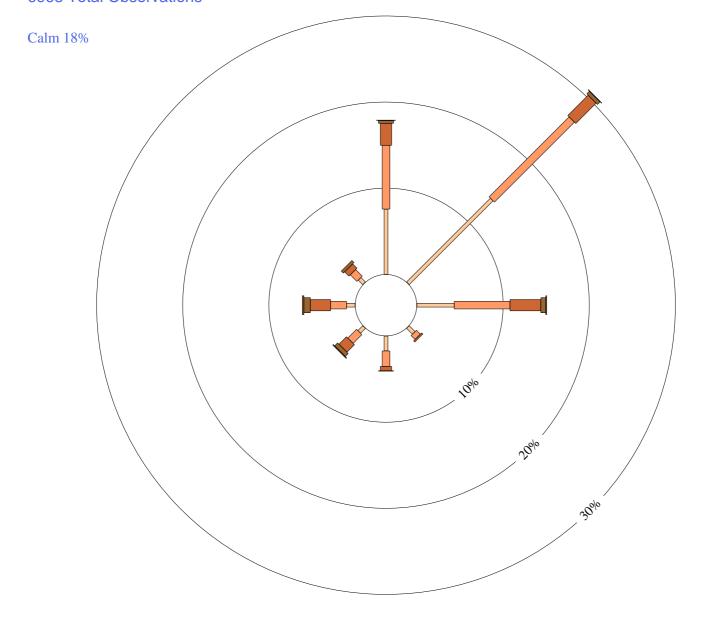
Site No: 009021 • Opened Jan 1944 • Still Open • Latitude: -31.9275° • Longitude: 115.9764° • Elevation 15.m

An asterisk (*) indicates that calm is less than 0.5%.

Other important info about this analysis is available in the accompanying notes.



9 am Winter 6968 Total Observations



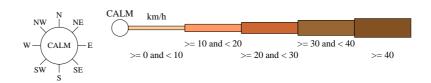
Custom times selected, refer to attached note for details

PERTH AIRPORT

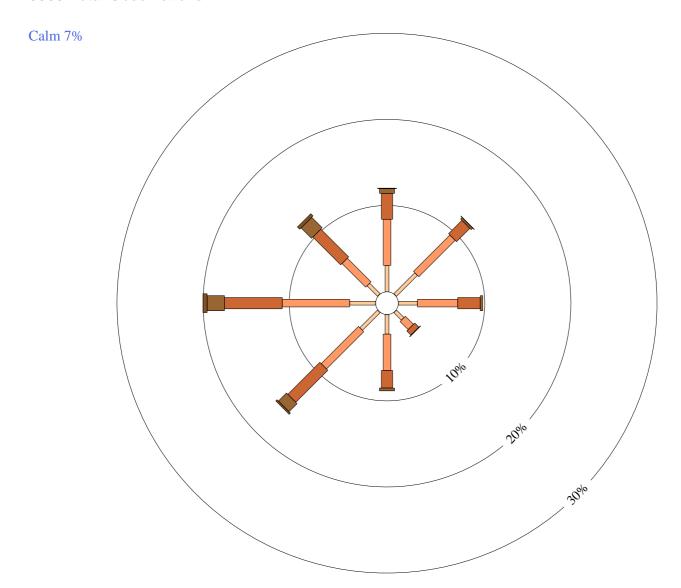
Site No: 009021 • Opened Jan 1944 • Still Open • Latitude: -31.9275° • Longitude: 115.9764° • Elevation 15.m

An asterisk (*) indicates that calm is less than 0.5%.

Other important info about this analysis is available in the accompanying notes.



3 pm Winter 6969 Total Observations







Appendix B: Understanding Your Report



UNDERSTANDING YOUR REPORT

GALT FORM PMP29 Rev3

1. EXPECTATIONS OF THE REPORT

This document has been prepared to clarify what is and is not provided in your report. It is intended to inform you of what your realistic expectations of this report should be and how to manage your risks associated with the conditions on site.

Geotechnical engineering and environmental science are less exact than other engineering and scientific disciplines. We include this information to help you understand where our responsibilities begin and end. You should read and understand this information. Please contact us if you do not understand the report or this explanation. We have extensive experience in a wide variety of projects and we can help you to manage your risk.

2. THIS REPORT RELATES TO PROJECT-SPECIFIC CONDITIONS

This report was developed for a unique set of project-specific conditions to meet the needs of the nominated client. It took into account the following:

- the project objectives as we understood them and as described in this report;
- the specific site mentioned in this report; and
- the current and proposed development at the site.

It should not be used for any purpose other than that indicated in the report. You should not rely on this report if any of the following conditions apply:

- the report was not written for you;
- the report was not written for the site specific to your development;
- the report was not written for your project (including a development at the correct site but other than that listed in the report); or
- the report was written before significant changes occurred at the site (such as a development or a change in ground conditions).

You should always inform us of changes in the proposed project (including minor changes) and request an assessment of their impact.

Where we are not informed of developments relevant to your report, we cannot be held responsible or liable for problems that may arise as a consequence.

Where design is to be carried out by others using information provided by us, we recommend that we be involved in the design process by being engaged for consultation with other members of the project team. Furthermore, we recommend that we be able to review work produced by other members of the project team that relies on information provided in our report.



3. SOIL LOGS

Our reports often include logs of intrusive and non-intrusive investigation techniques. These logs are based on our interpretation of field data and laboratory results. The logs should only be read in conjunction with the report they were issued with and should not be re-drawn for inclusion in other documents not prepared by us.

4. THIRD PARTY RELIANCE

We have prepared this report for use by the client. This report must be regarded as confidential to the client and the client's professional advisors. We do not accept any responsibility for contents of this document from any party other than the nominated client. We take no responsibility for any damages suffered by a third party because of any decisions or actions they may make based on this report. Any reliance or decisions made by a third party based on this report are the responsibility of the third party and not of us.

5. CHANGE IN SUBSURFACE CONDITIONS

The recommendations in this report are based on the ground conditions that existed at the time when the study was undertaken. Changes in ground conditions can occur in numerous ways including anthropogenic events (such as construction or contaminating activities on or adjacent to the site) or natural events (such as floods, groundwater fluctuations or earthquakes). We should be consulted prior to use of this report so that we can comment on its reliability. It is important to note that where ground conditions have changed, additional sampling, testing or analysis may be required to fully assess the changed conditions.

6. SUBSURFACE CONDITIONS DURING CONSTRUCTION

Practical constraints mean that we cannot know every minute detail about the subsurface conditions at a particular site. We use professional judgement to form an opinion about the subsurface conditions at the site. Some variation to our evaluated conditions is likely and significant variation is possible. Accordingly, our report should not be considered as final as it is developed from professional judgement and opinion.

The most effective means of dealing with unanticipated ground conditions is to engage us for construction support. We can only finalise our recommendations by observing actual subsurface conditions encountered during construction. We cannot accept liability for a report's recommendations if we cannot observe construction.

7. ENVIRONMENTAL AND GEOTECHNICAL ISSUES

Unless specifically mentioned otherwise in our report, environmental considerations are not addressed in geotechnical reports. Similarly, geotechnical issues are not addressed in environmental reports. The investigation techniques used for geotechnical investigations can differ from those used for environmental investigations. It is the client's responsibility to satisfy themselves that geotechnical and environmental considerations have been taken into account for the site.

Geotechnical advice presented in a Galt Environmental report has been provided by Galt Geotechnics under a sub-contract agreement. Similarly, environmental advice presented in a Galt Geotechnics report has been provided by Galt Environmental under a sub-contract agreement.

Unless specifically noted otherwise, no parties shall draw any inferences about the applicability of the Western Australian state government landfill levy from the contents of this document.

 $O: \ Administration \ Standard\ Forms\ and\ Documents \ \ GEPL\ Forms \ PMP29-Rev3\ Understanding\ your\ Report\ Env\ Logo. docxnote the properties of the$

Bushfire management plan/Statement addressing the Bushfire Protection Criteria coversheet

Site address: Lot 3, Kwinana Bead	ch Road, Kwinana Beach	•	AIIA			9
Site visit: Yes 🛛 No 🗌						
Date of site visit (if applicable): Date	³ y 6	Month	January		Year 2	2022
Report author or reviewer: Nath	nan Peart					
WA BPAD accreditation level (ple						
Not accredited Level 1 B	AL assessor Level 2 prac	titioner	Level 3 pra	actitioner		
If accredited, please provide the	following.					
BPAD accreditation number: 38	Accreditation expiry	: Month	May		Year	2022
Bushfire management plan versio	n number: 2					
Bushfire management plan date:		Month	January		Year 2	2022
Client/business name: Coogee		_				
				Г		
					Yes	No
Has the BAL been calculated by a (tick no if AS3959 method 1 has b			I in AS3959			\boxtimes
Have any of the bushfire protection performance principle (tick no if of bushfire protection criteria elements)	only acceptable solutions have			of the		\boxtimes
Is the proposal any of the following	g (see <u>SPP 3.7 for definitions</u>)?				Yes	No
Unavoidable development (in BA	L-40 or BAL-FZ)					\boxtimes
Strategic planning proposal (inclu	uding rezoning applications)					\boxtimes
High risk land-use						
Vulnerable land-use						
None of the above						
Note: Only if one (or more) of the or the WAPC) refer the pro	e above answers in the tables is posal to DFES for comment.	yes should	d the decision m	aker (e.g. lo	cal gove	ernment
Why has it been given one of the development is for accommodati		Considered	d vulnerable land	d-use as the		
Fuel storage site.						
The information provided within th	is bushfire management plan to	the best c	of my knowledge	is true and o	correct:	
Signature of report author or reviewer	nect.		D	ate 07.04.2	22	



Proposed commerical building at:

Kwinana Storage Tank Facility, Lot 3 Kwinana Beach Road, Kwinana

Client: Coogee



Document Control

Doc name:	oc name: Bushfire Management Plan (DA) - Kwinana Storage Tank Facility, Lot 3 Kwinana Be Road, Kwinana					
Version	Date	Author		Reviewer		
1	25.01.22	Nathan Peart	NP	Nathan Peart	NP	
ı	Initial Report					
2	07.04.22	Nathan Peart	NP	Nathan Peart	NP	
2	Update APZ refe	rence as per DFES	comments			

Disclaimer and Limitation

This report is prepared solely for the client, any future landowners of the subject lot and is not for the benefit of any other person and may not be relied upon by any other person. Bushfire Smart accepts no liability or responsibility whatsoever for or in respect of any use or reliance upon this report and its supporting material by any third party.

The mitigation strategies contained in this report are considered to be prudent minimum standards only, based on the writer's experience as well as standards prescribed by relevant authorities. It is expressly stated that Bushfire Smart and the writer do not guarantee that if such standards are complied with or if a property owner exercises prudence, that a building or property will not be damaged or destroyed by bushfire or that lives will not be lost in a bush fire. Fire is an extremely unpredictable force of nature. Changing climatic factors (whether predictable or otherwise) either before or at the time of a fire can also significantly affect the nature of a fire and in a bushfire prone area it is not possible to completely guard against bushfire.

Further, the growth, planting or removal of vegetation; poor maintenance of any fire prevention measures; addition of structures not included in this report; or other activity can and will change the bushfire threat to all properties detailed in the report. Further, the achievement of the level of implementation of fire precautions will depend on the actions of the landowner or occupiers of the land, over which Bushfire Smart has no control.

This report does not negate the need to follow Local government authority requirements for Firebreak and Fuel Hazard Reduction. The client agrees that in submitting this report they approve of and will comply with all requirements detailed.

About the author:

Bushfire Smart has been providing bushfire risk management reports and advise for over 7 years and undertake assessments of planning and land development applications to verify compliance with State Planning Policy 3.7 and associated bushfire regulations.

Nathan Peart is the bushfire lead and has over 20 years' experience in the construction and planning fields. Nathan has completed a Graduate Diploma in Bushfire Protection at the University of Western Sydney, the educational requirement to become a Level 3 Bushfire Planning and Design (BPAD) accredited practitioner. Accreditation is pending.

Nathan is supported by several other team members with varying levels of accreditation.

Bushfire Smart hold Professional Indemnity Insurance to the value of \$2,000,000 which includes cover for bushfire attack level assessments, planning, design and advice services as prescribed in FPA Australia`s Bushfire Planning and Design Accreditation Scheme for a BPAD - Level 3 practitioner.

	Author/Reviewer	
Nathan Peart	BPAD 38808	
Level 2 Bushfire Planning and Design (BPAD) Accre	rect.	
E: BAL@BushfireSmart.com.au	Ph: 9555 9444	



Executive Summary

The proposal is at Kwinana Storage Tank Facility, Lot 3 Kwinana Beach Road, Kwinana to support an application for the addition of 6 diesel storage tanks at the existing site.

The proposal is in an area that has been designated as bushfire prone and must therefore comply with State Planning Policy 3.7(SPP3.7). Guidelines for Planning Bushfire Prone Areas Version 1.4 (the Guidelines) has been used to determine the proposals compliance with SPP3.7.

The proposal does not require clearing of native vegetation.

The proposal can achieve a BAL 29 rating to all parts of the development. The tanks achieve BAL 12.5 or BAL Low after the implementation of this Bushfire Management Plan.

An assessment against the bushfire protection criteria (Appendix Four of the guidelines) is required to be undertaken. The following table summarises the outcome of this assessment

Table A.1: Summary of assessment against bushfire protection criteria

Element	Acceptable Solution	Compliance Method	Compliance notes.
1: Location	A1.1 Development location	Acceptable Solution	On completion the application will be in an area subject to a moderate to low. All structures will be BAL 29 or lower.
2: Sitting of development	A2.1 Asset Protection Zone (APZ)	Acceptable Solution	An APZ can be achieved and contained within the lot boundaries. All vegetation along verge to be maintained to APZ requirements.
	A3.1 Public Roads	Acceptable Solution	Public roads meet the minimum technical requirements of guidelines.
	A3.2a Multiple access routes	Acceptable Solution	Access is provided in at least two different directions.
	A3.2b Emergency access ways	N/A	No emergency accessways.
3: Vehicular	A3.3 Through-roads	N/A	
Access	A3.4a Perimeter roads	N/A	
	A3.4b Fire service access routes	N/A	
	A3.5 Battle axes	N/A	
	A3.6 Private driveways	Acceptable Solution	Private driveways can meet the requirements of the guidelines.
	A4.1 Identification of future water supply	N/A	
4: Water	A4.2 Provision of water for firefighting purposes	Acceptable Solution	Hydrants provided to comply with Water Corporation's No. 63 Water Reticulation Standard.



The subject lot is an existing cleared industrial site with no requirement to clear any native vegetation. The strip of vegetation bordering Patterson Road, will need to be maintained to the asset protection zone standards. The balance of vegetation creating a bushfire threat has a setback that allows a maximum BAL of 29 with only a small portion of the land classified as bushfire prone. The major bushfire threat would be a landscape fire from the south and east, which could subject the site to an ember attack. The site has good access and water provisions. The proposal is classified as a high risk land use and this BMP should be read in conjunction with the bushfire risk management plan for the site.

Compliance with this BMP, and therefore SPP3.7, will require action prior, during and after development.

The items requiring implementation include:

- Establish and maintain the Asset Protection Zone (APZ) to the dimensions and standard stated in this BMP
- Install and maintain fire fighting equipment as required
- Emergency management plan to be developed
- Requirements of the Bushfire Risk Management Plan to be implemented
- Maintain vehicular access routes to the required surface condition and clearances
- Action the ongoing training of personnel.
- Ensure ongoing implementation of Emergency Management and Bushfire Risk Management Plans

The entire report should be read in conjunction with the guidelines to ensure all requirements are understood.



Table of Contents

1	1 PROPOSAL AND SITE DETAILS	6
	1.1 Proposal Details	6
2	2 ENVIRONMENTAL CONSIDERATIONS	8
	2.1 Native vegetation – modification and clearing	
3	3 BUSHFIRE ASSESSMENT	8
	3.1 SITE ASSESSMENT	
4	4 Bushfire Hazard Issues	15
5	5 ASSESSMENT AGAINST THE BUSHFIRE PROTECTION	16
	ELEMENT 1: LOCATION ELEMENT 2: SITING AND DESIGN OF DEVELOPMENT ELEMENT 3: VEHICULAR ACCESS ELEMENT 4: WATER	16 18
6	6 IMPLEMENTATION	20
	6.1 ACKNOWLEDGEMENT	20
7	7 GENERAL REFERENCES	21
8	8 ONLINE REFERENCES	21
9	9 APPENDICES	22
Т	Table of Figures	
	Figure 1: Site Plan	
	Figure 2: Location Plan	
	Figure 3: Map of Bushfire Prone Area for Subject Site	
	Figure 4: Vegetation Classification	
Fi	Figure 5: BAL Contours (Attainable)	10



1 Proposal and Site Details

1.1 Proposal Details

Kwinana Storage Tank Facility, Lot 3 Kwinana Beach Road, Kwinana (subject lot) is an 8.11 hectare parcel presently used as a fuel storage depot within the City of Kwinana.

The proposal is for the addition of four storage tanks each of 30 million litres within terminal TTS4 area as shown below.

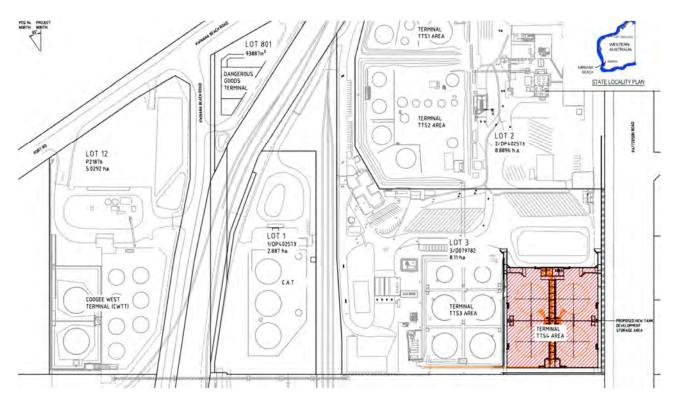


Figure 1: Site Plan





Figure 2: Location Plan



Figure 3: Map of Bushfire Prone Area for Subject Site



2 Environmental Considerations

The site is a fully cleared industrial lot, with no further clearing required, either for development or to incorporate the requirements of this BMP.

2.1 Native vegetation – modification and clearing

The site has been checked against the Native Vegetation mapping conducted by the Department of Primary Industries and Regional Development (DPIRD-005). Native vegetation has been not found on the site.

2.2 Revegetation/landscape plans

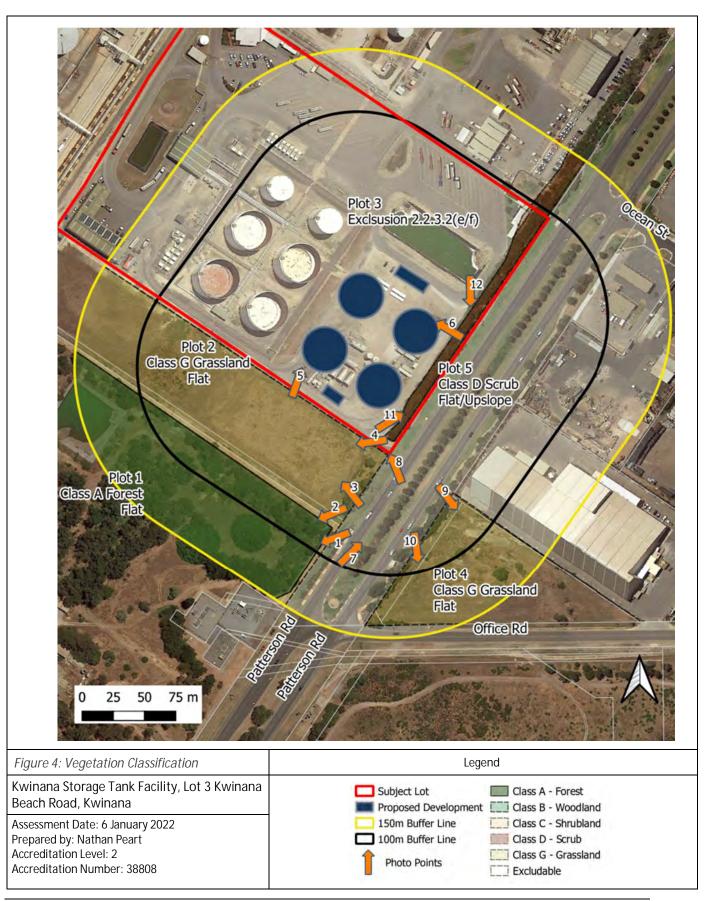
There are no revegetation or landscape plans as part of this proposal.

3 Bushfire Assessment

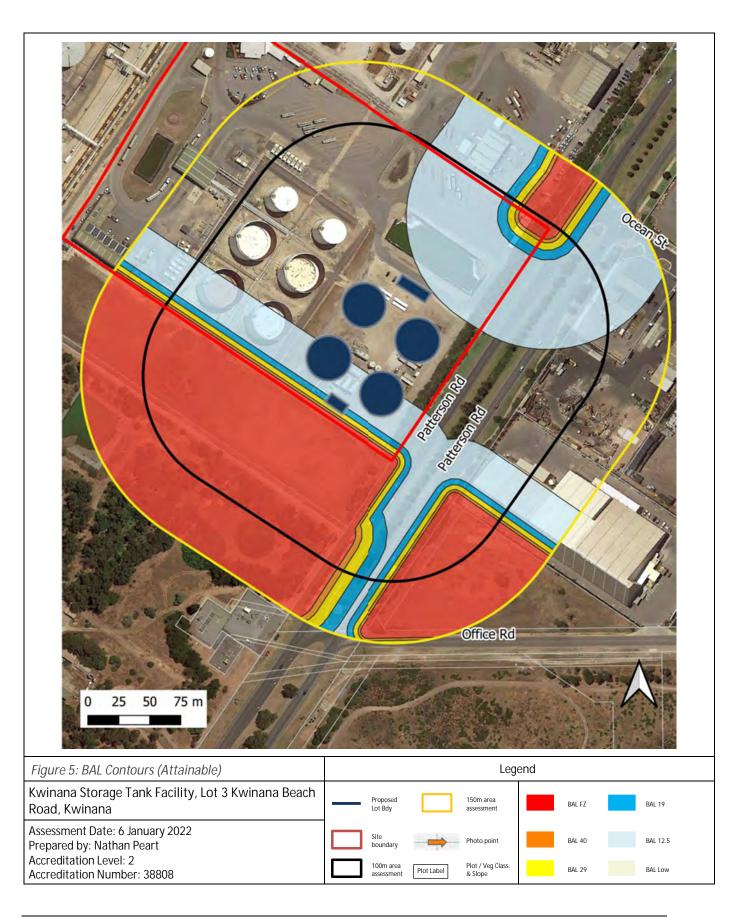
3.1 Site Assessment

The assessment of this site/development was undertaken on 6 January 2022 by a BPAD Accredited Practitioner for the purpose of determining the Bushfire Attack Level in accordance with AS 3959-2018 Simplified Procedure (Method 1).











3.2 Vegetation Classification

All vegetation within 100m of the site / proposed development was classified in accordance with Clause 2.2.3 of AS 3959-2018. Each distinguishable vegetation plot with the potential to determine the Bushfire Attack Level is identified below.







Plot:

3

Vegetation Classification or Exclusion Clause

Excludable - 2.2.3.2(e) Non Vegetated Areas

Description / Justification for Classification

Existing lot and hardstand area. Minimal vegetation.





Photo ID: 5

Photo ID: 6

Plot:

3

Vegetation Classification or Exclusion Clause

Excludable - 2.2.3.2(f) Low Threat Vegetation

Description / Justification for Classification

Maintained road verges, and road reserve. Bushes forming wind breaks or nature strips are predominantly exotic species with little effect on fire behaviour and exempt under 2.2.3.2(f)



DIRECTION 32.24882°S ACCURACY 5 m 115.77118°E DATUM WGS84

2022-01-06 12:05:50+08:00

Photo ID: 7

Photo ID: 8

Address: 71 Allnutt Street, Mandurah, 6210 Postal: PO Box 4160, Mandurah North, WA, 6210



Plot: Vegetation Classification or Exclusion Clause Class G Grassland - Open tussock G-23

Description / Justification for Classification

Vacant lot with grass greater than 100mm long.





Photo ID: 9

Photo ID: 10

Plot: Vegetation Classification or Exclusion Clause Class D Scrub - Closed scrub D-13

Description / Justification for Classification

Thick bushes 4 to 5 metres high. Bushes currently mature. Bushes on an earth mound which makes them appear





Photo ID: 11

Photo ID: 12



All vegetation within 100 metres of the site was classified in accordance with clause 2.2.3 of AS3959-2018.

The Fire Danger Index (FDI) – 80-and table 2.4.3 AS3959-2018 applied.

Potential Bushfire Impacts

The potential bushfire impact to the site / proposed development from each of the identified vegetation plots are identified below.

Plot	Vegetation Classification	Effective Slope	Separation (m)	BAL
1	Class A - Forest	Flat/Upslope	83	BAL – 12.5
2	Class G Grassland	Flat/Upslope	11	BAL – 29
3	Excludable - Clause 2.2.3.2(e)/(f)	Flat/Upslope	-	BAL – LOW
4	Class G Grassland	Flat/Upslope	87	BAL – LOW
5	Class D Scrub	Flat/Upslope	6	BAL – FZ

Table 2: BAL Analysis

Determined Bushfire Attack Level (BAL)

The Determined Bushfire Attack Level (highest BAL) for the site / proposed development has been determined in accordance with clause 2.2.6 of AS 3959-2018 using the above analysis.

Determined Bushfire Attack Level

BAL – FZ

Indicative Bushfire Attack Level (BAL)

The Bushfire Attack Level (highest BAL) for the site / proposed development can be reduced to the level indicated below with the inclusion of an Asset protection Zone as prescribed in this report as shown in the following table.

Plot	Vegetation Classification	Effective Slope	Separation (m)	BAL
1	Class A - Forest	Flat/Upslope	83	BAL – 12.5
2	Class G Grassland	Flat/Upslope	11	BAL – 29
3	Excludable - Clause 2.2.3.2(e)/(f)	Flat/Upslope	-	BAL – LOW
4	Class G Grassland	Flat/Upslope	87	BAL – LOW
5	Class D Scrub	Flat/Upslope	13M APZ	BAL – 29

Table 3: BAL Analysis with APZ requirements

Indicativa	Duchtira	ハナナったレー	$-\alpha V \alpha I$
Indicative	busi ii ii e <i>i</i>	HILAUN	LEVEL

BAL - 29



4 Bushfire Hazard Issues

The subject lot is an existing cleared industrial site with no requirement to clear any native vegetation. The strip of vegetation bordering Patterson Road, will need to be maintained to the asset protection zone standards. The balance of vegetation creating a bushfire threat has a setback that allows a maximum BAL of 29 with only a small portion of the land classified as bushfire prone. The major bushfire threat would be a landscape fire from the south and east, which could subject the site to an ember attack. The site has good access and water provisions. The proposal is classified as a high risk land use and this BMP should be read in conjunction with the bushfire risk management plan for the site.



5 Assessment against the Bushfire Protection

An assessment against the bushfire protection criteria (Appendix Four of the guidelines) is required to be undertaken for any strategic planning proposal, subdivision and development application for a site that has or will, on completion, have a bushfire hazard level above 'Low' or a BAL rating above BAL LOW. The following section details the measures to be taken so that this proposal complies with the bushfire protection criteria.

Element 1: Location

Intent:

The intent of this element is to ensure the proposal is located in the least possible risk of bushfire to facilitate the protection of people, property and infrastructure. To satisfy the intent, the proposal is required to be located in an area where the bushfire hazard assessment is or will, on completion, be moderate or low, or a BAL–29 or below, and the risk can be managed. The development is not considered to be unavoidable.

Proposed bushfire management strategies:

Element 1 will be satisfied using Acceptable Solution A1.1. The proposal is located in an area that is a moderate to low bushfire level. Additionally the proposal will be in an area that has a maximum BAL level of 29.

Element 2: Siting and design of development

Intent:

The intent of this element is to ensure that the siting and design of development minimises the level of bushfire impact.

Proposed bushfire management strategies:

An Asset Protection Zone (APZ) of 13 metres, or to the boundary (whichever is less), needs to be established. Most of the lot is cleared of bushfire prone vegetation and is predominantly hard landscaping, acting as an asset protection zone. There is a strip of vegetation along Patterson Road acting as a windbreak and screening, however the vegetation is too dense to be excluded under AS3959 2.2.3.2(f). Therefore, this vegetation will need to be reduced to comply with the asset protection guidelines as shown in schedule 1 below. The proposed structures are sufficiently offset from all other vegetation to minimise the level of bushfire impact.



Schedule 1: Standards for asset protection zones (WAPC 2021)

Object	Requirement
Fences within the APZ	Should be constructed from non-combustible materials (for example, iron, brick, limestone, metal post and wire, or bushfire-resisting timber referenced in Appendix F of AS 3959)
Fine fuel load (Combustible, dead vegetation matter <6	 Should be managed and removed on a regular basis to maintain a low threat state. Should be maintained at <2 tonnes per hectare (on average).
millimetres in thickness)	Mulches should be non-combustible such as stone, gravel or crushed mineral earth or wood mulch >6 millimetres in thickness.
Trees* (>6 metres in height)	 Trunks at maturity should be a minimum distance of six metres from all elevations of the building. Branches at maturity should not touch or overhang a building or powerline. Lower branches and loose bark should be removed to a height of two metres above the ground and/or surface vegetation. Canopy cover within the APZ should be <15 per cent of the total APZ area. Tree canopies at maturity should be at least five metres apart to avoid forming a continuous canopy. Stands of existing mature trees with interlocking canopies may be treated as an individual canopy provided that the total canopy cover within the APZ will not exceed 15 per cent and are not connected to the tree canopy outside the APZ. Figure 19: Tree canopy cover – ranging from 15 to 70 per cent at maturity
	150
Shrub* and scrub* (0.5	■ Should not be located under trees or within three metres of buildings.
metres to six metres in	Should not be planted in clumps >5 square metres in area.
height). Shrub and scrub >6	Clumps should be separated from each other and any exposed window or door by at
metres in height are to be	least 10 metres.
treated as trees.	loust to motios.
Ground covers* (<0.5 metres in height. Ground	Can be planted under trees but must be maintained to remove dead plant material, as prescribed in 'Fine fuel load' above.
overs >0.5 metres in height are to be treated as shrubs)	• Can be located within two metres of a structure, but three metres from windows or doors if >100 millimetres in height.
Grass	Grass should be maintained at a height of 100 millimetres or less, at all times.
Grass	Wherever possible, perennial grasses should be used and well-hydrated with
	regular application of wetting agents and efficient irrigation
Defendable space	Within three metres of each wall or supporting post of a habitable building, the
·	area is kept free from vegetation, but can include ground covers, grass and non-
	combustible mulches as prescribed above.
LP Gas Cylinders	 Should be located on the side of a building furthest from the likely direction of a bushfire or on the side of a building where surrounding classified vegetation is upslope, at least one metre from vulnerable parts of a building. The pressure relief valve should point away from the house. No flammable material within six metres from the front of the valve. Must sit on a firm, level and non-combustible base and be secured to a solid structure.



Element 3: Vehicular Access

Intent:

To ensure that the vehicular access serving a subdivision/development is available and safe during a bushfire event.

Proposed bushfire management strategies:

Element 2 will be satisfied using the following Acceptable Solutions:

A3.1 Public Roads

The minimum requirements under this acceptable solution are applicable to all proposed and existing public roads.

Public roads servicing this development are main transport routes that meet the minimum technical requirements in Table 6, Column 1.

A3.2a Multiple access routes

Public road access is provided in two different directions to at least two different suitable destinations with an all-weather surface (two-way access). Via Kwinana Beach Road to the south east onto Patterson Road into two different directions, or north west towards Rockingham Beach which has multiples access options.

A3.2b Emergency access way

The proposal does not include emergency access ways.

A3.3 Through-roads – Not Applicable

A3.4a Perimeter Roads – Not Applicable

A3.4b Fire service access route – Not Applicable

A3.5 Battle-axe access legs – Not Applicable

A3.5 Private Driveways

The private driveway meets the following requirements:

- requirements in Table 6, Column 4;
- specified passing bays are not required as entire driveway is constructed to allow passing.
- circular termination therefore no turnaround bay required.



Extract from Guidelines: Table 6: Vehicular access technical requirements

TECHNICAL REQUIREMENTS	1 Public roads	2 Emergency access way ¹	3 Fire service access route ¹	4 Battle-axe and private driveways ²				
Minimum trafficable surface (metres)	In accordance with A3.1	6	6	4				
Minimum horizontal clearance (metres)	N/A	6	6					
Minimum vertical clearance (metres)	4.5							
Minimum weight capacity (tonnes)	15							
Maximum grade unsealed road ³		1:10 (10%)						
Maximum grade sealed road ³	As outlined in the IPWEA	1:7 (14.3%)						
Maximum average grade sealed road	Subdivision Guidelines	1:10 (10%)						
Minimum inner radius of road curves (metres)	Guidelines	8.5						

Notes:

Element 4: Water

Intent:

To ensure that water is available to enable people, property and infrastructure to be defended from bushfire.

Proposed bushfire management strategies:

Element 4 will be satisfied using Acceptable Solutions:

A4.1 Identification of future water supply – Not Applicable

A4.1 Provision of water for firefighting purposes

Water supply for bushfire firefighting purposes will be through a reticulated water supply with hydrant connections. Fire fighting facilities within the site will be assessed by others.

To have crossfalls between 3 and 6%.

² Where driveways and battle-axe legs are not required to comply with the widths in A3.5 or A3.6, they are to comply with the Residential Design Codes and Development Control Policy 2.2 Residential Subdivision.

³ Dips must have no more than a 1 in 8 (12.5% -7.1 degree) entry and exit angle.



Implementation 6

The following tables set out the responsibilities of the developer(s), landowner(s) and local government for the initial implementation and ongoing maintenance associated with this proposal.

Management Action	Timing
Proponent/Landowner	
Establish the Asset Protection Zone (APZ) to the dimensions and standard stated in this BMP	Prior to construction
Fire extinguishers to be installed as required	Prior to occupancy
Emergency management plan to be developed	Prior to occupancy
Requirements of the Bushfire Risk Management Plan to be implemented	Prior to occupancy
Occupants	
Maintain vehicular access routes to the required surface condition and clearances	Ongoing
Maintain the Asset Protection Zone (APZ) to the dimensions and standard stated in this BMP	Ongoing
Maintain water supply including vehicular access in good condition	Ongoing
Maintain firefighting equipment	Ongoing
Action the ongoing training of personnel.	Ongoing
Ensure ongoing implementation of Emergency Management and Bushfire Risk Management Plans	Ongoing
City of Kwinana	•
Manage vegetation on verge and reserve to the south	Ongoing

Acknowledgement 6.1

Acknowledgement - Proponent

The proponent acknowledges the responsibilities as listed above and the requirement to ensure that should the land transfer to a new owner, that the new owner is aware of the BMP and their ongoing responsibility.



7 General References

WA Department of Planning 2016, Visual Guide for bushfire risk assessment in Western Australia

Standards Australia 2009, AS 3959-2018 Construction of buildings in bushfire-prone areas, Sydney

Western Australian Planning Commission (WAPC) 2015, *State Planning Policy 3.7 Planning in Bushfire Prone Areas*, Western Australian Planning Commission, Perth, Perth

Western Australian Planning Commission and (WAPC) 2021, Guidelines for Planning in Bushfire Prone Areas Version 1.4, Western Australia

8 Online references

Office of Bushfire Risk management (OBRM) 2017, Map of Bush Fire Prone Areas, Viewed January 22, < https://maps.slip.wa.gov.au/landgate/bushfireprone/>

Office of Bushfire Risk Management (OBRM), Bushfire Risk Management (BRM) Plan Guidelines, Viewed January 22.

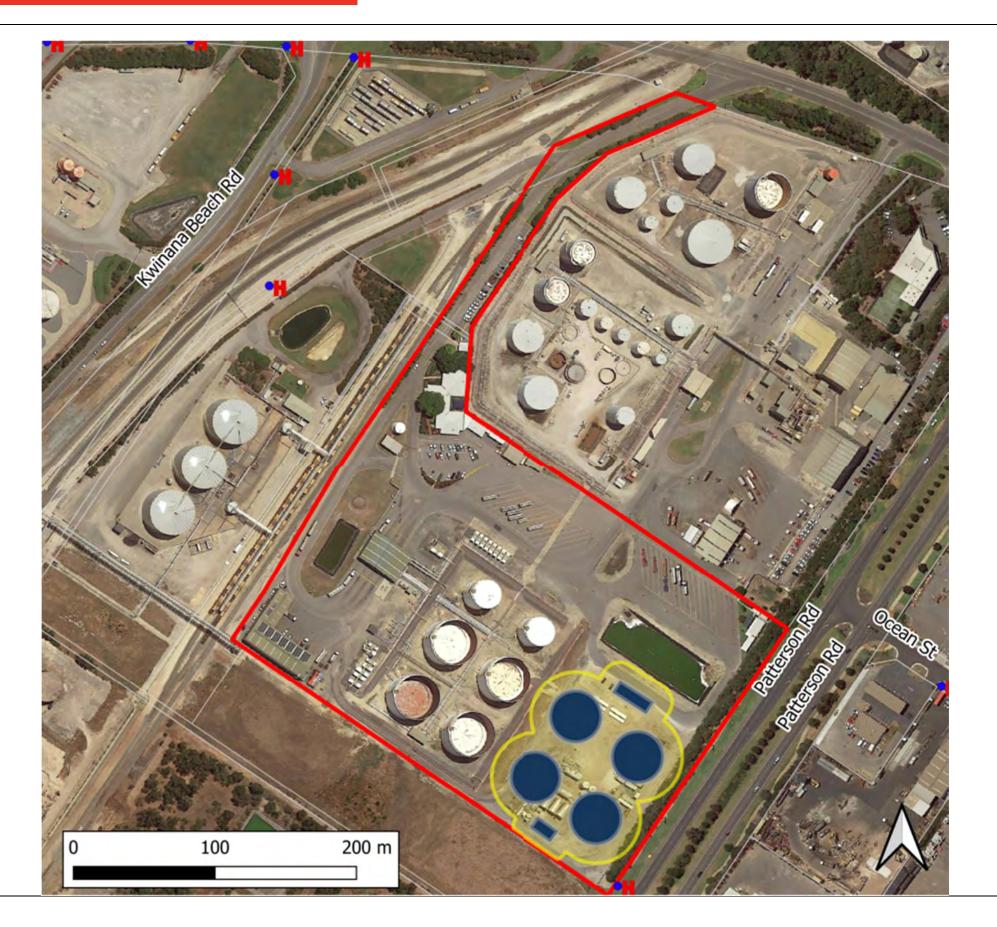
WA Local Government Association (WALGA), Environmental Planning Tool, Viewed January 22, < pbp.walga.asn.au/Tools/EnvironmentalPlanningTool.html>



9	Appendices
---	-------------------

Appendix A: Spatial Representation of proposed risk management measures (Next Page)





Legend

Subject Lot

Proposed Development

APZ

■ Water Hydrant

Bushfire Protection Criteria

APZ requirements: 13 metre APZ required (Or to boundary, whichever closer)

Driveway requirements: Existing driveway complies – no further requirements.

Water Requirements: Existing hydrants supply water for bushfire fighting purposes.

Figure 6: Spatial Representation of proposed risk management measures.

Kwinana Storage Tank Facility, Lot 3 Kwinana Beach Road, Kwinana

Assessment Date: 6 January 2022 Prepared by: Nathan Peart Accreditation Level: BPAD Level 2 Accreditation Number: 38808 Accreditation Expiry: May 2022





Project: Construction of Diesel Storage Tanks

Lot 3 Kwinana Beach

Client: Coogee

Author: Paul Nguyen

Date: 16th March 2022

Shawmac Document #:

2202012-TIA-001

CONSULTING CIVIL AND TRAFFIC ENGINEERS

1 ST. FLOOR, 908 ALBANY HIGHWAY, EAST VICTORIA PARK WA 6101.

PHONE|+61 8 9355 1300

EMAIL| admin@ shawmac.com.au





Document Status: Revised based on City comments

Version	Prepared By	Reviewed By	Approved By	Date
Α	Paul Nguyen	Ryan Needham	Paul Nguyen	10/02/2022
В	Paul Nguyen	-	Paul Nguyen	16/03/2022

Disclaimer

Although all care has been taken in the preparation of this document, Shawmac Pty Ltd and all parties associated with the preparation of this document disclaim any responsibility for any errors or omissions. Shawmac Pty Ltd reserves the right to amend or change this document at any time. This document does not constitute an invitation, agreement or contract (or any part thereof) of any kind whatsoever. Liability is expressly disclaimed by Shawmac Pty Ltd for any loss or damage which may be sustained by any person acting on this document © Shawmac Pty. Ltd. 2022 ABN 51 828 614 001

File Reference: Y:\Jobs Active 2022\T&T - Traffic & Parking\Coogee_Fuel Tank Construction_TIA_2202012\3. Documents\3.2 Reports\Coogee_Fuel Tank Construction_TIA_Rev B.docx



Contents

1.	Introduction and Background	1
1.1.	Proponent	1
1.2.	Site Location	1
1.3.	Scope	2
2.	Development Proposal	3
2.1.	Land Use	3
2.2.	Vehicle Access and Parking	4
3.	Existing Situation	5
	Road Network	5
3.2.	Changes to Surrounding Transport Networks	7
4.	Transport Assessment	8
4.1.	Assessment Parameters	8
4.2.	Traffic Generation	8
4.3.	Traffic Distribution	9
4.4.	Road Network Capacity	10
5.	Road Safety	14
5.1.	Crash History	14
6.	Impact on Cyclists	15
7	Conclusions	17



Figures

Figure 1: Site Location	1
Figure 2: Aerial View of the Site (November 2021)	2
Figure 3: Proposed Tanks Location	3
Figure 4: Vehicle Access Arrangement	4
Figure 5: Existing Road Network Hierarchy	5
Figure 6: Existing Speed Limits	6
Figure 7: Kwinana Beach Road Average Weekday Traffic (Main Roads WA)	7
Figure 8: Estimated Peak Hour Development Traffic Flows	g
Figure 9: Network Model Layout	10
Figure 10: SIDRA Intersection Capacity Analysis Results – AM Peak	11
Figure 11: SIDRA Intersection Capacity Analysis Results – PM Peak	12
Figure 12: Crash History January 2016 to December 2020	14
Figure 13: Department of Transport Long Term Cycling Network	16
Tables	
Table 1: SIDRA Intersection Capacity Analysis Results Summary	13



1. Introduction and Background

1.1. Proponent

Shawmac Pty Ltd has been engaged by Coogee to prepare a Transport Impact Assessment (TIA) for the proposed construction of new diesel storage tanks at the Kwinana Terminal in Kwinana Beach. As requested by the City of Kwinana, the TIA will primarily assess the traffic impact of the construction phase of the project which is expected to last a period of 20 months from February 2022 to September 2023.

Once completed, the diesel tanks will only provide additional strategic storage. No additional gantry loading capacity is proposed and so the tanks will not generate any additional traffic once operational.

1.2. Site Location

The site is located on the corner of Patterson Road and Kwinana Beach Road in Kwinana Beach. The Local Authority is the City of Kwinana. The site location is shown in Figure 1. An aerial view of the existing site is shown in Figure 2.



Figure 1: Site Location





Figure 2: Aerial View of the Site (November 2021)

1.3. Scope

This TIA has been prepared in accordance with the Western Australian Planning Commission's (WAPC) *Transport Impact Assessment Guidelines*. According to the TIA guidelines, the key objectives of a TIA are to:

- assess the proposed internal transport networks with respect to accessibility, circulation and safety for all modes, that is, vehicles, public transport, pedestrians and cyclists;
- assess the level of transport integration between the development and the surrounding land uses;
- determine the impacts of the traffic generated by the development on the surrounding land uses; and
- determine the impacts of the traffic generated by the development on the surrounding transport networks.



2. Development Proposal

2.1. Land Use

The proposal is to construct additional fuel storage tanks at Terminal 4 and 5 in the southern corner of the site as shown in Figure 3.

Construction is expected to last a period of about 20 months starting February 2022 and ending September 2023. Construction will occur 6 days per week (Monday to Saturday) from 6am to 5pm.



Figure 3: Proposed Tanks Location



2.2. Vehicle Access and Parking

Construction of the tanks will involve a range of contractor and construction vehicles, including concrete trucks, concrete booms, Franna crane trucks and semi-trailers.

All construction traffic will access the site via Patterson Road, Kwinana Beach Road and then Gate 3 immediately prior to the rail crossing. All construction traffic will then leave the site via Gate 2.

Coogee will allocate additional parking areas for contractor vehicles within the site in a location to be determined.

The proposed vehicle access and parking layout is shown in Figure 4.

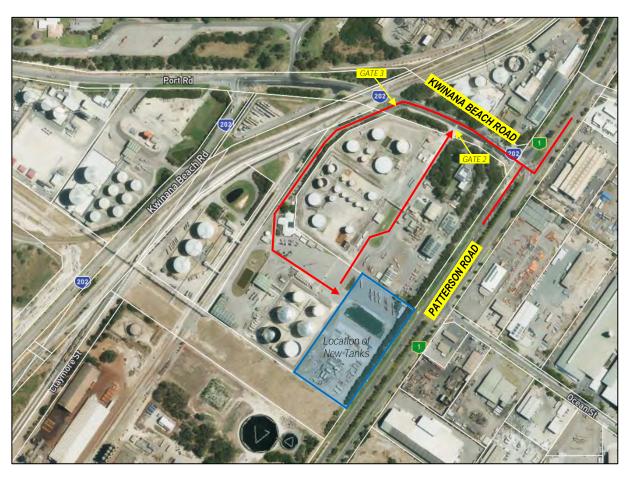


Figure 4: Vehicle Access Arrangement



3. Existing Situation

3.1. Road Network

3.1.1. Layout and Hierarchy

The layout and hierarchy of the existing local road network according to the Main Roads WA Road Information Mapping System is shown in Figure 5.

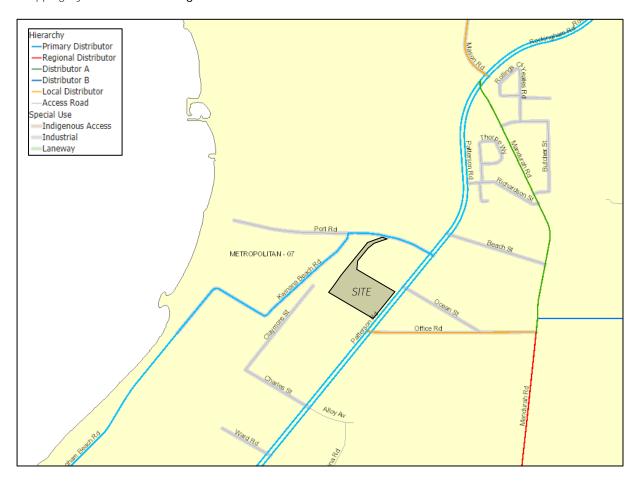


Figure 5: Existing Road Network Hierarchy

As shown, Patterson Road and Kwinana Beach Road are both Primary Distributor roads which are controlled by Main Roads WA.



The existing speed limits are shown in Figure 6.



Figure 6: Existing Speed Limits



3.1.2. Traffic Counts

The latest traffic counts along Kwinana Beach Road west of Patterson Road were obtained from the Main Roads WA *Traffic Map*.

The Average Weekday Traffic (AWT) is shown in Figure 7.

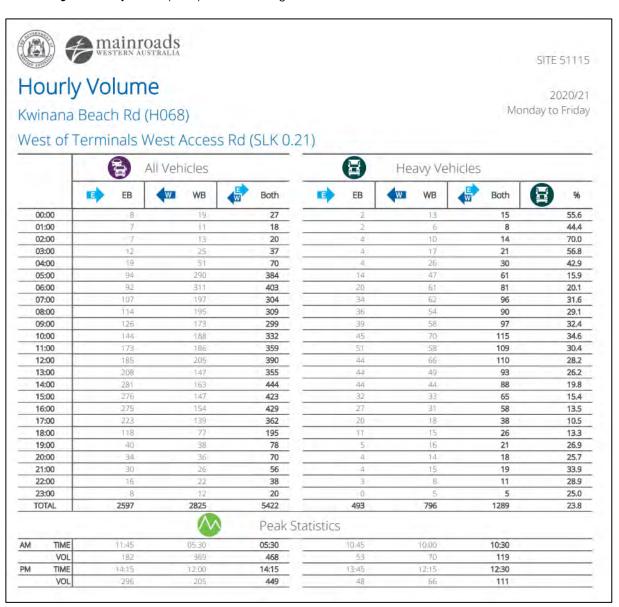


Figure 7: Kwinana Beach Road Average Weekday Traffic (Main Roads WA)

3.2. Changes to Surrounding Transport Networks

The surrounding road network is reasonably well established and there are no known major changes planned.



4. Transport Assessment

4.1. Assessment Parameters

Construction is planned to commence each day at around 6am which coincides with the morning peak hour on the road network which is from 6 to 7am. Therefore, the critical morning peak hour for assessment would be the road network peak hour.

According to the traffic count data at the Patterson Road / Kwinana Beach Road intersection, the afternoon peak hour on the road network is from 4 to 5pm. As construction is planned to end at around 5pm, most construction traffic movements will occur after the road network peak. Regardless, it is assumed conservatively that the peak period of construction traffic coincides with the road network peak in the event that the shift times vary on different days.

As above, the time periods adopted for assessment are the weekday morning and afternoon peak hours on the adjacent road network which are from 6 to 7am and from 4 to 5pm.

4.2. Traffic Generation

The expected number of contractor and construction vehicles has been provided by the client.

The number of contractor vehicles increases gradually up to January 2023 and then gradually decreases over the remainder of the construction period. In January 2023, the peak number of contractors on-site is estimated to be 95 vehicles per day (vpd) with most arriving during the morning peak and then leaving during the afternoon peak.

The number of construction vehicles is summarised as follows:

- Concrete trucks average 2 per day, up to 25 per day once a month. Typically arrive early around 4am and leave by mid-day.
- Concrete booms average 2 per day.
- Crane trucks average 2 per day.
- Semi-trailers average 4 per day.
- Light vehicles average 5 per day.

It is understood that the majority of construction vehicles will arrive and leave outside of the peak hours.

Based on the above, the maximum daily traffic generation is estimated to be 133 vpd including 100 light vehicles and 33 heavy vehicles.

The peak hour traffic generation is estimated to be 100 vehicles per hour (vph) being all inbound during the morning peak and all outbound during the afternoon peak. It is conservatively assumed that all light construction vehicles arrive and leave during the peak hours.



4.3. Traffic Distribution

The majority of vehicles are likely to travel to and from the site via Patterson Road and it is assumed that construction traffic is split evenly in both direction on Patterson Road

Based on the layout of the road network, the estimated increase in peak hour traffic flows on the road network and through the site crossovers is shown in Figure 8.

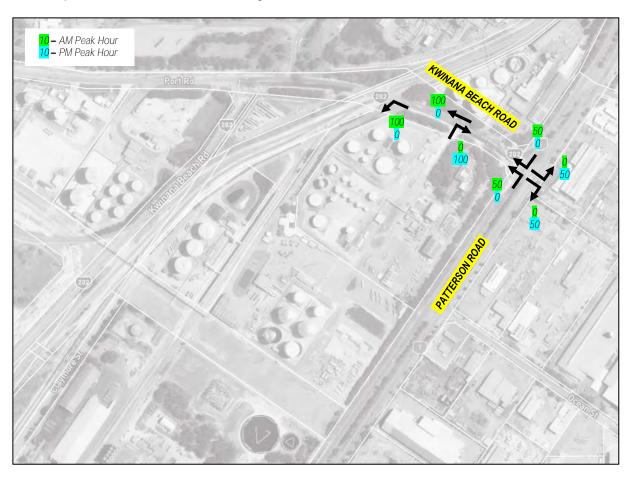


Figure 8: Estimated Peak Hour Development Traffic Flows



4.4. Road Network Capacity

A peak hour capacity analysis has been undertaken in SIDRA Intersection 9.0 for the Patterson Road / Kwinana Beach Road traffic signals.

The peak hour traffic flows, signal phasing, average cycle times and other key inputs were derived from Main Roads WA SCATS signal data and the model has been set up according to Main Roads WA's Operational Modelling Guidelines.

The modelled layout is shown in Figure 9. The southbound through lanes on Patterson Road were not included in the model as this movement is unsignalised and has negligible impact on the intersection capacity.

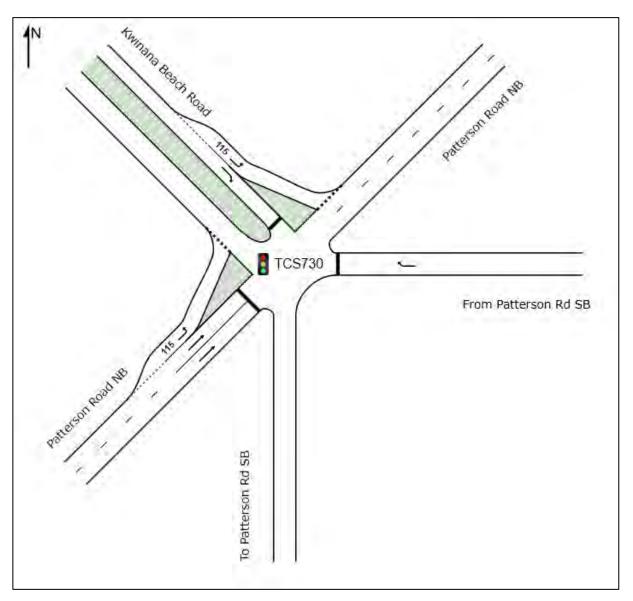
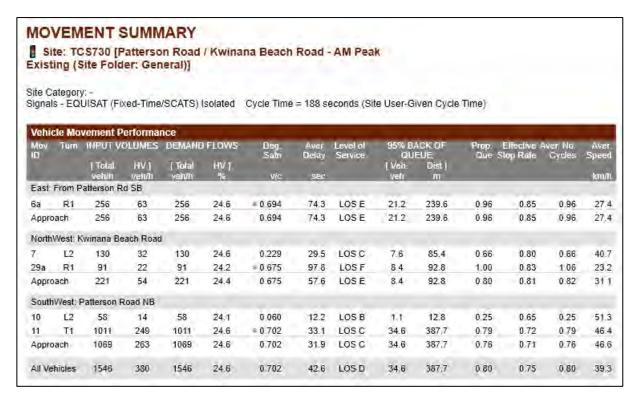


Figure 9: Network Model Layout



The results of the assessment are shown in Figure 10 and Figure 11 and summarised in Table 1.



MO	VEIV	ENT	SUMIN	IARY										
					/ Kwina Genera	na Béach [)]	Road -	AM Pea	k with					
	ategory s - EQI		xed-Time	/SCATS)	Isolated	Cycle Time	= 188 s	econds (Si	te User-G	iven Cycle	Time)			
Vehic	de Mo	rement P								-			-	
Mov	Tum	INPUT V	OLUMES	DEMANE	FLOWS	Deg. Satn	Aver. Delav	Level of Service		ACK OF FUE	Prop.	Effective / Stop Rate	Aver, No. Cycles	Ave Spee
		[Total veh/h	HV] weh/h	[Total veh/h	₩ HVI	vic	sec	- to the	[Vah. veh	Dist]	ane	101794210	-1:	km/h
East:	From P	atterson R	d SB											
6a	R1	306	113	306	36.9	* 0.729	72.3	LOSE	25.3	268.0	0.97	0.86	0.97	26.
Appro	ach	306	113	306	36.9	0.729	72.3	LOSE	25.3	268.0	0.97	0.86	0.97	26
North	West: K	winana Be	ach Road	R										
7	L2	130	32	130	24.6	0.222	30.1	LOSC	7.4	83.2	0.64	0.80	0.64	40
29a	R1	91	22	.91	24.2	* 0 713	100.0	LOSF	8.6	94.2	1.00	0.84	1.10	22.
Appro	ach	221	54	221	24.4	0.713	58.9	LOSE	8.6	94.2	0.79	0.82	0.83	30
South	West: F	atterson F	Road NB											
10	L2	108	64	108	59.3	0.102	14.0	LOS B	2.6	23.8	0.29	0.66	0.29	44.
11	T1	1011	249	1011	24.6	≈ 0.726	35.5	LOSD	36.1	404.2	0.81	0.74	0.81	45.
Appro	ach	1119	313	1119	28.0	0 726	33.4	LOSC	36.1	404.2	0.76	0.73	0.76	45.
	hicles	1646	480	1646	29.2	0.729	44.1	LOSD	36.1	404.2	0.81	0.77	0.81	37.

Figure 10: SIDRA Intersection Capacity Analysis Results - AM Peak



MOVEMENT SUMMARY

Site: TCS730 [Patterson Road / Kwinana Beach Road - PM Peak Existing (Site Folder: General)]

Mov	v Tum		OLUMES	DEMANE	FLOWS	Deg. Sain	Aver. Delay	Level of Service		ACK OF EUE	Ргор. Оше	Effective / Stop Rate	Aver No Cycles	Aver. Speed
		(Total velvir	HV] ven/h	[Total veh/h	HVj %	V/C	sec		[Veh veh	Dist j m			-	km/h
East	From P	atterson R	d SB											
6a	R1	346	85	346	24.6	≈ 0.714	59.1	LOS E	24.9	279.8	0.93	0.86	0.93	30.9
Appro	ach	346	85	346	24.6	0.714	59.1	LOSE	24.9	279.8	0.93	0.86	0.93	30.9
North	West: K	winana Be	each Road	1										
7	L2	214	53	214	24.8	0.307	25.1	LOS C	9.4	105.4	0.58	0.81	0.58	42,7
29a	R1	107	26	107	24.3	≈ 0.719	89.3	LOSF	9.1	100.4	1.00	0.85	1.10	24.6
Appro	ach	321	79	321	24.6	0.719	46.5	LOS D	9.4	105.4	0.72	0.82	0.76	34,3
South	West: F	atterson F	Road NB											
10	L2	31	7	31	22.6	0.034	14.0	LOSB	0.7	7.0	0.30	0.65	0.30	50.4
11	T1	848	209	848	24.6	+ 0 709	41.1	LOS D	28.5	319.2	0.87	0.78	0.87	42.
Appro	ach	879	216	879	24.6	0.709	40.1	LOS D	28.5	319.2	0.85	0.78	0.85	42.
All Ve	hicles	1546	380	1546	24.6	0.719	45.7	LOSD	28.5	319.2	0.84	0.81	0.85	37.

MOVEMENT SUMMARY

Site: TCS730 [Patterson Road / Kwinana Beach Road - PM Peak with Construction Traffic (Site Folder: General)]

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 170 seconds (Site User-Given Cycle Time)

Mov ID	Tum	ALCOHOLD STATE OF THE PARTY OF		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Ргор. Оше	Effective Aver Stop Rate C	Aver No Cycles	Aver. Speed
		(Total HV) veh/h veh/h	Total veh/h	HV]	v/c	Sec		[Veh Dist]				km/h		
East	From P	atterson F	ld SB											
6a	R1	346	85	346	24.6	-0.740	61.0	LOSE	25.4	285.2	0.95	0.87	0.95	30.
Appro	ach	346	85	346	24.6	0.740	61.0	LOSE	25.4	285.2	0.95	0.87	0.95	30.
North	West: K	winana B	each Road											
7	L2	264	103	264	39.0	0.348	27.1	LOS C	11.2	116.2	0.58	0.83	0.58	40.1
29a	R1	157	76	157	48.4	≠ 0.727	84.0	LOSF	13.0	126.6	1.00	0.86	1.07	24.
Appro	ach	421	179	421	42.5	0.727	48.3	LOS D	13.0	126.6	0.74	0.84	0.77	32
South	West: F	atterson I	Road NB											
10	L2	31	7	31	22.6	0.033	14.0	LOS B	0.7	7.0	0.30	0.65	0.30	50.
11	T1	848	209	848	24.6	= 0.749	44.7	LOS D	29.8	333.8	0.91	0.82	0.91	40,
Appro	ach	879	216	879	24.6	0.749	43.6	LOS D	29.8	333.8	0.89	0.81	0.89	40.
All Ve	hicles	1646	480	1646	29.2	0.749	48.5	LOS D	29.8	333.8	0.86	0.83	0.87	35

Figure 11: SIDRA Intersection Capacity Analysis Results – PM Peak



Table 1: SIDRA Intersection Capacity Analysis Results Summary

Intersection	Scenario	DOS	Average Delay	Worst Delay	Maximum Queue	Average LOS	Worst LOS
	AM Peak - Existing	0.702	42.6s	97.8s	387.7m	D	F
Patterson Road /	AM Peak - Construction	0.729	44.1s	100.0s	404.2m	D	F
Kwinana Beach Road	PM Peak - Existing	0.719	45.7s	89.3s	319.2m	D	F
	PM Peak - Construction	0.749	48.5s	84.0s	333.8m	D	F

Under the existing scenario, the intersection is modelled as operating mostly within capacity during both peak hours but the following is noted:

- The right turn from Patterson Road operates at Level of Service E as the average delay of 74.3 seconds is longer than the desirable value of 65 seconds. As this is a major intersection between two primary distributor roads in a major industrial area, the longer than standard delay is generally accepted. It is also noted that the 95th percentile queue for this movement is approximately 240 metres which is longer than the available turn lane. However in this case, there are two southbound through lanes and so the through traffic is not completely blocked.
- The right turn onto Patterson Road operates at Level of Service F as the average delay is 97.8 seconds which is also beyond the desirable value of 65 seconds and the same justification as above is applicable for this movement. It is noted that the degree of saturation is below the threshold of 0.9 which may indicate that the delay is due to high volumes of traffic on opposing movements and a high percentage of longer heavy vehicles.

With the addition of the construction traffic, the peak hour intersection performance is largely the same and the modelled increases in delays and queues are marginal. On this basis, the increase in traffic resulting from the construction of the fuel tanks does not warrant any modifications to the road network.

It is further noted that the accuracy of intersection modelling is likely to decrease where there is a high number of heavy vehicles and a wide range of vehicles sizes. The intersection and adjacent section of Kwinana Beach Road has recently been upgraded to improve the geometry for heavy vehicles and it is likely that the actual peak hour operation will have improved or will be improved.



5. Road Safety

5.1. Crash History

The crash history of the adjacent road network was obtained from the MRWA Reporting Centre. The search included the length of Kwinana Beach Road between Patterson Road and Port Road.

A summary of the recorded incidents over the five-year period ending December 2020 is shown in Figure 12.

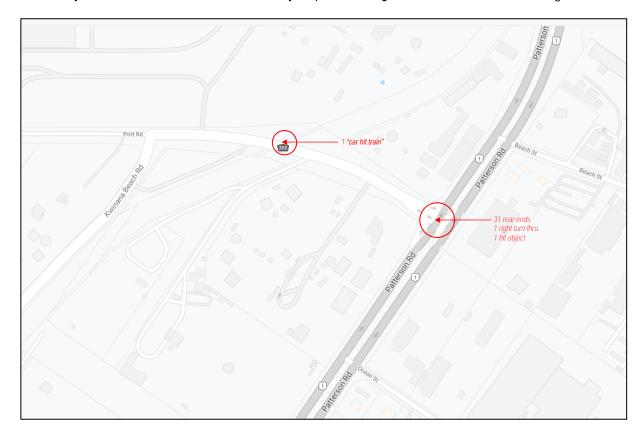


Figure 12: Crash History January 2016 to December 2020

As shown, crashes have occurred at the Patterson Road / Kwinana Beach Road intersection. The majority of these crashes are rear end crashes which are common at major signalised intersections. The number of crashes appear to be proportional to the traffic volumes through the intersection and a review of the crash details indicates that the yearly number of crashes has not changed significantly.

As mentioned previously, the intersection was recently upgraded to improve geometry for heavy vehicles which is likely to make the intersection safer.

The proposed construction activities itself will only generate a moderate volume of traffic for a relatively discrete period of 20 months and there is no indication that the development would increase the risk of crashes unacceptably.



6. Impact on Cyclists

The City of Kwinana has requested consideration of the impacts to cyclists as many cyclists ride through the area, particularly on weekends.

It is noted that Patterson Road, Kwinana Beach and the signalised intersection of these two roads already carry relatively high traffic volumes. The predicted increase in traffic volumes generated by the proposed construction activities (133 vehicles per day) represent a relatively low percentage of the existing traffic volumes (approximately 2.5% of the traffic volume along Kwinana Beach Road and even less on Patterson Road. This increase is unlikely to result in a noticeable impact on cyclist movements in the area beyond the current scenario. The following is also noted:

- The construction period is temporary, lasting approximately 20 months (ending September 2023). After construction, the site generated traffic will reduce to pre-construction levels.
- The 133 vehicles per day is based on the peak month during the construction phase. For the majority of the construction phase, less vehicles are expected. The contractor vehicles make up the majority of the construction traffic movements with approximately 95 contractors expected in January 2023. For 9 of the 20 months, the number of contractors will be less than 50% of the peak month.
- The majority of heavy construction vehicle movements are expected outside of peak periods when there
 is likely to be less cyclist activity.
- Construction activities will not occur on Sundays and so there will be no impact to cyclists on Sundays.
- Kwinana Beach Road is not included on the Department of Transport's Long Term Cycling Network which is shown in Figure 13.



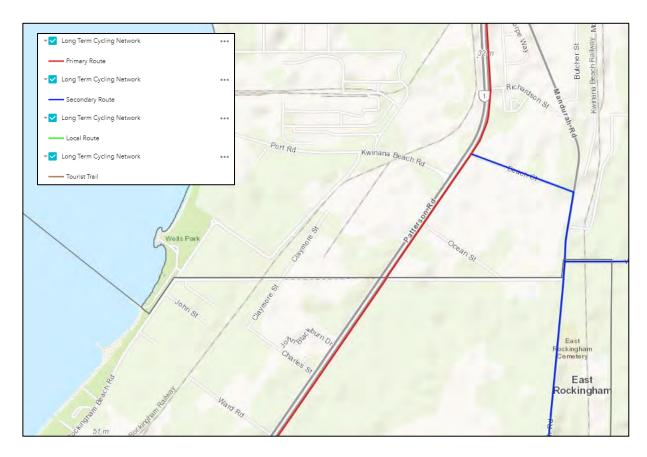


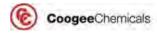
Figure 13: Department of Transport Long Term Cycling Network



7. Conclusions

The Transport Impact Assessment for the proposed construction of new fuel storage tanks at the Coogee Kwinana Terminal concluded the following:

- The maximum daily traffic generation during the 20-month construction period is estimated to be 133 vpd including 100 light vehicles and 33 heavy vehicles.
- The peak hour traffic generation is estimated to be 100 vehicles per hour (vph) being all inbound during
 the morning peak and all outbound during the afternoon peak. The majority of heavy vehicle movements
 occur outside of the peak hours of the road network.
- A peak hour capacity analysis of the Patterson Road / Kwinana Beach Road signalised intersection indicates that the intersection is currently operating mostly within capacity except for the right turn movements which are modelled as experiencing delays longer than the desirable 65 seconds. The longer delays are considered acceptable as the intersection is located on the junction of two primary distributor roads within an industrial area where high volumes of heavy vehicles (and therefore delays) are expected by other drivers.
- With the addition of the construction traffic, the peak hour intersection performance is largely the same
 and the anticipated increases in delays and queues are marginal. On this basis, the increase in traffic
 resulting from the construction of the fuel tanks does not warrant any modifications to the road network.
- Numerous crashes have occurred at the Patterson Road / Kwinana Beach Road intersection. The
 majority of these crashes are rear end crashes which are common at major signalised intersections. The
 number of crashes appear to be proportional to the traffic volumes through the intersection. The
 intersection was recently upgraded to improve geometry for heavy vehicles which is likely to make the
 intersection safer.
- The proposed construction activities will only generate a moderate volume of traffic for a relatively discrete period of 20 months and there is no indication that the development would increase the risk of crashes unacceptably.
- The construction activities are unlikely to result in a noticeable impact on cyclist movements in the area beyond the current traffic volumes.



HAZARD IDENTIFICATION AND RISK ASSESSMENT

ATTACHMENT 11

Revision	A
Workshop	HAZID for Coogee Terminal 4 Expansion – for the Joint Development Assessment Panel
detail	

Participant	Role	Date
Vic Origlio	Project Engineer	27/01/2022
David Orchard	Process Safety Leader	27/01/2022
Justin Sirrell	Construction Supervisor	27/01/2022

RISK ASSESSMENT SCOPE

Note – Minutes have been recorded against the Coogee's standard HAZID guidewords for Joint Development Assessment Panel submissions.

The scope of this HAZID are the new hazards and/or increased risks associated with the construction and operation of Terminal 4, which will comprise 4x tanks storing combustible liquids (in a separate area/bund to the existing chemicals stored onsite). The screening criteria for a Major Incident Event is that the event must:

- Have a potential consequence of permanent disability or fatality; and
- Involve Schedule 1 materials.

No Major Incident Events were identified during the risk assessment process.

Study inputs included the below:

- Proposed layout of facility, outlined in Figure 1;
- Chemicals Safety Data Sheet;
- · Previous risk assessments for the storage of similar chemicals; and
- Experience of the study team.

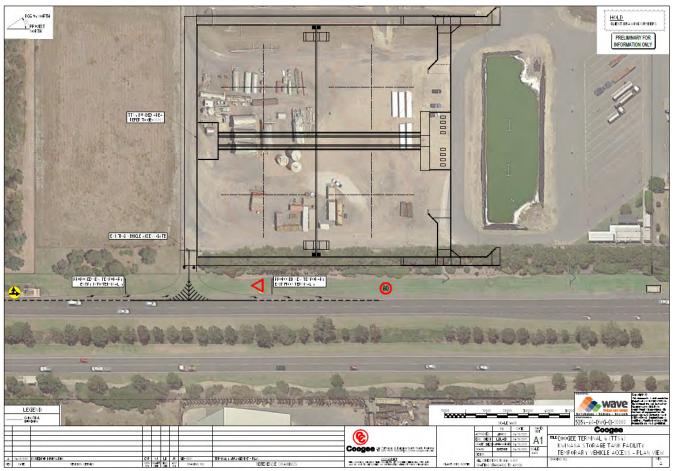
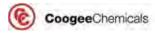


Figure 1: Layout of combustible storage facility



HAZARD IDENTIFICATION AND RISK ASSESSMENT

A review of the MSDS for hazard properties of the chemical/s to be stored or handled in bulk, yielded the below:

Diesel

- Combustible liquid;
- Incompatible with strong acids, halogens, alkalis, strong oxidisers.

Coogee's risk matrix (Figure 2) was used in providing an assessment of risk consequences and likelihoods.

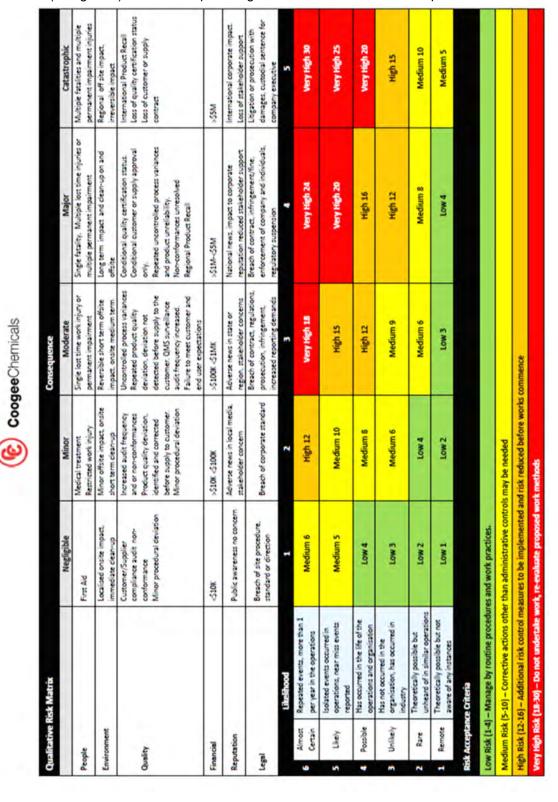
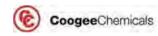
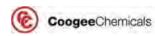


Figure 2: Coogee's risk matrix



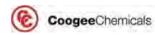
Item	Guideword	Hazard	Consequences	Consequence Level	Frequency Level	Risk Level	MIE Reference Details	Measures / Actions reducing risk	Consequence Level	Frequency Level	Risk Level
1	Geographical considerations / abnormalities	No new impact.									
2	Population Proximity	No new impact.						 The expansion is for an existing plant located within a designated industrial park. No population other than personnel at other industrial facilities is potentially affected by the expansion. 			
3	Surrounding Land Use	Potential for impact on people using nearby roads in the event of a tank fire.	Potential impact to people driving.	Major 4	Rare 2	Medium 8	Not applicable.	 Only combustibles to be stored in tanks, making a tank-on-fire scenario extremely unlikely; Existing site fire prevention and mitigation strategies to be used for Terminal 4. Minimum distances to protected places to be incorporated in design, in accordance with AS1940. 	Major 4	Rare 2	Medium 8
4	Potential Impact on Neighbouring Facilities	No new impact.						4) Regulatory approvals will be obtained from DMIRS, DWER and the City of Kwinana.5) Related risk studies (e.g. HAZOP, LOPA and/or QRA) will be updated to confirm that risk contours do not exceed national guidelines.			
5	Infrastructure	No new impact.						All new infrastructure will be located within Coogee's lease boundaries.			
6	Normal Communications	No new impact.									
7	Emergency Communications	Project/construction personnel do not take correct action in the event of an emergency situation.	Credible, worst-case result is that in the event of an emergency, a permanent disability or fatality results.	Major 4	Remote 1	Low 4	Refer to all MIEs specifically addressing causes of Loss Of Containment of Schedule 1 substances. (Not a new MIE).	6) Ensure Construction Safety Management Plan supplements emergency response procedure for project/construction personnel in the event of an emergency.	Major 4	Remote 1	Low 4
8	Access	Plant access frequency by vehicles will be increased.	Increased traffic may increase the risk of traffic incident.	Major 4	Unlikely 3	High 12	Not applicable.	7) Ensure Construction Safety Management Plan addresses access and egress for all project traffic. 8) Have a Traffic Impact Assessment conducted by a third party, and address any areas of concern.	Major 4	Rare 2	Medium 8
9	Environmental Conditions	Possible increased dust in area.	Impact on Patterson Road and reduced visibility on road, contributing to traffic incident.	Moderate 3	Unlikely 3	Medium 9	Not applicable.	9) Dust management plan to be put in place.	Minor 1	Unlikely 3	Low 3
10	Extreme weather /cyclone/monsoon	High winds during construction.	Failure of tanks during construction.	Catastrophic 5	Unlikely 3	High 15	Not applicable.	 10) Ensure CB&I implement new stiffening system during construction. 11) Confirm CB&I are prepared in advance for adverse wind conditions (e.g. by employing own meteorologist to advise on such weather). 12) Confirm that project is adequately insured to protect Coogee against this type of loss. 	Moderate 3	Rare 2	Medium 6
11	Extreme weather /cyclone/monsoon	Heavy rain during construction.	Construction delays and dewatering required, resulting in additional costs.	Moderate 3	Possible 4	High 12	Not applicable.	13) Storm Water Management Plan put in place to dewater in the event of a heavy rain event.	Moderate 3	Possible 3	Medium 9
12	Prevailing wind direction	Refer to item 9 (possible increase in dust).									
13	Lightning or highly static environmental conditions	No new impact.									
14	Subsidence	Subsidence of ground and subsequent	Structural issues with tanks and/or failures relating to inadequate groundwork.	Catastrophic 5	Unlikely 3	High 15	Not applicable.	14) Existing geotechnical survey conducted on the footprint of the new terminal to ensure ground stability due to imposed loads from tank.	Catastrophi c 5	Remote 1	Medium 5
15	Seismic activity	No new impact.									
16	Tsunami	No new impact.									



Item	Guideword	Hazard	Consequences	Consequence Level	Frequency Level	Risk Level	MIE Reference Details	Measures / Actions reducing risk	Consequence Level	Frequency Level	Risk Level
17	Radioactivity	Increased frequency of radiography on site.	Health impacts to personnel inadvertently exposed to radiation.	Moderate 3	Unlikely 3	Medium 9	Not applicable.	15) Ensure NDT radiography on pipe welds is managed via existing Permit to Work system.16) Reduce NDT as practicable, by ensuring majority of pipe work will be plastic.	Moderate 2	Unlikely 3	Medium 6
18	Man Made	Refer to item 9 (possible increase in dust).									
19	Man Made	Refer to item 11 (storm water removal).									
20	Security	Unauthorised access to plant achieved via construction access.	Greater potential for personnel to be harmed in plant.	Moderate 3	Unlikely 3	Medium 9	Not applicable.	 17) Consider additional security monitoring via cameras or security guards. 18) Consider erecting temporary construction fencing to separate construction area from plant areas (i.e. to be left in place until pre-commissioning for tie-ins, de-isolation etc.) 19) Confirm contractor processes are in place to reduce the likelihood of successful theft. 	Moderate 3	Rare 2	Medium 6
21	Security	Active thieves operating in area with potential to cause significant damage/costs/delays.	Damage to plant, loss of equipment and delays to project	Moderate 3	Likely 5	High 15	Not applicable.	 17) Consider additional security monitoring via cameras or security guards. 18) Consider erecting temporary construction fencing to separate construction area from plant areas (i.e. to be left in place until pre-commissioning for tie-ins, deisolation etc.) 19) Confirm contractor processes are in place to reduce the likelihood of successful theft. 	Moderate 3	Possible 4	High 12
22	Third party intervention	No new impact.									
23	Environmental Impact	No new impact.									
24	Discharges to air	No new impact.									
25	Uncontrolled discharges to water and soil	No new impact.									
26	Potential cross contamination	No new impact.									
27	Process upset conditions	No new impact.									
28	Waste Disposal	Disposal of general construction waste generated during construction.	Potential for environmental impact if disposal methods are inadequate.	Minor 2	Possible 4	Medium 8	Not applicable.	20) Ensure skip bins are provided on-site for proper disposal of general waste.	Minor 2	Rare 2	Low 4
29	Waste Disposal	Disposal of construction toilet waste.	Potential for environmental impact if disposal methods are inadequate.	Minor 2	Possible 4	Medium 8	Not applicable.	21) Ensure self-contained toilets are provided on site.22) Ensure toilets are routinely pumped out with a vac-truck.23) Ensure waste is disposed of at an appropriate off-site disposal facility.	Minor 2	Rare 2	Low 4
30	Material and Equipment	General construction equipment (cranes, EWPs, earth-moving equipment)	Personnel/vehicle interaction resulting in serious injury or death.	Major 4	Unlikely 3	High 12	Not applicable as no Schedule 1 substance involved.	 24) Ensure Construction Safety Management Plan details requirements for vehicles and access. 25) Ensure Traffic Management Plan provides detail on the requirements to minimise the risk of significant vehicular impacts. 26) Ensure Safe Work Method Statements are in place for use of general construction equipment (Equipment inspections, pre-starts etc.) 	Major 4	Remote 2	Medium 8
31	Corrosion	No new impact.						Tanks have a corrosion allowance built into design service life, and are inspected in accordance with design and risk.			
32	Erosion	No new impact.						Concrete bund floor, so minimal impact from rain events.			
33	Fatigue	No new impact.									



Item	Guideword	Hazard	Consequences	Consequence Level	Frequency Level	Risk Level	MIE Reference Details	Measures / Actions reducing risk	Consequence Level	Frequency Level	Risk Level
34	Material defects	No new impact.		EGVGI	Lover			• Ensure project specifications detail the Quality Control processes and requirements to prevent material defects.	Ecver	LOVOI	
35	Welding defects	No new impact.						Ensure project specifications detail welder qualifications, NDT requirements, and any specific requirements for plastic pipe installation.			
36	Wear	No new impact.						Ensure adequate Mechanical Design to cover all pertinent failure modes.			
37	Creep	No new impact.						Ensure adequate Mechanical Design to cover all pertinent failure modes.			
38	Mechanical failure	No new impact.						Ensure adequate Mechanical Design to cover all pertinent failure modes.			
39	Hazardous area classification	Ignition source causing fire in proximity of storage tanks.	Fire results in plant or equipment damage, or injury to personnel.	Major 4	Rare 2	Medium 8	Not applicable as no Schedule 1 substance involved.	27) Hazardous area classification will be reviewed by regular Hazardous Area consultant as part of the project.	Major 4	Remote 1	Low 4
40	Functional	No new impact.									
41	Dropped load	General construction equipment (cranes, EWPs, earth-moving equipment)	Personnel serious injury or fatality from dropped load.	Major 4	Unlikely 3	High 12	Not applicable.	 24) Ensure Construction Safety Management Plan details requirements for vehicles and access. 25) Ensure Traffic Management Plan provides detail on the requirements to minimise the risk of significant vehicular impacts. 28) Contractor Selection Process focuses on engaging contractors that meet Coogee's safety expectations with regards to employing qualified/skilled personnel and adequate supervision. 	Major 4	Rare 2	Medium 8
42	Impact	Increased frequency of vehicles within plant area	Plant damage from vehicle impact.	Moderate 3	Unlikely 3	Medium 9	Not applicable.	 24) Ensure Construction Safety Management Plan details requirements for vehicles and access. 25) Ensure Traffic Management Plan provides detail on the requirements to minimise the risk of significant vehicular impacts. 28) Contractor Selection Process focuses on engaging contractors that meet Coogee's safety expectations with regards to employing qualified/skilled personnel and adequate supervision. 	Moderate 3	Rare 2	Medium 6
43	Vessel collision	Increased frequency of vehicles within plant area	Personnel serious injury or fatality from vehicle impact.	Major 4	Unlikely 3	High 12	Not applicable.	 24) Ensure Construction Safety Management Plan details requirements for vehicles and access. 25) Ensure Traffic Management Plan provides detail on the requirements to minimise the risk of significant vehicular impacts. 28) Contractor Selection Process focuses on engaging contractors that meet Coogee's safety expectations with regards to employing qualified/skilled personnel and adequate supervision. 	Major 4	Rare 2	Medium 8
44	Low temperature embrittlement	No new impact.									
45	Human error	No new impact.									
46	Structural failure	No new impact.						Ensure adequate Mechanical Design to cover all pertinent failure modes.			
47	Fire & Explosion Protection Concept	No new impact – combustible only storage means fire very unlikely.	Fire results in plant or equipment damage, or injury to personnel.	Major 4	Rare 2	Medium 8	Not applicable.	 Only combustibles to be stored in tanks, making a tank-on-fire scenario extremely unlikely; Existing site fire prevention and mitigation strategies to be used for Terminal 4. Hazardous area classification will be reviewed by regular Hazardous Area consultant as part of the project. 	Major 4	Remote 1	Medium 4
48	Gas ingress into non- hazardous areas	No new impact.									
49	Smoke ingress	No new impact.									
50	Jet fire - gas	Not a credible scenario.									
51	Jet fire - liquid	Not a credible scenario.									



Item	Guideword	Hazard	Consequences	Consequence Level	Frequency Level	Risk Level	MIE Reference Details	Measures / Actions reducing risk	Consequence Level	Frequency Level	Risk Level
52	Bund fire	No new impact – combustible only storage means fire very unlikely.	Fire results in plant or equipment damage, or injury to personnel.	Major 4	Rare 2	Medium 8	Not applicable.	Only combustibles to be stored in tanks, making a tank-on-fire scenario extremely unlikely; Existing site fire prevention and mitigation strategies to be used for Terminal 4. Hazardous area classification will be reviewed by regular Hazardous Area consultant as part of the project.	Major 4	Remote 1	Medium 4
53	Pool fire	Not a credible scenario.									
54	Confined pool fire	Not a credible scenario.									
55	Seal pool fire	Not a credible scenario.									
56	Flash fire	Not a credible scenario.									
57	Explosion, dust, VCE internal	Not a credible scenario.									
58	BLEVE	Not a credible scenario.									
59	Projectiles	Not a credible scenario.									
60	Electrical fire	Electrical fire caused by fault on installed equipment.	Electrical fire and subsequent property damage (new Terminal power supply, including transformer).	Moderate 3	Possible 4	High 12	Not applicable.	 30) Working with Western Power design consultancy in preparation for the grid connection application and layout with respect to fire risk. 31) Ensure electrical equipment is located within a fire proof room. 32) Ensure that electrical equipment complies with the relevant Australian standards. 	Moderate 3	Rare 2	Medium 6
61	Electrical fire	Electrical fire caused by portable equipment or vehicles (e.g. EWP).	Electrical fire and subsequent property damage.	Moderate 3	Possible 4	High 12	Not applicable.	33) Regular equipment inspections for equipment which may pose risk of electrical fire.	Moderate 3	Unlikely 3	Medium 9
62	Other fire - External fire threat	Brush fire whilst undertaking hot work.	Subsequent environmental impacts to surrounding environment.	Moderate 3	Possible 4	High 12	Not applicable.	34) Ensure that Contractor Safe Work Method Statements have adequate controls for the threat of causing brush fires (e.g. a Safe Work Method Statement may require a fire extinguisher, a designated water tank etc. for fire-fighting purposes, where such fire risks exist). 35) Set up sprinklers dependent on proximity to Landcorp as a mitigating control, to be monitored and set up as required.	Moderate 3	Unlikely 3	Medium 9
63	Structural Failure as a result of fire	No new impact.									
64	Dropped loads and falling structures	Falling tools or equipment onto personnel below.	Personnel serious injury or fatality from dropped load.	Major 4	Unlikely 3	High 12	Not applicable as no Schedule 1 substance involved.	36) Ensure Construction Safety Management Plan details the requirements and controls for crane lifts and protection from dropped objects.	Major 4	Rare 2	Medium 8
65	Vessel impacts and collision	Not a credible scenario.									
66	Loss of Utilities	Not a credible scenario.						Contractors will provide own utilities.			
67	Electricity	Not a credible scenario.						Contractor will employ the use of a diesel generator.			
68	Cooling water	No new impact.									
69	Potable water	No new impact.									
70	Fire water	No new impact.						The fire water ring main will be extended around Terminal 4.			
71	Compressed air	No new impact.						The existing compressed air system will be extended.			
72	Instrument air	No new impact.									



Item	Guideword	Hazard	Consequences	Consequence Level	Frequency Level	Risk Level	MIE Reference Details	Measures / Actions reducing risk	Consequence Level	Frequency Level	Risk Level
73	Steam	No new impact.		20001	Lovoi				Lovei	Lovoi	
74	Nitrogen	No new impact.									
75	Breathable air	No new impact.									
76	Exposure Controls – Toxics	No new risk.									
77	Exposure Controls – Corrosives	No new risk.									
78	Exposure Controls - Irritants	No new risk.									
79	Ergonomics	No new risk.									
80	Noise	Construction phase may result in additional noise sources.	Additional noise may impact adversely on neighbours.	Minor 2	Possible 4	Medium 8	Not applicable.	Noise will be monitored throughout the project, and additional controls implemented if required.	Minor 2	Possible 4	Medium 8
81	Machinery Guarding	No new risk.									
82	Confined spaces	Person working in a confined space with toxic substances or inadequate oxygen.	Fatality or permanent disability due to asphyxiation or toxic reaction.	Major 4	Possible 4	High 16	Not applicable as no Schedule 1 substance involved.	 37) Ensure Construction Safety Management Plan outlines requirements for undertaking high risk activities (e.g. working at heights, working in confined spaces). 38) Ensure all construction personnel undergo site induction and area walk around. 39) Ensure Contractor Safe Work Method Statements are in place for Confined Space tasks. 40) Ensure Permit to Work process is followed for Confined Space Entry tasks in Operational Plant. 	Major 4	Remote 2	Medium 8
83	Working at Heights	Person working at heights during construction or commissioning.	Fatality or permanent disability due to fall from heights.	Major 4	Possible 4	High 16	Not applicable as no Schedule 1 substance involved.	 37) Ensure Construction Safety Management Plan outlines requirements for undertaking high risk activities (e.g. working at heights, working in confined spaces). 38) Ensure all construction personnel undergo site induction and area walk around. 41) Ensure Contractor Safe Work Method Statements are in place for Working at Heights tasks. 42) Ensure Permit to Work process is followed for Working at Heights tasks in Operational Plant. 	Major 4	Remote 2	Medium 8
84	Heat	Risk to personnel during hot periods	Lost time injury due to heat stroke.	Moderate 3	Possible 4	High 12	Not applicable.	 37) Ensure Construction Safety Management Plan outlines requirements for working in heat (i.e. adequately outlines risk mitigation controls for heat stress). 38) Ensure all construction personnel undergo site induction and area walk around. 43) Ensure Contractor Safe Work Method Statements are in place for tasks with prolonged exposure to heat. 44) Coogee to promote hydration via toolboxes and infrastructure (e.g. taking rest breaks to enable hydration, and getting out of extreme heat). 		Unlikely 3	Medium 9
85	Dropped Objects	A construction task results in a dropped object.	Personnel serious injury or fatality from dropped load.	Major 4	Unlikely 3	High 12	Not applicable as no Schedule 1 substance involved.	 45) Ensure Construction Safety Management Plan details the requirements and controls for crane lifts and protection from dropped objects. 46) Ensure Construction Safety Management Plan details the requirements for adequate drop-zones and bunting. 47) Ensure Construction Safety Management Plan details the requirements for adequate hoarding. 	Major 4	Rare 2	Medium 8
86	Vehicle Movements	More vehicle movements through site due to construction activities.	Fatality or permanent disability due to vehicle impact with personnel.	Major 4	Unlikely 3	High 12	Not applicable as no Schedule 1 substance involved.	 24) Ensure Construction Safety Management Plan details requirements for vehicles and access. 25) Ensure Traffic Management Plan provides detail on the requirements to minimise the risk of significant vehicular impacts. 48) Consider painting lines or markings on road, for contract personnel to navigate to correct locations and reduce likelihood of traffic incident. 	Major 4	Rare 2	Medium 8

ATTACHMENT 12



Bushfire Risk Management Plan Kwinana Storage Tank Facility

Address: Lot 3 Kwinana Beach Road, Kwinana
Prepared for:
Coogee
Prepared by:
Bushfire Smart

January 2022



Document Control

Document Name	Bushfire Risk Management Plan	Current Revision	1
Document Owner	Coogee	Issue Date	25.01.22
Document Location	Lot 3 Kwinana Beach Road, Kwinana	Next Review Date	25.01.27

Amendment List

Revision No.	Date	Author(s)	Checked By	Details
-	-	-	-	-



Contents

1	Intr	oduction	5
	1.1	Background	5
	1.2	Aim and Objectives	5
	1.3	Legislation, Policy and Standards	5
	1.3.	1Legislation	5
	1.3.	2Policies, Guidelines and Standards	6
2	The	Risk Management Process	7
	2.1	Likelihood Rating	8
	2.2	Consequence Rating	8
	2.3	Risk Matrix	9
	2.4	Risk Acceptability	9
3	Esta	blishing the Context	. 10
	3.1	Location	. 10
	3.2	Topography and Landscape Features	. 10
	3.3	Climate and Bushfire Season	. 10
	3.4	Proposal	. 11
4	Bus	nfire Risk Assessment	. 11
	4.1	Identifying Bushfire risk	. 11
	4.2	Evaluating Bushfire Risk	. 11
	4.2.	1External Fire Risk	. 11
	4.2.	2Inward Fire Risk	. 13
	4.2.	3Responders Risk	. 14
	4.2.	4Environmental Risk	. 16
5	Bus	hfire Risk Treatment	. 17
	5.1	Fire Protection	. 17
	5.2	Evacuation Plan	. 17
	5.3	Personnel Training	. 17
	5.4	Bushfire Response	. 17
	5.5	Site Requirements	. 17
	5.6	Sundry Items	. 17
	5.7	Residual Risk	. 18
6	Role	es and Responsibilities	. 19
7	Moi	nitoring and Review	. 20

7	7.1	Review	.20
7	7.2	Monitoring	20
8	Glos	ssary	21
9	Com	nmon Abbreviations	24
10	R	eferences	25
11	А	ppendices	26



1 Introduction

1.1 Background

Lot 3 Kwinana Beach Road, Kwinana (subject lot) is an 8.11 hectare flat parcel of land and in a rough rectangular shape. The subject land is within an existing industrial area and bordered by a grassed reserve to the southwest and unmanaged vegetation further to the south.

This Bushfire Risk Management Plan (BRMP) has been prepared for Coogee (the proponent) in accordance with State Planning Policy 3.7 (WAPC, 2015). The risk management processes used to develop this BRMP are aligned to the key principles of AS/NZS ISO 31000:2018 Risk management – Principles and guidelines (AS/NZS ISO 31000:2018), as described in the Second Edition of the National Emergency Risk Assessment Guidelines (NERAG) (AIDR, 2020).

The Dangerous Goods Safety (Storage and Handling of Non-Explosives) Regulations 2007 requires the operator to develop separate risk assessment that addresses risks other than bushfire. In addition, these regulations require the preparation of an emergency plan for fuel depots. This emergency plan is to reflect the site layout and bushfire risk, as detailed in this BRMP.

1.2 Aim and Objectives

The aim of this BRMP is to identify, assess and specify treatments to assist the protection of life and property on the subject land.

The objective of the BRMP is to effectively manage bushfire risk within the property at Lot 3 Kwinana Beach Road, Kwinana to protect people and infrastructure. Specifically, the objectives of this BRMP are to:

- Undertake a bushfire risk assessment of the potential bushfire threats to the property and proposed development.
- Address areas of unacceptable risk, the causes of such risk and develop appropriate mitigation measures to promote the protection of life and property as a priority.
- Establish procedures to monitor and review the implementation of treatments to ensure risk is managed at an acceptable level.

1.3 Legislation, Policy and Standards

The following legislation, policy and standards were applicable in the development and implementation of the BRMP.

1.3.1 Legislation

- Bush Fires Act 1954
- Bush Fires Regulations 1954
- Planning and Development (Local Planning Scheme) Regulations 2015



1.3.2 Policies, Guidelines and Standards

- National Emergency Risk Assessment Guidelines (NERAG) (Second Edition 2015, Updated 2020)
- AS/NZS ISO 31000:2018 Risk management Principles and guidelines
- State Planning Policy 3.7: Planning in Bushfire Prone Areas (WAPC)
- State Planning Policy 3.4: Natural Hazards and Disasters (WAPC)
- Guidelines for Planning in Bushfire Prone Areas (WAPC 2017)
- AS 3959-2018, Construction of buildings in bushfire-prone areas (AS 2018)
- Western Australian Emergency Risk Management Guidelines (OEM 2015)
- NCC 2019 Volume 2 Part G5
- AS3745-2010, Planning for Emergencies in Facilities (AS 2010)
- AS1940-2017, The storage and handling of flammable and combustible liquids (AS 2017)



2 The Risk Management Process

The risk management processes used to identify and address risk in this BRM Plan are aligned with the international standard for risk management, AS/NZS ISO 31000:2018, as described in NERAG (2015, Updated 2020). This process is outlined in Figure 1 below.

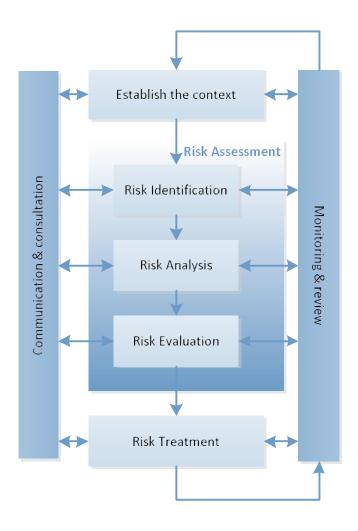


Figure 1 - An overview of the risk management process 1

AS/NZS ISO 31000:2018 can be used to determine the inherent risk (the level of risk after current controls and the treatments required to achieve an acceptable residual risk (the level of risk that remains after risk treatment) for a bushfire event.

¹ Source: AS/NZS ISO 31000:2018, Figure 3.



2.1 Likelihood Rating

The likelihood is based on the annual exceedance probability (AEP), or the chance of an event occurring once in a year. This can then be translated into average recurrence interval (ARI) as shown in Table 4.1.

Table 4.1 Likelihood Level

Likelihood Rating	Annual Recurrence Interval (ARI) (indicative)
Almost Certain	Expected to occur at least yearly. (AEP =>63%)
Likely	Expected to occur at very 1 to <10 years. (AEP 10% to < 63%)
Unlikely	Expected to occur at very 10 to <100 years. (AEP 1% to < 10%)
Rare	Expected to occur every 100 years or more. (AEP less than 1%)

2.2 Consequence Rating

A consequence assessment needs to be allocated against each risk description developed as part of the BRMP. Consequences can be categorised into four broad groups that include:

- people consequences (e.g., Death or injury),
- economic consequences (e.g., Loss of an asset, loss of profit),
- environmental consequence (e.g., Loss of, or damage to, a habitat),
- social consequences (e.g., Loss of community space or assets)

The following table shows the consequence rating the associated descriptor used in the plan.

Table 4.2 - Qualitative measure of Consequence

Consequence Rating	Descriptions
	Loss of life.
	Extensive number of severe injuries
Catastrophic	Extensive displacement of persons for extended duration
	Loss of significant asset(s)
	Permanent damage to environmental or cultural assets
	Persons with significant injuries
Major	Large number of persons displaced (more than 24 hours duration)
iviajui	Serious damage to significant assets
	Significant damage to environmental or cultural assets
	Persons with injuries
Moderate	Isolated cases of displaced persons who return within 24 hours.
ivioderate	Moderate Amount of Property Damaged
	Isolated cases of damage to environmental or cultural assets
	Minor Injuries
Minor	No persons are displaced
IVIIIIOI	Inconsequential damage to assets.
	Inconsequential damage to environmental or cultural assets
Insignificant	Little to no public injury or impact to property



2.3 Risk Matrix

After combining the qualitative measures of both likelihood and consequence a determination can be made on the level of risk to each identified asset. Table 4.3 shows how likelihood and consequence combine to give the risk rating.

Table 4.3 – Qualitative Risk Matrix²

Consequence Likelihood	Insignificant	Minor	Moderate	Major	Catastrophic
Almost Certain	Medium	Medium	High	Extreme	Extreme
Likely	Low	Medium	High	Extreme	Extreme
Unlikely	Low	Low	Medium	High	Extreme
Rare	Very Low	Low	Medium	High	High

2.4 Risk Acceptability

Once the level of risk has been determined, criteria is assigned to describe that level of risk. This qualitative descriptor provides guidance as to whether the level of risk is acceptable. The treatments applied can then be further analysed to determine if the treatment has reduced the risk to a more acceptable level. The acceptability used for this risk assessment is shown the following Table 4.4.

Table 4.4 – Criteria for Acceptance of Risk and Course of Action

Risk Level	Criteria for Acceptance of Risk	Risk Evaluation	Second Order Evaluation
Extreme	The consequence of bushfire is an intolerable risk to life and property. Requires immediate mitigation measures. If unable to apply measures these areas should not be habitable	1	a-k
High	The consequence of bushfire is an unacceptable risk to life and property. Mitigation measures are necessary.	2	a-k
Medium	The consequence of bushfire presents a potentially unacceptable risk to life and property. Mitigation measures may be necessary to reduce to risk to life and property and be implemented within an agreed timeframe	3	a-k
Low	The consequence of bushfire presents an acceptable risk to life and property. Some mitigation measures are necessary to reduce to risk to life and property and be implemented within an agreed timeframe, considering cost to the resident/community	4	a-k
Very Low	The consequence of bushfire presents an acceptable risk to life and property. Basic mitigation measures can be applied at the resident discretion.	5	a-k

The likelihood, consequence, and acceptability of the risk level for the proposal has been assessed and collated into Table 5.1 in section 5.

² Source: Table 11, National emergency Risk Assessment guidelines



3 Establishing the Context

The context that is important in respect to a high-risk development under SPP3.7 is the activities on the site that has the potential to influence the bushfire risk. In particular, the potential it will contribute to the ignition of a bushfire, the potential for it increasing the severity of a bushfire, the potential for the site to impact the safety of fire fighters or the community during a bushfire event, the potential for adverse environmental impacts through increased contaminants in the run off or fumes escaping from site.

3.1 Location

The subject lot is an 8.11 Hectare parcel. The lot is within the City of Kwinana and accessed via Kwinana Beach Road



Figure 2: Location Plan

3.2 Topography and Landscape Features

The subject lot is an existing industrial lot with a small strip of vegetation running along Patterson Road. The lots immediately adjacent to the lot are industrial lots with the exception of a reserve containing grassland type vegetation to the south.

3.3 Climate and Bushfire Season

The closest weather station to the site is the Garden Island station, approximately 11 kilometres from the site. The temperature data shows the highest maximum temperatures are achieved in the months of December through to March. This aligns with the City of Kwinana's declared bushfire season of 1st December to 31st of May (City of Kwinana, 2021).



3.4 Proposal

The proposal is for the addition of 6 diesel storage tanks of 30 million litres each, along with associated hard stand and infrastructure. The site contains a diesel fuel tank, spacing, and turnaround areas allowing for large vehicles to enter and access the refuelling areas. The tanks and bowsers are well set back from the bushfire threat and attain a BAL of 19.

4 Bushfire Risk Assessment

4.1 Identifying Bushfire risk

In evaluating the bushfire risk for the proposal, an assessment of the fire scenarios likely to impact the area, within the context of SPP3.7, has been undertaken. The following scenarios have been developed:

- 1. External fire risk. Fire starting on the site and escaping to the vegetation on the reserve to the south and continuing to threaten properties adjoining the vegetation.
- 2. Inward fire risk. Fire starting in the vegetation to the south and threatening the site.
- 3. Responders Risk. Hazardous and flammable material on site creating as risk to firefighters and first responders.
- 4. Environmental Risk. Hazardous materials escaping from site during a bushfire event including from water runoff during firefighting activities.

4.2 Evaluating Bushfire Risk

The above identified risks have been evaluated using the Likelihood and consequence descriptors from NERAG 2020 as detailed in Section 2. These have then been combined into a risk Matrix in tables 4.1 through to 4.4 to determine the risk matrix and analyse the effectiveness of potential treatments.

4.2.1 External Fire Risk

Likelihood

As the site is a fuel storage site, fuel spills at some stage are possible and could be caused by operator error, or equipment failure. While there is also a possibility of a vehicle collision causing damage to equipment, the likelihood of this causing a spill is low.

Any fuel spillage is likely to be captured by the bunding and catchment area installed on the site and is unlikely to leave the site. Given the likelihood of a spill is low, the likelihood of a spill combined with an ignition source causing a fire on the site and escaping to the vegetation on the reserve to the south and continuing to threaten properties adjoining the vegetation is very low.



Consequence

The site is surrounded by industrial land, predominantly hardstand type development. There is a a grassed reserve and section of remnant bushland further to the south. The reserve to the south, while classified as grassland in the BMP, appears to be maintained regularly. Therefore, the fuel load in the reserve appears to be minimal. All other vegetation is set well back from the site.

Assessed Risk

Likelihood: There is a chance that this could occur once every 10 years or more: Unlikely

Consequence: No lasting damage to assets, little or no recovery efforts required: Minor

Risk Treatment

The following risk treatments are to be introduced to aid in the reduction of the likelihood, the consequence, or both:

- Install bunding around the tank to contain fuel spills as per Dangerous Goods Safety Act 2004 and Australian Standard 1940: 2017 The storage and handling of flammable and combustible liquid.
- Install vehicle restraints (E.G. Kerbs or Bollards) to prevent vehicle damage to tanks.
- Fire extinguishers to be located within the subject site at each filling point.
- A spill kit to be kept on site and signposted.
- Fire service to be called if a spill covers an area greater than 2m² and it is not considered safe to be cleaned on site.
- Develop an emergency management plan for the site in accordance with Australian Standard 3745-2010 Planning for emergencies in facilities (SA 2010).
- All possible ignition sources such as hot works or electrical equipment and repairs, to be managed as required by operators of dangerous goods sites.

Table 4.1: External Fire Risk

Consequence Likelihood	Insignificant	Minor	Moderate	Major	Catastrophic
Almost Certain	Medium	Medium	High	Extreme	Extreme
Likely	Low	Medium	High	Extreme	Extreme
Unlikely	Low	Low	Medium	High	Extreme
Rare	Very Low	Low	Medium	High	High



4.2.2 Inward Fire Risk

Likelihood

A fire starting on the reserve or remnant vegetation to the south, could be fuelled by easterly winds that are to be expected in the mornings of the bushfire season coinciding with a rising FDI. This scenario would subject the site to ember attack and possible radiant heat. The tank itself would not be expected to experience direct flame contact, however the site may be subject to ember attack. This has the potential to cause a fire on the subject site if these embers were to meet open flammable materials or an existing unmanaged fuel spill. Should the site be allowed to accumulate dead vegetation such as leaf litter, or other material that may blow in from the adjacent reserve, an ember could land on this debris and cause an ignition.

Consequence

Should any embers, discussed in the likelihood section, land on flammable material, it may create a small spot fire. The fire size would depend on the volume of flammable liquid available to the fire. If proper controls are carried out, the amount of flammable liquid should be minimal. This would not be expected to cause any lasting damage to the tank or associated equipment and would either self-extinguish or be brought under control with the firefighting equipment available on site.

Embers igniting vegetation debris left on the site that has travelled in from the reserve or other places would have a similar affect and cause a small spot fire. The amount of fuel available to the fire will be critical in the resulting consequence. Therefore, the landscaping and general maintenance of the hardstand and associated gardens is critical to ensure the consequence is minimised.

Risk Treatment

The following risk treatments are to be introduced to aid in the reduction of the likelihood, the consequence, or both:

- The emergency management plan developed for the site in accordance with Australian Standard 3745-2010 Planning for emergencies in facilities (SA 2010) must incorporate a response to a bushfire in the reserve to the south.
- All occupants who may work at the site to be trained in responding and managing all emergency incident in accordance with the emergency management plan for the site.
- Regular garden and site maintenance to be carried out to ensure no leaf litter or the like is on site. Daily inspections required during the bushfire season.
- All existing and future landscaping is to comply with the Standards for Asset Protection Zones (WAPC 2017).

Assessed Risk

Likelihood: There is a chance that this could occur once every 10 years or more: Unlikely

Consequence: No lasting damage to asset, little or no recovery efforts required: Minor



Table 4.2: Inward Fire Risk

Consequence Likelihood	Insignificant	Minor	Moderate	Major	Catastrophic
Almost Certain	Medium	Medium	High	Extreme	Extreme
Likely	Low	Medium	High	Extreme	Extreme
Unlikely	Low	Low	Medium	High	Extreme
Rare	Very Low	Low	Medium	High	High

4.2.3 Responders Risk

Likelihood

If a fire started on the reserve or on the site as identified in the previous risks one of the previous risks, fire fighters would be expected to attend the site. The risks that were identified in 4.2.1 and 4.2.2 would require a firefighter response, the likelihood of the event would be the same as those risks already identified.

Consequence

Firefighting activities always contain an element of risk that cannot be eliminated. However, it is important to ensure that this proposal does not increase the risk to fire fighters that would otherwise be expected. Items that would affect the consequences to attending fire fighters include if there are flammable materials stored incorrectly or additional fuel sources, such as unmaintained garden or debris that could result in additional spot fires on the site.

The responding brigade would be Rockingham Fire Station located at 99 Dixon Rd, approximately 10 minutes travel time under normal traffic conditions, no lights and sirens. The response time will depend on the following items (IFEG 2005):

- Notification time
- Dispatch Time
- Arrival Time
- Completion of investigation time
- Completion of search and rescue time
- Fire attack time
- Time to control
- Time to extinguish.

While the completion of a full analysis of fire service intervention is outside the scope of this plan, the consequence to fire fighters will rely on the site minimising the risk of a bushfire threat that increases any of the times identified above.



Risk Treatment

The following risk treatments are to be introduced to aid in the reduction of the likelihood, the consequence, or both:

- Signage to be placed in prominent position to all visitors with emergency contact numbers.
- A current manifest and a dangerous goods site plan to be kept on site as required for dangerous goods site in accordance with the relevant Dangerous Goods Safety Guidance Note (DMIRS 2019) to ensure emergency responders can undertake a properly informed response to an emergency such as a fire.
- The Emergency Plan, Dangerous Goods Manifest, Register of Dangerous Goods and Hazardous Materials, Safety Data Sheets for bulk products kept on site and dangerous goods site layout plan to be stored on site.
- Signage in a position to be readily seen by emergency responders to provide visual warnings of the hazards associated with the storage of fuel required as per relevant codes of practice, Australian Standards, and Regulations.
- An emergency management plan for the site in accordance with Australian Standard 3745-2010 Planning for emergencies in facilities incorporating a bushfire event.

Assessed Risk

The following items could be considered to increase the risk to firefighters:

- Flammable Material: BAL level of 12.5 or low, tank non-combustible. Risk: Low
- Fumes/Toxic Materials: Materials to be enclosed and not expected to ignite. Risk: Low
- Electrical Hazards: No above ground power or gas on site. Risk: N/A
- People Control: No additional bystanders, vulnerable people expected on site. Risk: N/A
- Vehicle Control: Private property with no thorough fare. Risk: N/A
- Falling Debris: No overhead trees or objects on site. Risk: N/A

Likelihood: There is a chance that this could occur once every 10 years or more: Unlikely

Consequence: No fatalities, minor injuries possible treated with onsite first aid: Minor

Table 4.3: Responders Risk

Consequence Likelihood	Insignificant	Minor	Moderate	Major	Catastrophic
Almost Certain	Medium	Medium	High	Extreme	Extreme
Likely	Low	Medium	High	Extreme	Extreme
Unlikely	Low	Low	Medium		Extreme
Rare	Very Low	Low	Medium	High	High



4.2.4 Environmental Risk

Likelihood

The contents of the tank are unlikely to ignite and therefore let off toxic fumes. In the event of a fire on the site, it is expected that fire fighters will attend and commence fire suppression activities as required. A bushfire would need to coincide with a major spillage to cause leaching of toxic runoff into the groundwater system and therefore be considered here. (The risk of a major spillage which does not coincide with a bushfire is outside the scope of this plan).

The tank is setback from the bushfire threat and therefore should not require the continuous application of water for the purposes of cooling during a bushfire event.

Consequence

It would not be expected that significant amounts of contaminant would be flushed into the drainage system.

Assessed Risk

Likelihood: There is a chance that this could occur once every 10 years or more: Unlikely

Consequence: Inconsequential damage to environmental or cultural assets: Minor

Table 4.4: Environmental Risk

Consequence Likelihood	Insignificant	Minor	Moderate	Major	Catastrophic
Almost Certain	Medium	Medium	High	Extreme	Extreme
Likely	Low	Medium	High	Extreme	Extreme
Unlikely	Low	Low	Medium	High	Extreme
Rare	Very Low	Low	Medium	High	High



5 Bushfire Risk Treatment

The purpose of a risk treatment is to reduce the likelihood of a bushfire occurring and/or the potential impact of a bushfire. This is achieved by implementing treatments that modify the characteristics of the hazard, the community, or the environment. The following treatments will assist to mitigate the bushfire risk within the subject site.

5.1 Fire Protection

Fire extinguishers to be located within the subject site at each filling point.

A spill kit to be kept on site and signposted. Fire service to be called if a spill covers an area greater than 2m² and it is not considered safe to be cleaned on site.

5.2 Evacuation Plan

Coogee to develop an emergency management plan for the site in accordance with Australian Standard 3745-2010 Planning for emergencies in facilities (SA 2010), identifying evacuation triggers, depicting muster points on-site, and incorporating actions in a bushfire event.

5.3 Personnel Training

All occupants who may work at the site to be trained in responding and managing an emergency incident in accordance with the emergency management plan for the site. At least one staff member to be on call at any time to respond to incidents on the site. Contact number(s) for assistance to be prominently displayed on site.

5.4 Bushfire Response

The bushfire response will be provided by Career firefighters based at the Rockingham Fire Station approximately 5.6 kilometres from the site.

5.5 Site Requirements

All existing and future landscaping is to comply with the Standards for Asset Protection Zones (WAPC 2021).

Install bunding around the tank to contain fuel spills as per Dangerous Goods Safety Act 2004 and Australian Standard 1940: 2017 The storage and handling of flammable and combustible liquid.

Install infrastructure to prevent vehicle damage to tanks.

5.6 Sundry Items

Manifest

A current manifest and a dangerous goods site plan to be kept on site as required for dangerous goods site in accordance with the relevant Dangerous Goods Safety Guidance Note (DMIRS 2019) to ensure emergency responders can undertake a properly informed response to an emergency such as a fire.



Storage of documents

The Emergency Plan, Dangerous Goods Manifest, Register of Dangerous Goods and Hazardous Materials, Safety Data Sheets for bulk products kept on site and dangerous goods site layout plan to be stored in Manifest Box on site and at main office.

Ignition Sources

All possible ignition sources such as hot works or electrical equipment and repairs, to be managed as required by operators of dangerous goods sites.

<u>Signage</u>

Signage in a position to be readily seen by emergency responders to provide visual warnings of the hazards associated with the storage of fuel required as per relevant codes of practice, Australian Standards, and Regulations.

Licencing

Renew and maintain dangerous goods site licence for the life of the site

5.7 Residual Risk

The above analysis of the risk in accordance with AS/NZS ISO 31000:2018 Risk management – Principles and guidelines demonstrates, that while the tank and self-service filling points is not without risk, the risk is low. The response to a bushfire event is not further complicated through the establishment of this proposal.



6 Roles and Responsibilities

The following table sets out the roles and responsibilities of the relevant stake holders for the ongoing compliance with this BRMP.

Stakeholder	Roles and Responsibilities
Local Government	 Enforce annual firebreak notice issued under s33 of the Bush Fires Act 1954 Monitor vegetation loads in reserve to ensure adequate separation is maintained.
Developer/Builder	 Install bunding around the tank to contain fuel spills as per Dangerous Goods Safety Act 2004 and Australian Standard 1940: 2017 The storage and handling of flammable and combustible liquid. Install Bollards to prevent vehicle damage to tanks and bowsers Install signage in a position to be readily seen by emergency responders to provide visual warnings of the hazards associated with the storage of fuel required as per relevant codes of practice, Australian Standards, and Regulations
Facility Operator	 Maintain facility as required in the associated Bushfire Management Plan. Comply with the relevant local government annual firebreak notice issued under s33 of the Bush Fires Act 1954. Maintain firefighting equipment. Action the ongoing training of personnel. Ensure ongoing implementation of Emergency Management and Bushfire Risk Management Plans. Review and update this BRMP annually. Renew and maintain dangerous goods site licence for the life of the site. Throughout bushfire season ensure entire site remains free of flammable material and objects through daily inspections of the site. Develop an emergency management plan for the site in accordance with Australian Standard 3745-2010 Planning for emergencies in facilities (SA 2010), identifying evacuation triggers, depicting muster points on-site, and including procedures to be adopted should a fire occur in the reserve. Maintain a current manifest and a dangerous goods site plan to be kept on site as required for dangerous goods site in accordance with the relevant Dangerous Goods Safety Guidance Note (DMIRS 2019). Maintain the signage which provides visual warnings of the hazards associated with the storage of fuel required as per relevant codes of practice, Australian Standards, and Regulations



7 Monitoring and Review

Monitoring and review processes are in place to ensure that the BRM Plan remains current and valid.

7.1 Review

A comprehensive review of this BRM Plan will be undertaken at least once every five years.

Significant circumstances that may warrant an earlier review of the BRM Plan include:

- Changes to the BRM Plan area, or legislation.
- Changes to the bushfire risk profile of the area; or
- Following a major fire event.

7.2 Monitoring

Risk ratings are to be reviewed on a regular basis. Any modifications to the site to added to the BRMP when they are identified.



8 Glossary

Asset A term used to describe anything of value that may be adversely impacted by

bushfire. This may include residential houses, infrastructure, commercial,

agriculture, industry, environmental, cultural and heritage sites.

Asset Category There are four categories that classify the type of asset – Human Settlement,

Economic, Environmental and Cultural.

Asset Owner The owner, occupier or custodian of the asset itself.

Bushfire Unplanned vegetation fire. A generic term which includes grass fires, forest

fires and scrub fires both with and without a suppression objective.³

Bushfire Management Plan A document that sets out short-, medium- and long-term bushfire risk

management strategies for the life of a development.4

Bushfire risk management

A systematic process to coordinate, direct and control activities relating to bushfire risk with the aim of limiting the adverse effects of bushfire on the

community.

Bushfire Hazard The hazard posed by the classified vegetation, based on the vegetation

category, slope and separation distance.

Consequence The outcome or impact of a bushfire event.

Geographic Information System (GIS) A data base technology, linking any aspect of land-related information to its

precise geographic location.5

Geographic Information System (GIS) Map The mapping component of the Bushfire Risk Management System. Assets, treatments and other associated information is spatially identified, displayed

and recorded within the GIS Map.

Land Owner The owner of the land, as listed on the Certificate of Title; or leaser under a

registered lease agreement; or other entity that has a vested responsibility to

manage the land.

³ Australasian Fire and Emergency Service Authorities Council 2012, AFAC Bushfire Glossary, AFAC Limited, East Melbourne.

⁴ Western Australian Planning Commission 2015, State Planning Policy 3.7: Planning in Bushfire Prone Areas, WAPC, Perth.

⁵ Landgate 2015, Glossary of terms, Landgate, Perth



Likelihood The chance of something occurring. In this instance, the chance of a bushfire

igniting, spreading and reaching the asset.

Locality The officially recognised boundaries of suburbs (in cities and larger towns)

and localities (outside cities and larger towns).

Planning Area A geographic area determine by the local government which is used to

provide a suitable scale for risk assessment and stakeholder engagement.

Priority See Treatment Priority.

Recovery Cost The capacity of an asset to recover from the impacts of a bushfire.

Responsible Person The person responsible for planning, coordinating, implementing, evaluating

and reporting on a risk treatment.

Risk acceptance The informed decision to accept a risk, based on the knowledge gained during

the risk assessment process.

Risk analysis The application of consequence and likelihood to an event in order to

determine the level of risk.

Risk assessment The systematic process of identifying, analysing and evaluating risk.

Risk evaluation The process of comparing the outcomes of risk analysis to the risk criteria in

order to determine whether a risk is acceptable or tolerable.

Risk identification The process of recognising, identifying and describing risks.

Risk Manager The organisation or individual responsible for managing a risk identified in the

Bushfire Risk Management Plan; including review, monitoring and reporting.

Risk Register A component within the Bushfire Risk Management System used to record,

review and monitor risk assessments and treatments associated with assets

recorded in the Bushfire Risk Management Plan.

Risk treatment A process to select and implement appropriate measures undertaken to

modify risk.



Rural Any area where in residences and other developments are scattered and

intermingled with forest, range, or farm land and native vegetation or

cultivated crops.6

Rural Urban Interface (RUI) The line or area where structures and other human development adjoin or

overlap with undeveloped bushland.⁷

Slope The angle of the ground's surface measured from the horizontal.

Treatment An activity undertaken to modify risk, for example a prescribed burn.

Treatment Objective The specific aim to be achieved or action to be undertaken, in order to

complete the treatment. Treatment objectives should be specific and

measurable.

Treatment Manager The organisation, or individual, responsible for all aspects of a treatment

listed in the Treatment Schedule of the Bushfire Risk Management Plan, including coordinating or undertaking work, monitoring, reviewing and

reporting.

Treatment Schedule A report produced within the Bushfire Risk Management System that details

the treatment priority of each asset identified in the Bushfire Risk

Management Plan and the treatments scheduled.

Treatment Strategy The broad approach that will be used to modify risk, for example fuel

management.

Treatment Type The specific treatment activity that will be implemented to modify risk, for

example a prescribed burn.

Vulnerability The susceptibility of an asset to the impacts of bushfire.

⁶ Australasian Fire and Emergency Service Authorities Council 2012, AFAC Bushfire Glossary, AFAC Limited, East Melbourne

⁷ Australasian Fire and Emergency Service Authorities Council 2012, AFAC Bushfire Glossary, AFAC Limited, East Melbourne



9 Common Abbreviations

APZ	Asset Protection Zone
BRMP	Bushfire Risk Management Plan
BRMS	Bushfire Risk Management System
DFES	Department of Fire and Emergency Services
ERMP	Emergency Risk Management Plan
FFDI	Forest Fire Danger Index
BMP	Bushfire Management Plan
GFDI	Grassland Fire Danger Index
GIS	Geographic Information System
LEMC	Local Emergency Management Committee
LG	Local Government
OBRM	Office of Bushfire Risk Management
WAPC	Western Australian Planning Commission



10 References

AIDR, 2020, National Emergency Risk Assessment Guidelines (NERAG), Second edition 2015 (updated 2020), Australian Institute for Disaster Resilience, viewed 20 September 2020 https://www.aidr.org.au/media/7600/aidr_handbookcollection_nerag_2020-02-05_v10.pdf

City of Kwinana 2021, Fire-break/hazard compliance notice,

https://www.kwinana.wa.gov.au/council/documents,-publications-and-forms/publications-and-forms-(all)/information-sheets-and-guides/2020/fire-break-notice-2020-2021

Department of Mines, Industry Regulation and Safety (DMIRS) 2019, Dangerous Goods Safety Guidance Note, 1 Adelaide Terrace, East Perth WA 6004

Douglas G, He Y P, Kwok K 2016, Proceedings of the eighth international seminar on fire and explosion hazards (ISFEH8), Extreme value analysis of forest fire behavior parameters.

IFEG 2005, International Fire Engineering Guidelines, Australian Government, State and Territories Australia.

Lucas, C., 2010: On developing a historical fire weather dataset for Australia. Australian Meteorological and Oceanographic Journal, 60, 1-14.

Standards Australia (SA) 2010, Planning for emergencies in facilities, AS3745-2010, SAI Global under license from Standards Australia Limited, Sydney

Standards Australia (SA) 2017, The storage and handling of flammable and combustible liquids, SAI Global under license from Standards Australia Limited, Sydney

Standards Australia (SA) 2018, Construction of buildings in bushfire-prone areas, AS3959-2018, ISBN 978 1 76072 253 1, SAI Global under license from Standards Australia Limited, Sydney

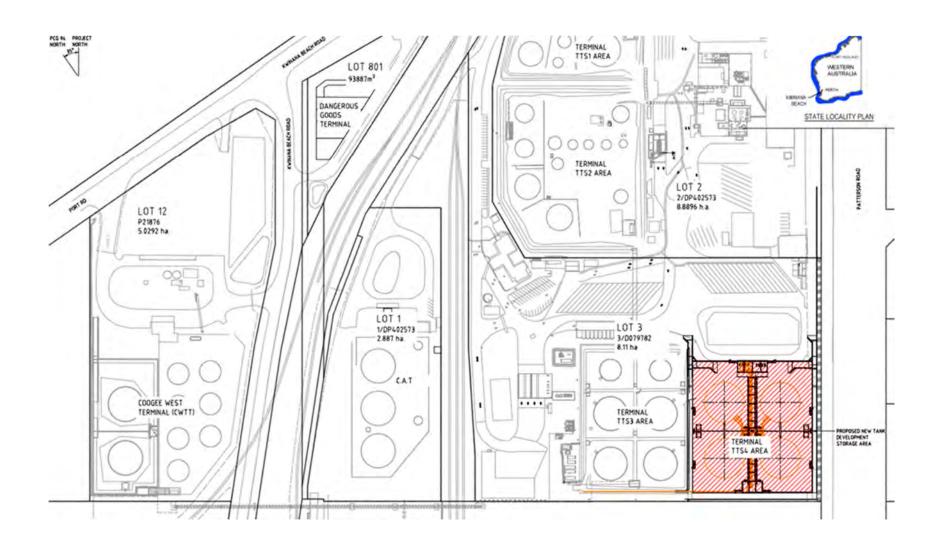
Western Australian Planning Commission (WAPC) 2015, State Planning Policy 3.7 Planning in Bushfire Prone Areas, Western Australian Planning Commission, Perth, Perth

Western Australian Planning Commission (WAPC) 2021, Guidelines for Planning in Bushfire Prone Areas Version 1.4, Western Australia



11 Appendices

Appendix A: Site Layout





ATTACHMENT 13

Coogee Chemicals Pty Ltd

ABN 37 008 747 500

14/02/2022

Development Application Panel Town of Kwinana Local Authority

To whom it may concern

Subject: Request for exemption from Development Contribution towards Public Art

This letter sets to outline Coogee Chemicals request for exemption for the above contribution in relation to the stage 2 strategic diesel storage project.

This project will be the subject of a Development Assessment Panel review, for which this letter will be a part of.

For the purposes of this letter, the project will be known as "stage 2" Coogee strategic diesel storage project. It will include the construction of a 120ML fuel terminal which includes 4x 30ML large atmospheric storage tanks.

The expected total project cost is ~\$60m

Coogee have had a chance to review the local planning policy and believe there is room for exemption possibilities available for Coogee to pursue, with regards to the Art Levy, and as such listed below.

- The works to be completed are completely within the boundaries of Coogee lots with no public space impacted, or accessible to the general public
- With the site classified as a Major Hazard Facility, this does not afford access to the general public
- This particular project does not involve accessible buildings as part of the design, and is purely industrial process plant and infrastructure
- Coogee has already obtained exemption from obtaining a Building Permit under Part 5, section 74 of the Building Act 2011, pertaining to "buildings incidental to industrial plant
- Coogee spend significant money on an ongoing basis towards art and keeping the gardens around the facility in mint condition. Some of these costs expended over the last few years are as follows:
 - Coogee donated over \$30,000 to the well-known sculptures by the sea over the last few years.
 - Coogee has spent over \$167,000 over the last few years on numerous pieces of art, which are held at Coogee's main administration and gardens in Kwinana.
 - Coogee is currently trying to locate a laser projector that is capable of projecting images onto the tanks subject of this application. This could include famous and community works of art along with seasonal messages as deemed appropriate.
 - Coogee's ongoing commitment to landscaping and gardening around their Kwinana locations, is also significant and no less than \$500,000 is spent annually to maintain these gardens and lawns

Cnr Patterson & Kwinana Beach Roads, KWINANA BEACH WA 6167 PO Box 5051, ROCKINGHAM BEACH WA 6969 | (08) 9439 8200 | www.coogee.com.au As you can appreciate, Coogee's ongoing commitment to the arts and maintaining the aesthetic quality of their facility in Kwinana is substantial. On this basis, we would appreciate your consideration to exempt us from this art levy on this occasion.

Yours sincerely

Vic Origlio Project Manager

www.coogee.com.au

Jayden Pope

ATTACHMENT 14

From: SENYCIA, Patrick < patrick.senycia@dmirs.wa.gov.au >

Sent: Thursday, 31 March 2022 1:23 PM

To: Jayden Pope

Cc: David Orchard; LANE, Stephen

Subject: DA10283 - Referral Comments - Fuel Tanks - Lot 2 and 3 Kwinana Beach Road,

Kwinana Beach

WARNING: This email has originated outside your organisation. Please ensure you trust this sender and are expecting this email before clicking on any links or attachments.

Hi Jayden,

Thank you for your email of 9 March 2022 regarding a request for comments/ recommendations in relation to the abovementioned proposal.

I advise that the proposed fuel storage will be subject to the Dangerous Goods Safety Act 2004 and associated regulations which we administer – this will require Coogee Chemicals making relevant submissions to us in due course.

Please contact me should you have any queries.

Regards,

Patrick Senycia | Principal Inspector On Shore Dangerous Goods and Critical Risks Directorate

Department of Mines, Industry Regulation and Safety

Level 2, 1 Adelaide Terrace East Perth WA 6004

Tel: +61 8 9358 8044 | Mob: 0418 914 530

patrick.senycia@dmirs.wa.gov.au | www.dmirs.wa.gov.au





We acknowledge Aboriginal and Torres Strait Islander people as the Traditional Custodians of this land on which we deliver our services. We pay our respects to elders and leaders past, present and emerging.

DISCLAIMER: This email, including any attachments, is intended only for use by the addressee(s) and may contain confidential and/or personal information and may also be the subject of legal professional privilege. If you are not the intended recipient, you must not disclose or use the information contained in it. In this case, please let me know by return email, delete the message permanently from your system and destroy any copies. Before you take any action based upon advice and/or information contained in this email you should carefully consider the advice and information and consider obtaining relevant independent advice.



ATTACHMENT 15

Your ref: DA10283

Our ref: RF3779-04 & PA 048100 Enquiries: Jane Sturgess Ph: 9550 4228

City of Kwinana PO Box 21 Kwinana WA 6966

Attention: Jayden Pope

Dear Jayden

RE: FUEL TANKS - LOTS 2 AND 3 KWINANA BEACH RD, KWINANA

Thank you for providing the development application received 9 March 2022 for the Department of Water and Environmental Regulation (the Department) to consider.

The Department has reviewed the development application for proposed fuel tanks at Lots 2 and 3 Kwinana Beach Rd in Kwinana Beach and advice is provided below.

Issue

Industry Regulation

Advice

The proposal to construct additional diesel storage tanks on the premises does not trigger the requirement for a works approval under section 59 of the *Environmental Protection Act 1986 (EP Act)*. Given the site is an existing major hazard facility (MHF), it is presumed that the proponent will have existing obligations under MHF regulations and also Dangerous Goods regulations administered by the Department of Mines, Industry Regulation and Safety, which set out the minimum requirements for storage and handling of dangerous goods exceeding threshold quantities.

The proponent has contacted the Department's Regulatory Services, with the above advice being relayed. However once constructed, an amendment to their existing Part V licence will be required, to provide the necessary authorisation for increased storage capacity and use of the new tanks.

Where the Department has a statutory role, planning applications should be considered prior to the Department issuing any relevant permits, licenses and/or approvals.

In the event that the applicant determines that a works approval or licence application is required under Part V of the *Environmental Protection Act 1986* (EP Act), the advice provided in this communication does not prejudice and must not be considered to infer the outcome of the EP Act licence and works approval process.

In the event there are modifications to the proposal that may have implications on aspects of environment and/or water management, the Department should be notified to enable the implications to be assessed.

Should you require any further information on the comments please contact the undersigned on 9550 4228.

Yours sincerely

Jane Sturgess

Acting Program Manager – Planning Advice

Kwinana Peel Region

16 / 03 / 2022







ATTACHMENT 16

Our Ref: D23764 Your Ref: DA10283

Jayden Pope City of Kwinana customer@kwinana.wa.gov.au

Dear Mr Pope

RE: HIGH RISK - LOT 2 & 3 KWINANA BEACH ROAD, KWINANA - ADDITIONAL FUEL STORAGE TANKS - DEVELOPMENT APPLICATION

I refer to your email dated 9 March 2022 regarding the submission of a Bushfire Management Plan (BMP) (Version 1), prepared by Bushfire Smart and dated 25 January 2022, for the above development application.

This advice relates only to *State Planning Policy 3.7: Planning in Bushfire Prone Areas* (SPP 3.7) and the *Guidelines for Planning in Bushfire Prone Areas* (Guidelines). It is the responsibility of the proponent to ensure the proposal complies with relevant planning policies and building regulations where necessary. This advice does not exempt the applicant/proponent from obtaining approvals that apply to the proposal including planning, building, health or any other approvals required by a relevant authority under written laws.

Assessment

1. Policy Measure 6.5 a) (ii) Preparation of a BAL contour map

Issue	Assessment	Action
APZ	The BAL Contour Map has excluded Plot 5 - Class D Scrub in the post development scenario. Given the development footprint is known an APZ should be spatially represented in the BMP.	Modification to the BMP is required.
	The Scrub extends along the entire section of Patterson Road as screening vegetation to the industrial development. The City should be satisfied that there is no amenity issue in modifying this vegetation to low threat.	

Recommendation - supported subject to modifications

The development application and the BMP have adequately identified issues arising from the bushfire risk assessment and considered how compliance with the bushfire protection criteria can be achieved. However, modifications to the BMP are necessary to ensure it accurately identifies the bushfire risk and necessary mitigation measures. As these modifications will not affect the development design, these modifications can be undertaken without further referral to DFES.

The required modifications are listed in the table(s) above.

As this planning decision is to be made by a Development Assessment Panel, please forward notification of the decision to DFES for our records.

If you require further information, please contact Sasha De Brito – A/Senior Land Use Planning Officer on telephone number 9395 9703.

Yours sincerely

Naomi Mynott

DIRECTOR LAND USE PLANNING

1 April 2022

CC Jayden.Pope@kwinana.wa.gov.au



ATTACHMENT 17

Enquiries: Lucas Hodgson on (08) 9323 4806

Our Ref: 22/2004 (D22#381779)

Your Ref: DA10283

13 April 2022

Chief Executive Officer City of Kwinana PO Box 21 KWINANA WA 6966

Email: customer@kwinana.wa.gov.au (via email)

Dear Sir/Madam,

PROPOSED FUEL TANKS – LOT 2 AND LOT 3 (PATERSON ROAD AND KWINANA BEACH ROAD) KWINANA BEACH

In response to your correspondence received on 9 March 2022, please be advised Main Roads has no objections subject to the following conditions being imposed:

Conditions

- All vehicle access is to be via the existing crossovers to Kwinana Beach Road, no direct vehicle access is permitted to Patterson Road during either construction or operation.
- 2. Prior to the commencement of works, plans are to be amended to remove the proposed ramp and access to the site via Patterson Road (including existing gate), to the satisfaction of the City of Kwinana in consultation with Main Roads.
- 3. No earth works shall encroach onto the Patterson Road reserve.
- 4. No stormwater drainage is to be discharged onto the Patterson Road reserve.
- 5. The ground levels on the Patterson Road boundary are to be maintained as existing.

Advice

- a) Patterson Road (Melville Mandurah Highway) is a proclaimed Control of Access road pursuant to s.28A of the Main Roads Act 1930, and vehicle access between adjacent properties and Patterson Road is not permitted.
- b) It is noted the Hazard Identification and Risk Assessment provided refers to a proposed temporary access from Patterson Road to the existing gate on the southern corner of the site, which has not been proposed or included as part of the information provided to Main Roads. As detailed in Condition 1 and Advice note A, this access is not supported. It is recommended the applicant and Council consider if an updated Hazard Identification and Risk Assessment is required to be performed without the assumption of this access point.
- c) Main Roads recommends the City of Kwinana review sight lines for vehicles making a right turn onto Kwinana Beach Road from the subject sites existing crossover, and undertake vegetation pruning of the local government managed verge if required.



d) The applicant is required to submit an application form to undertake works within the road reserve prior to undertaking any works within the Patterson Road reserve. Application forms and supporting information about the procedure can be found on the Main Roads website > Technical & Commercial > Working on Roads.

Should the City disagree with or resolve not to include as part of its conditional approval any of the above conditions or advice, Main Roads requests an opportunity to meet and discuss the application further, prior to a final determination being made.

Main Roads advises that it offers a free of charge pre-lodgement consultation service. Main Roads encourages both the Local Government in liaising with applicants to promote and capitalise on this free advisory service offered by the road authority prior to lodgement of strategic or statutory planning proposals, especially where development plans involve land adjacent to or have the potential to impact on the State road network.

Further information on the pre-lodgement consultation process can be found on Main Roads website at mainroads.wa.gov.au > Technical & Commercial > Planning & Development

Main Roads requests a copy of the City's final determination on this proposal to be sent to planninginfo@mainroads.wa.gov.au. If you have any queries please do not hesitate to contact Lucas Hodgson on 9323 4806.

Yours sincerely

√ohn McDonald

/Planning Assessment Coordinator /A

ATTACHMENT 18

Your Ref: DA10283

Our Ref: LM: Planning April 2022

Contact: Kathy Chick Telephone: 08 9223 4928 Dampier Bunbury Pipeline

> ABN 78 081 609 289 Level 23, 140 St Georges Tce Perth WA 6000 **Postal Address** PO Box Z5267 Perth St Georges Tce WA 6831

Telephone: +61 8 9223 4300 Facsimile: +61 8 9223 4301

19 April 2022

Wayne Jack Chief Executive Officer City of Kwinana PO Box 21 KWINANA WA 6966

Dear Wayne

DEVELOPMENT APPLICATION – LOT 3 KWINANA BEACH ROAD STORAGE TANKS

Thank you for your email of 9 March 2022 seeking DBP's comments on the proposed storage tanks on Lot 3 Kwinana Beach Road.

DBP as owners and operators of the Dampier to Bunbury Natural Gas Pipeline (DBNGP) has no objections to the proposal.

Should you have any further inquiries, please do not hesitate to contact me on the number above.

Yours sincerely

Neil Parry

Head of Land Management Dampier Bunbury Pipeline



ATTACHMENT 19

Your ref: DA10283 Our ref: Case 2200630

Enquiries: Robyn Corbett PH 6551 8117 Email: robyn.corbett@dplh.wa.gov.au

Mr Jayden Pope Statutory Planning Officer City of Kwinana PO Box 21 KWINANA WA 6966

Dear Mr Pope

DAMPIER TO BUNBURY NATURAL GAS PIPELINE (DBNGP) CORRIDOR – DEVELOPMENT APPLICATION 10283 – LOTS 2 AND 3 KWINANA BEACH ROAD, KWINANA BEACH

I refer to your email dated 9 March 2022 seeking comments in relation to the close proximity of the DBNGP to the abovementioned land in Kwinana Beach. Our assessment is based on the information provided in the development application and **in relation to the DBNGP corridor only**.

The development application for fuel tanks at Lots 2 and 3 Kwinana Beach Road in Kwinana Beach is not expected to materially interfere with the exercise of rights that have been, or might in the future be, conferred under section 34 of the *Dampier to Bunbury Pipeline Act 1997* (DBP Act) as the Lots are not encumbered by the DBNGP corridor.

Australian Gas Infrastructure Group (AGIG) have been conferred rights under the DBP Act to own/operate high pressure gas pipelines within the DBNGP corridor. We recommend the City of Kwinana seeks comments from the AGIG.

For further enquiries please contact Ms Robyn Corbett, on telephone (08) 6551 8117 or at Robyn.Corbett@dplh.wa.gov.au.

Regards,

Jamie Lee King Manager - Delivery