Department of Biodiversity, Conservation and Attractions

SWAN CANNING RIVERPARK

Form 1 – Application for Approval of Development

Swan and Canning Rivers Management Act 2006 – Part 5 – section 72(1)

1. Applicant details

The applicant is the person with whom the department, on behalf of the Chief Executive Officer, will correspond, unless an authorised agent has been appointed to act on behalf of the applicant, in which case correspondence will be sent direct to the agent.

Name	Christian Tinelli			
Position (if applicable)				
Organisation (if applicable)				
Contact person				
Postal address	[redacted]			
Town/Suburb	[redacted]	State	WA	Postcode [redacted]
Telephone	Work		Mobile	[redacted]
Email	[redacted]			

I give authority for an agent (as identified at item No. 3) to act on my behalf during the assessment of the application ☑ YES ☐ NO

If 'YES', please provide Agent's details at item No. 3

Applicant signature | Date 6/10/25

2. Landowner details

All owner(s) of the land **must sign this application**. Where land is owned by the Crown or has a management order granted to a local government or other agency, this application must be signed by the relevant landowner or management body as required under section 72(5)(a) of the Act. If there are more than two landowners, please provide the additional information and signature(s) on a separate page.

Details of first landowner

Name	Matthew Scott			
Position (if applicable)	Chief Executive Officer			
Organisation (if applicable)	City of South Perth			
Contact person	Matthew Scott			
Postal address	Cnr South Terrace and Sandgate Street,			
Town/Suburb	South Perth	State	WA	Postcode 6152

I consent to this application being made.

First landowner signature | Date 17/10/2025

Details of second landowner (if applicable)

Name				
Position (if applicable)				
Organisation (if applicable)				
Contact person				
Postal address				
Town/Suburb		State		Postcode

I consent to this application being made.

Second landowner signature | Date

Department of **Biodiversity, Conservation and Attractions**

GOVERNMENT OF WESTERN AUSTRALIA

SWAN CANNING RIVERPARK

3. Authorised agent details (if applicable)

The applicant must sign the form and tick the authorisation under item No. 1 to provide authority for an appointed authorised agent to act on their behalf.

Details of authorised agent

Name	Graham Hutton				
Position (if applicable)	Architect				
Company/agency (if applicable)	Giorgi				
ACN/ABN (if applicable)					
Postal address	276 Newcastle Street				
Town/Suburb	Perth	State	WA	Postcode	6000
Telephone	Work 9444 8711	Mobile	0403 460 228		
Email	graham@giorgi.co				
Authorised Agent signature		Date	06/10/2025		

4. Location of proposed development

Certificate of title information	Volume LR3176	Folio 703		
	Diagram/plan/deposit plan no. DP424378			
Lot No.(s)	502			
Location				
Reserve No.(s) (if applicable)				
Street No.(s) and name	5 Mill Point Road			
Town/Suburb	South Perth			
Nearest road intersection	Mill Point Close			

5. Details of proposed development

Please provide a written description of the proposed development (refer to the Development Application Guidelines for further details on what information to include in this section).

Estimated cost of development	$3,000,000.00
Current use of land	Currently the land is a grassed area that is used recreationally by the public.
Proposed development	The proposed building will be a Restaurant/Cafe and Kiosk that can be used by the public. It will be a single story building constructed predominately of lightweight walls, rammed earth walls and glazing suites with a concrete roof and metal deck roof to the rear. The flooring will be both concrete slab on ground as well as lightweight flooring on stumps.

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Millers Point Restaurant

Lot 502 (#5) Mill Point Road, South Perth

Development Application
SPP 7.0 Design Principles Assessment

Architects + Builders

Perth Built | Since 1994

1.0 Context and Character

Good design responds to and enhances the distinctive characteristics of a local area, contributing to a sense of place.

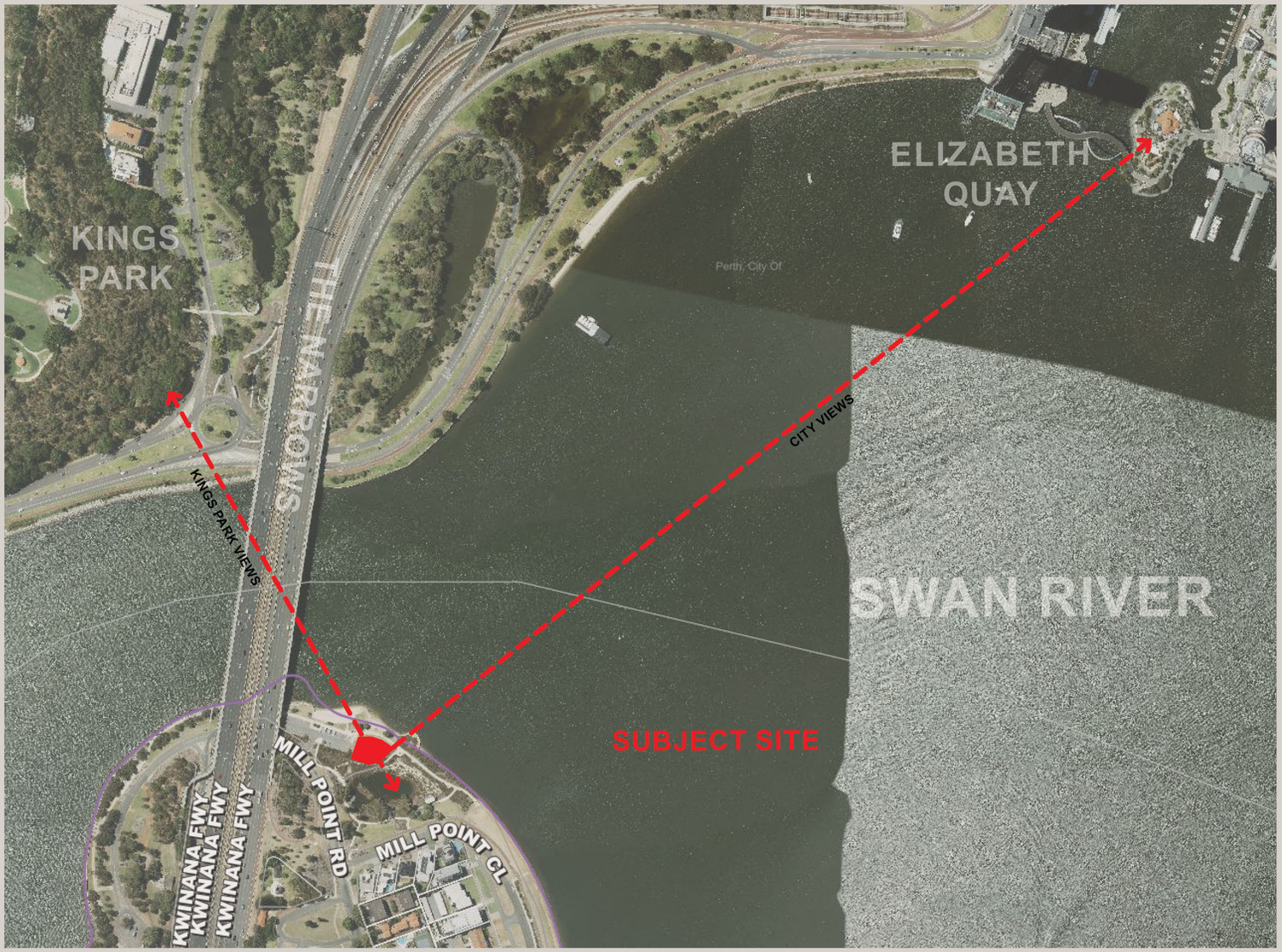


Figure 1.1 - Location Plan and Site photos

The subject site is located to a unique portion of the South Perth foreshore, immediately east of the Narrows Bridge, north of Millers Pool with aspect across the Swan River to Kings Park to the north-west and Elizabeth Quay to the north-east. The site is on reclaimed land and has been extensively landscaped in keeping with the "Perth Water Buneenboro Landscape & Planting Guideline" in 2017, specifically to the periphery of Miller's Pool.

The existing architectural character of the South Perth foreshore presents as an eclectic mix of large single residential homes and commercial functions to the Mends Street precinct. The proposed restaurant presents as a contemporary, sculptural form, tying together the distinctive characteristics of its context including its prominent natural and built features, building upon its social and economic uses with sensitivity towards its existing environmental condition and the overall qualities of its built environment.

The closest residences are located approximately 100m from the subject site. The building has been arranged into two portions, seperated by a sweeping rammed earth wall, with BOH and services located to the rear and roofline kept at a minimal profile.

Figure 1.2 - Aspect to Millers Pool and established boardwalk from the subject site

Figure 1.3 - Aspect to the Narrows Bridge and Kings Park beyond across the Swan River from the subject site

Figure 1.4 - Historical Imagery

'Goorgygoogup, also referred to as Millers Pool is a place of great significance to the Noongar people. The natural pool was located near Booryulup (close to Richardson Park) and Beenabup (Como Beach).

Historical records indicate the pool was a large permanent embayment on the Swan River covering an area of approximately two hectares, providing protected water for local fauna. The area and its surrounds were part of an important camping and fishing area for the Noongar Bibbulmun people. It was also one of the original encampment sites for European settlers, and served as a pseudo port for the flour mill in the 1830s.

William Kernot Shenton saw the potential for the pool to aid his milling operation, and a spur channel was dug from the pool to his mill, allowing boats easy access to offload grain. In 1896 the pool took on another life as a wildlife sanctuary. Worried that the black swan was becoming extinct, the colonial government built a fence around the pool and offered a bounty: any healthy swan presented to Constable Rewell of the Water Police was worth a guinea. Though housing hundreds of swans and operating until 1914, the Millers Pool Swannery failed to produce a breeding population.

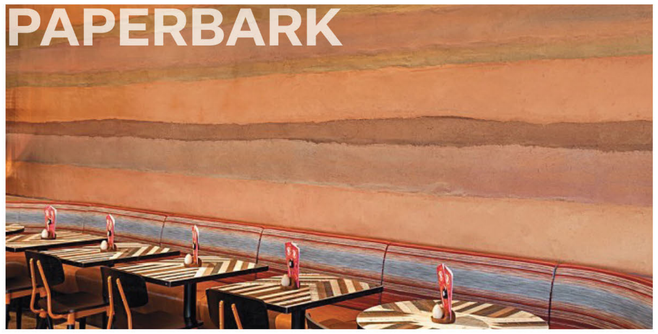
The pool was a controversial feature, considered both a valuable natural landmark and a mosquito-infested eyesore. It was finally destroyed in 1938, filled in with silt gained from dredging ferry channels through the Narrows.'

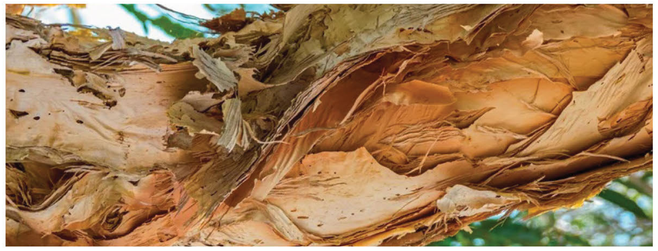
Collections WA (https://collectionswa.net.au/node/54711)

The design team has undertaken a series of meaningful meetings and Design Workshops with the Whadjuk Aboriginal Corporation Cultural Advisory Commitee to gain an understanding into the cultural history and meaning of place.

From these meetings, key learnings have been incorporated into the design response to reinforce a meaningful narrative that acknowledges the history and responds to the unique character of place in a way that all users can enjoy for generations to come.

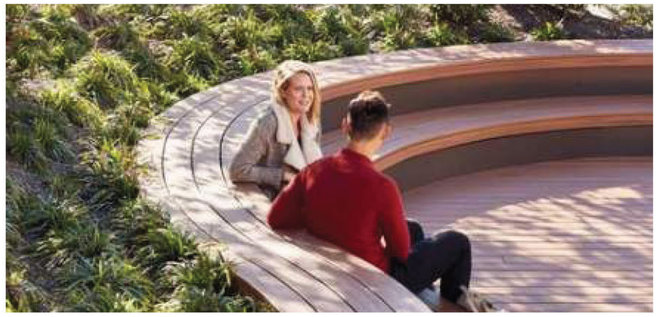
PAPERBARK





THE DESIGN OF THE RESTAURANT FEATURES A RAMMED EARTH SPINE WALL THAT SERVES AS BOTH A STRUCTURAL AND SCULPTURAL ELEMENT, INSPIRED BY THE TEXTURED, LAYERED BARK OF THE PAPERBARK TREE (MELALEUCA). THIS BLADE WALL GRACEFULLY SWEEPS THROUGH THE MAIN RESTAURANT, DIVIDING THE FRONT AND BACK OF HOUSE WHILE BECOMING A CENTRAL FOCAL POINT FOR DINERS. ITS ORGANIC FORM AND NATURAL MATERIALITY CREATE A TACTILE, IMMERSIVE EXPERIENCE THAT CONNECTS GUESTS TO THE LANDSCAPE AND

YARN CIRCLE



THE PROPOSED AMPHITHEATRE-STYLE SEATING INTEGRATED INTO THE KIOSK DESIGN FOSTERS A GATHERING SPACE FOR YARNS AND STORYTELLING, ENHANCING COMMUNITY ENGAGEMENT AND CULTURAL EXCHANGE. POSITIONED AT THE MOST PROMINENT CORNER OF THE SITE, THE DESIGN TAKES FULL ADVANTAGE OF ITS ASPECT TO THE SWAN RIVER AND MILLERS POOL, CREATING A VISUALLY AND EXPERIENTIALLY RICH SETTING.

FISH TRAP SONG

THE PROPOSED ARTWORK INSTALLATION INTEGRATES THE WHADJUK FISH TRAP SONG INTO THE RESTAURANT'S EXTERIOR CONCRETE WALL AS 'IMPRINTS', CELEBRATING THE DEEP CULTURAL AND HISTORICAL SIGNIFICANCE OF THE WHADJUK NOONGAR PEOPLE AND FORMING A MEANINGFUL CONNECTION WHICH TIES THE RESTAURANT AND KIOSK TO PLACE.

2.0 Landscape Quality

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

Figure 2.1 - Existing vegetation on site

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

The "Perth Water Buneenboro Landscape & Planting Guideline" refers to this land as zone #16 "Miller Pool". As such, Millers Pool Restaurant seeks to achieve the following:

Landscaping with Constraints
Focus on supporting biodiversity connections, while providing amenity value through play and educational initiatives and recognising constraints such as river and city views from public points.

– Revegetate using a mix of low vegetation near identified public viewing corridors and providing opportunities for shade where appropriate.
– Species associated with the Vasse Complex are encouraged, however, species from within the Perth Water Buneenboro Plant Species List are acceptable.

Vasse Complex
Mixture of the closed scrub of Melaleuca species fringing woodland of:
– Eucalyptus rudis (Flooded Gum)
– Melaleuca species and open forest of Eucalyptus gomphocephala (Tuart)
– Eucalyptus marginata (Jarrah) – Corymbia calophylla (Marri).

Appendix A – Plant Species List is quite extensive and offers many options for use.

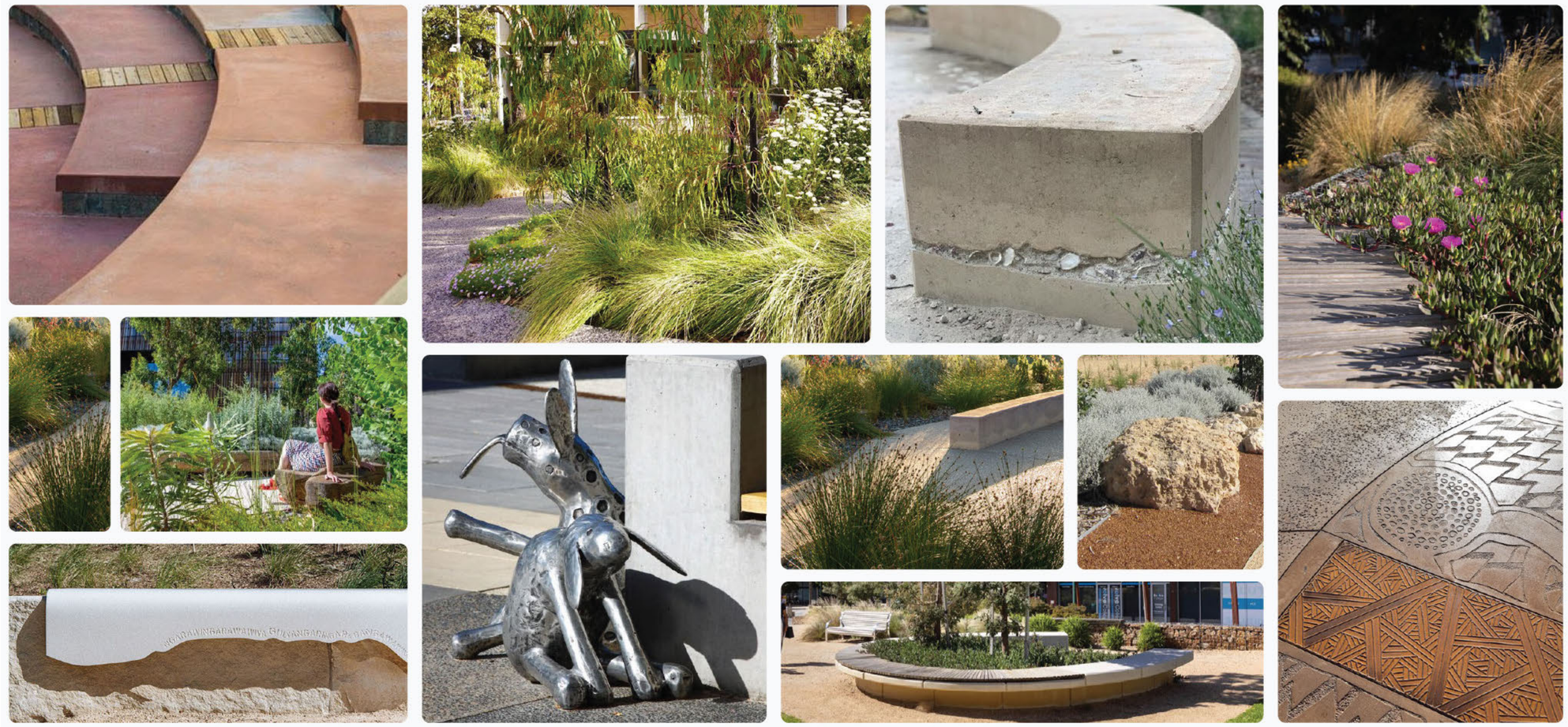


Figure 2.2 - Landscape Precedent Imagery

LANDSCAPE ARCHITECTS
LEVEL 1 278 RAILWAY PDE WEST LEEDERVILLE WA 6007
T: (08) 9388 9566 E: mail@plane.com.au

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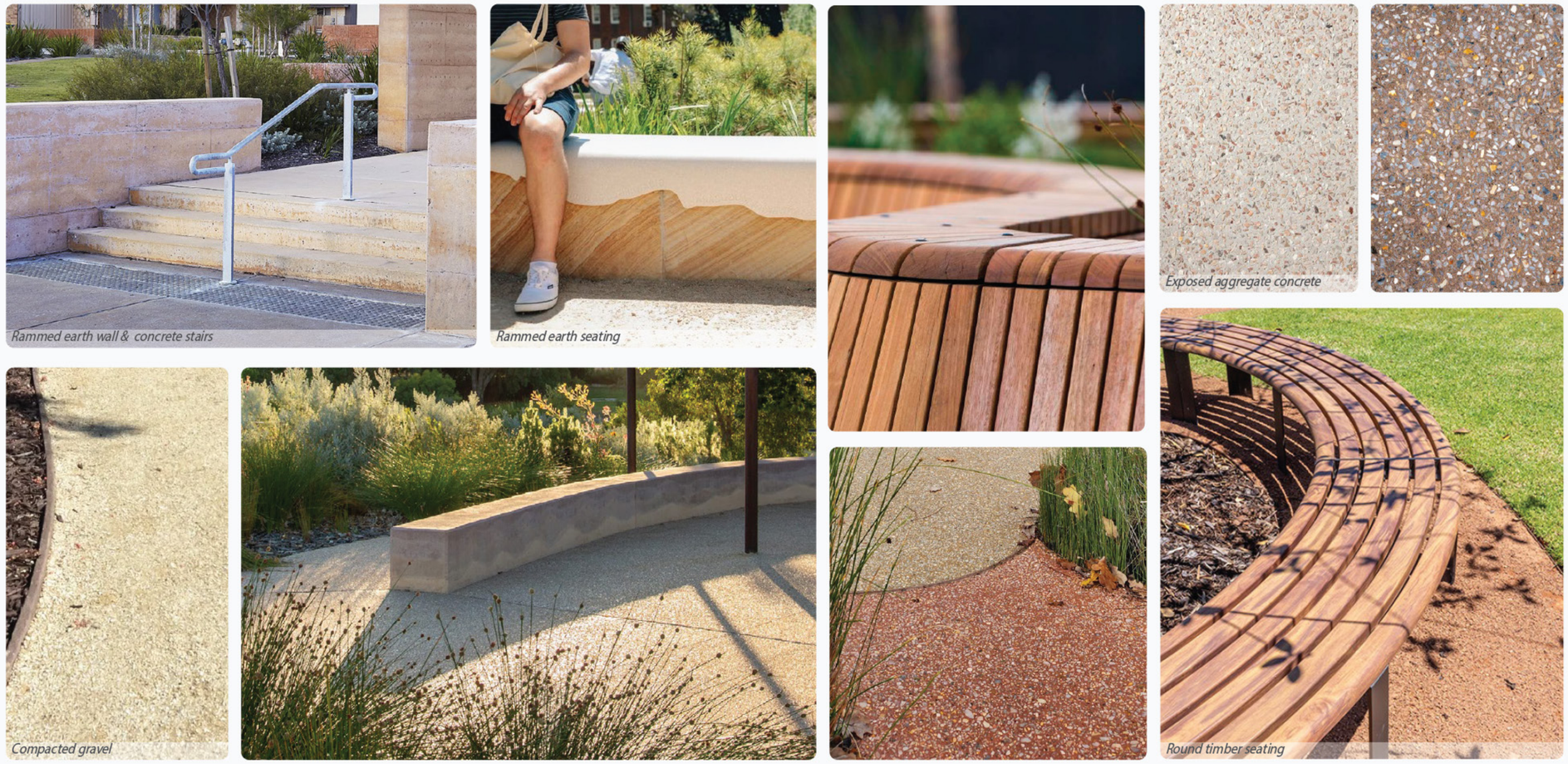

Figure 2.3 - Landscape Precedent Imagery

LANDSCAPE ARCHITECTS
LEVEL 1 278 RAILWAY PDE WEST LEEDERVILLE WA 6007
T: (08) 9388 9566 E: mail@plane.com.au

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Working with the overall design narrative, the landscape responds to the unique character of place to connect & bed the Building into the environment and the locale.

The landscape scheme focuses on extending the riverine planting of Millers Pool to the restaurant surrounds with feature tree planting at the entry & Amphitheatre, further reinforcing the landscape design narrative.

Seating along the foreshore path and adjacent to the kiosk Amphitheatre space, offers a variety of places to take in the river views and meet with friends. The provision of shade tree planting to the car park lifts the amenity to this part of the South Perth Foreshore.

The new landscape works will work with and are limited to mitigating any impact on the existing landscape through careful integration of new landscape works within the existing pathways, foreshore path & car park. The selection of natural hard landscape materials such as pavements, walls and seating are intended to reflect the existing material palette and create a seamless landscape design for this important site.

- Plan E Landscape Architects

LEGEND

01 EXPOSED AGGREGATE INSITU CONCRETE PAVEMENT TO ENTRY & SERVICE AREA

02 FEATURE ENTRY GARDEN WITH LOW SHRUB, GRASS/SEDGE PLANTING & FEATURE LIMESTONE BOULDERS

03 FEATURE ENTRY TREE (BIBOOL/FRESHWATER PAPERBARK)

04 FEATURE TREE PLANTING

05 SHALLOW STORAGE BASIN WITH LOW SHRUB, GROUND COVER & REED SEDGE PLANTING REFLECTING RIVERINE PLANTING

06 LOW PLANTER WITH BUILT IN TIMBER BENCH SEAT. PLANTED WITH LOW GROUND COVERS AND CASCADING PLANTS.

07 FEATURE KIOSK TREE (KONDIL / COMMON SHE OAK)

08 TIMBER CIRCULAR BENCH YARNING SEAT

09 STEPPED SEMI CIRCULAR RAMMED EARTH SEATING/AMPHITHEATRE/GATHERING SPACE WITH EXPOSED AGGREGATE PAVEMENT AND DERBAL YERRIGAN (SWAN RIVER) STORIES

10 BICYCLE RAILS FOR KIOSK

11 REVEGETATION OF DISTURBED VEGETATION TO MILLERS POOL WETLAND (ALL PLANT SPECIES TO BE LOCAL)

12 EXISTING VEGETATION TO MILLERS POOL WETLAND TO BE RETAINED

13 NATIVE SHADE TREES TO CARPARK WITH UNDER PLANTING OF LOW SHRUBS & GROUNDCOVERS

PLAN E
LANDSCAPE ARCHITECTS
LEVEL 1 278 RAILWAY PDE WEST LEEDERVILLE WA 6007
T: (08) 9388 9566 E: mail@plane.com.au

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3.0 Built Form and Scale

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.

Figure 3.1 - Existing Built Scale and Character

Figure 3.2 - Future Built Scale and Character

Existing Character
SPACP - Mill Point Precinct
2.3.3 - 'The Mill Point character area is a predominantly residential area characterised by green, leafy streets and buildings set back from the public realm. This significant amenity is complemented by its proximity to the South Perth Foreshore and views to the Perth CBD and Swan River. In the future, this character will be enhanced through upgrades to the public realm and new development that responds to and enhances the special amenities that make the area a great place to live.'

Desired Future Character
SPACP - Mill Point Precinct
The City of South Perth's desired future character is a liveable, sustainable, and connected community with a unique natural environment, featuring active, vibrant neighborhoods and a distinct identity. This vision is pursued through plans that aim for green, accessible spaces, a sustainable built environment, improved biodiversity, active street frontages, diverse housing, and vibrant public areas connected to the Foreshore and transport nodes.
In line with 2.3.3.1 the proposal seeks to reflect the garden character of the area through the incorporation of a considered and visually pleasing roof form and living walls where appropriate.

It was important from the outset that a proposal to this prominent location sought to limit bulk and scale to a modest single level development to minimise impact on solar access and preserve view corridors between buildings wherever possible. This would ensure that the eventual development would be in line with the City of South Perths vision for building heights - generally stepping down towards the Northern end of the South Perth Peninsula and the Swan River in accordance with the applicable Building Height and Plot Ratio Limits.

Identified early was also the existing condition of the public carpark and walkway adjeacent to the site. The proposal incorporates considered hard and soft landscaped zones to provide pedestrian respite on what is a key movement corridor on the South Perth foreshore. Trees have been incorporated to the existing carpark offering further shading and landscaping to what is currently a derelict carpark with limited shading.

In line with the Citys vision, the development respects the upgrade of the South Perth Esplanade as a low speed waterfront boulevard and park with pedestrian and cyclist movements prioritised by the insertion of a publicly-accessible private open space. Amenity impacts from the freeway are managed with considered visual and physical buffer through the use of landscaping, tree planting and low sound walls.

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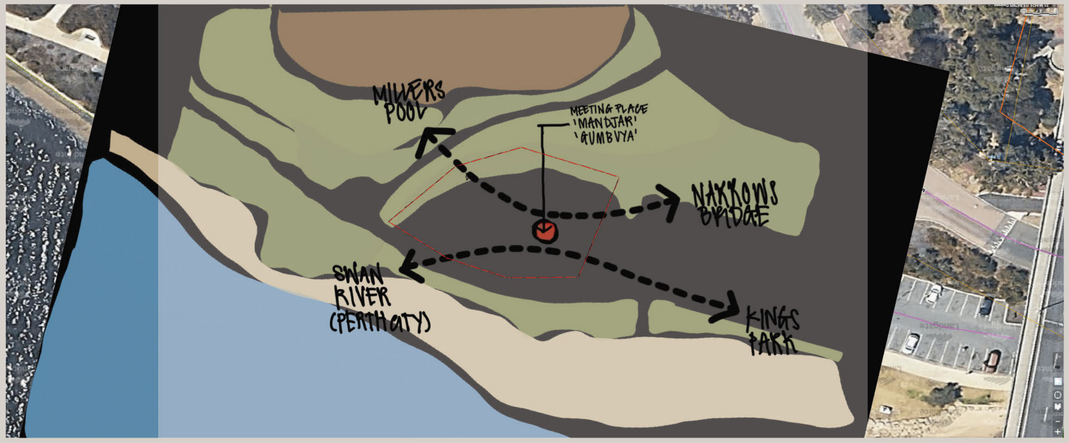


Figure 3.3 - Concept Diagram - Context

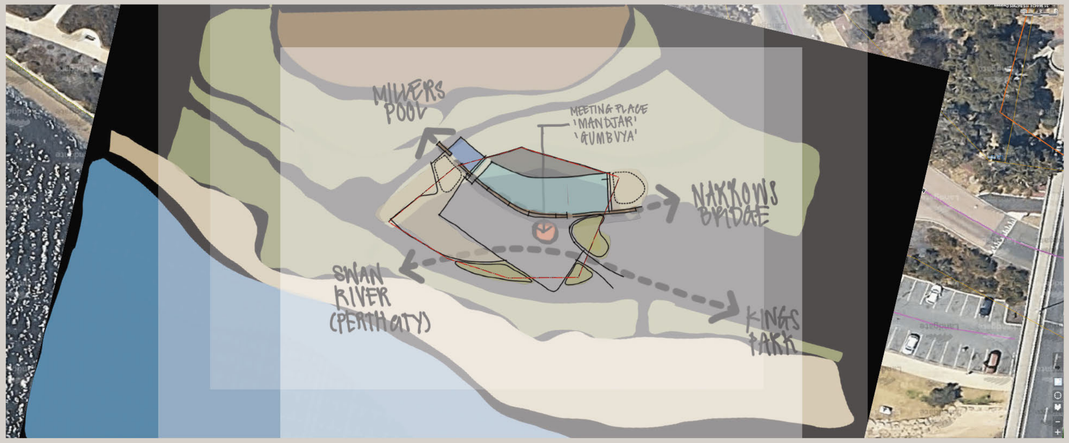


Figure 3.4 - Concept Diagram - Form

Architectural Response

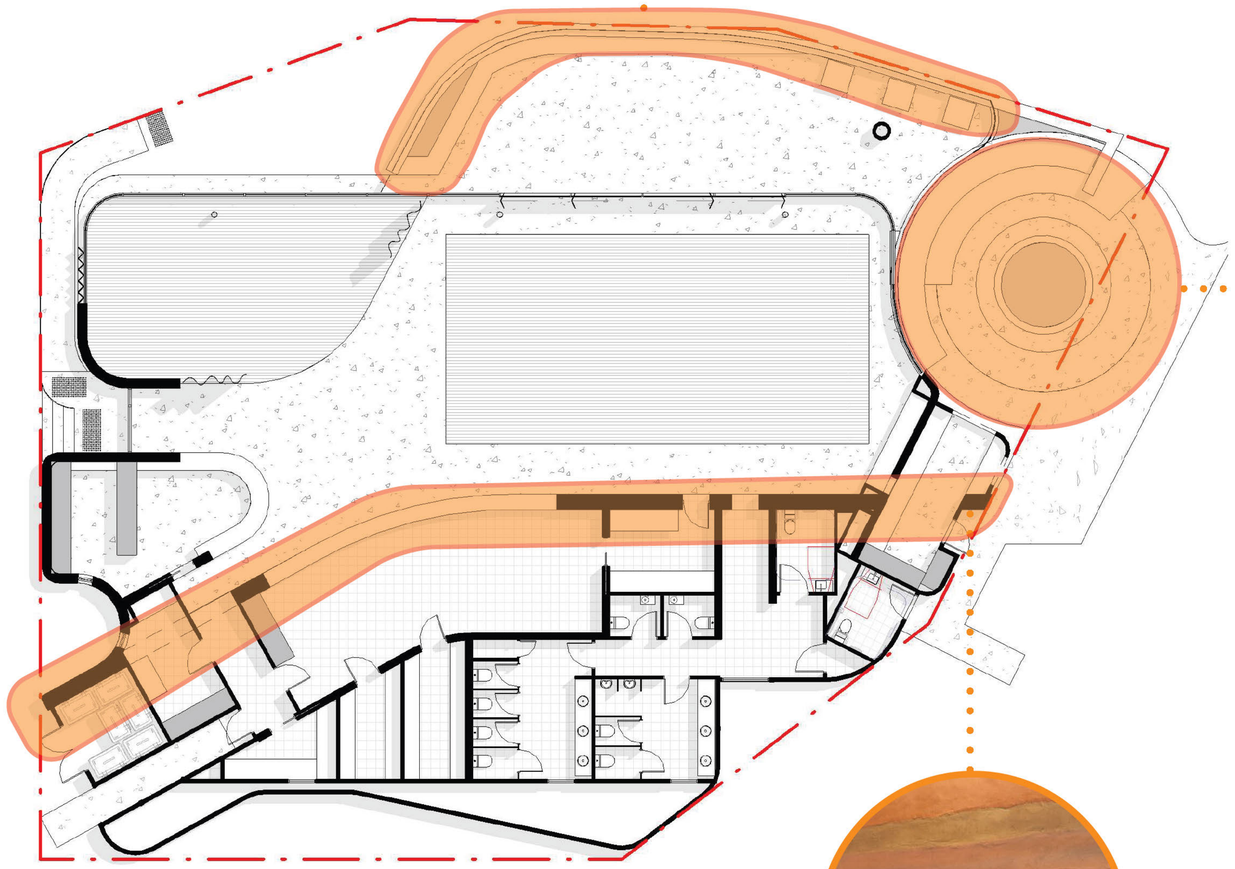
The proposed restaurant at Millers Pool is conceived as a subtle and contextually responsive architectural statement that celebrates its prominent location at the confluence of Perth's most iconic natural and urban landmarks; Kings Park, the Swan River, Perth City, and the Narrows Bridge.

Anchored in the rich history of Millers Pool as an indigenous place of gathering and connection, the architectural approach seeks to reinterpret storytelling of its custodians through a contemporary lens, to be shared by all in the modern day. The building's low-profile form floats over the natural contours of the site, ensuring minimal disruption to the existing vegetation and visual impact from the surrounding parkland and foreshore. Its elongated and highly articulated shape sweeps across the landscape, opening out toward panoramic river and city views while maintaining a respectful scale and character in relation to the adjacent residential areas to the south-west.

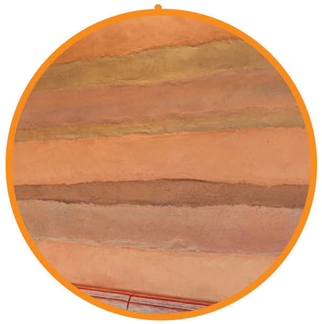
A carefully composed palette of natural materials and tactile finishes allows the building to age gracefully within its setting, echoing the textures and tones of the riverbank and surrounding vegetation. Expansive glazing, deep overhangs, and shaded terraces invite a fluid connection between interior and exterior spaces, allowing patrons to experience the changing light and atmosphere of the riverfront throughout the day.

The design aspires to create not only an exciting destination for dining but also a landmark of subtlety, aiming to enhance the experience of adjacent Millers Pool and the Swan River to strengthen its identity as a meeting place where Perth's natural beauty and rich cultural history coexist.

THE FISH TRAP SONG
BOUNDING WALL



YARN CIRCLE
KIOSK FORECOURT



PAPERBARK
SPINE WALL

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Figure 3.5 - Proposed Form - integration to context

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KIOSK AND YARN CIRCLE

THE SEATING IS DESIGNED AS A SEMI-CIRCULAR AMPHITHEATRE, EMBRACING THE KIOSK AS ITS FOCAL POINT WHILE MAINTAINING AN OPEN CONNECTION TO THE LANDSCAPE. THE STEPPED SEATING FOLLOWS THE NATURAL CONTOURS OF THE SITE, CREATING AN INFORMAL YET STRUCTURED GATHERING SPACE THAT ACCOMMODATES BOTH INTIMATE AND LARGER GROUP DISCUSSIONS. THE ORIENTATION MAXIMIZES RIVER VIEWS WHILE ENSURING OPTIMAL ACOUSTIC PROJECTION, ALLOWING NATURAL VOICES TO CARRY WITHIN THE SPACE WITHOUT AMPLIFICATION. RATHER THAN A SEPARATE NODE WITHIN THE LANDSCAPE, THE AMPHITHEATRE SEAMLESSLY CONNECTS TO THE KIOSK, BECOMING A KEY NODE ON THE SOUTH PERTH FORESHORE, ALLOWING VISITORS TO SHARE IN FOOD AND DRINK WHILE PARTICIPATING IN STORYTELLING SESSIONS. THE OPEN AND WELCOMING FORM ENCOURAGES SPONTANEOUS INTERACTIONS AND PASSIVE ENGAGEMENT FOR THOSE WALKING THROUGH THE SPACE. STRATEGICALLY PLACED SOFT LIGHTING ENSURES USABILITY IN THE EVENING, INVITING STORYTELLING SESSIONS UNDER THE STARS. THE SEATING INCORPORATES ORGANIC CURVES, INSPIRED BY TRADITIONAL GATHERING CIRCLES AND THE RIPPLING FLOW OF THE RIVER.

THE SPACE IS DESIGNED IN CONSULTATION WITH WHADJUK NOONGAR ELDERS AND KNOWLEDGE KEEPERS, ENSURING CULTURAL AUTHENTICITY AND RESPECT FOR STORYTELLING TRADITIONS. EMBEDDED INTERPRETIVE ELEMENTS (SUCH AS ENGRAVED STORIES, NOONGAR LANGUAGE PLAQUES, OR DIGITAL QR CODES) ENHANCE THE CULTURAL LEARNING EXPERIENCE. BY INCORPORATING AMPHITHEATRE-STYLE SEATING, THE KIOSK TRANSFORMS INTO A CULTURAL AND COMMUNAL LANDMARK, ENRICHING THE EXPERIENCE OF VISITORS WHILE STRENGTHENING THE CONNECTION BETWEEN PEOPLE, PLACE, AND STORYTELLING TRADITIONS. POSITIONED WITH BREATHTAKING VIEWS OF THE SWAN RIVER AND MILLERS POOL, THE SPACE EMBODIES THE SPIRIT OF GATHERING, LEARNING, AND SHARING, ENSURING A MEANINGFUL AND ENDURING LEGACY.

KIOSK AND YARN CIRCLE

MATERIAL PALETTE

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KIOSK AND YARN CIRCLE

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KIOSK AND YARN CIRCLE

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PAPERBARK WALL

FORM & SPATIAL ORGANIZATION

- THE WALL IS DESIGNED AS A CONTINUOUS, SWEEPING ELEMENT, GUIDING MOVEMENT THROUGH THE SPACE AND SUBTLY DEFINING DIFFERENT ZONES WITHIN THE RESTAURANT.
- ITS VARYING THICKNESSES AND UNDULATING SURFACE ECHO THE PEELING LAYERS OF THE PAPERBARK TREE.
- OPENINGS WITHIN THE WALL PROVIDE FRAMED VISUAL CONNECTIONS BETWEEN THE FRONT-OF-HOUSE DINING AREA AND GLIMPSES OF THE KITCHEN, CELEBRATING THE CRAFT OF COOKING.
- POSITIONED AS THE RESTAURANT'S CENTREPIECE, THE WALL BECOMES A BACKDROP FOR INTIMATE DINING MOMENTS WHICH CAN BE APPRECIATED FROM BOTH WITHIN AND EXTERNAL TO THE RESTAURANT.

MATERIALITY & CONSTRUCTION

- THE RAMMED EARTH MIX IS CURATED TO REFLECT THE SOFT, TONAL VARIATIONS OF PAPERBARK, WITH WARM SANDY HUES, WHITES, AND OCHRES.
- TEXTURED FINISHES AND STRIATIONS ARE INTEGRATED TO MIMIC THE FIBROUS, ORGANIC QUALITY OF BARK, ACHIEVED THROUGH LAYERED COMPACTION TECHNIQUES AND NATURAL OXIDES.
- LOCALLY SOURCED AGGREGATES ENSURE SUSTAINABILITY AND A STRONG CONNECTION TO THE LAND.
- ITS THERMAL MASS PROPERTIES CONTRIBUTE TO PASSIVE CLIMATE CONTROL, ABSORBING HEAT DURING THE DAY AND RELEASING IT IN THE EVENING.
- THE TACTILE SURFACE INVITES DINERS TO INTERACT WITH THE MATERIAL, DEEPENING THEIR SENSORY ENGAGEMENT WITH THE SPACE.

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THE FISH TRAP SONG

THIS ARTISTIC INTERVENTION WILL TRANSFORM THE WALL INTO A NARRATIVE CANVAS, WHERE SONG, TEXTURE, AND SYMBOLISM CONVERGE, CREATING AN IMMERSIVE EXPERIENCE FOR PASSERSBY, ACCESSIBLE TO ALL MEMBERS OF THE PUBLIC.

AN EOI PROCESS FOR WHADJUK NOONGAR ARTISTS WILL BE RUN TO APPOINT THE SUCCESSFUL ARTIST TO CONSULT WITH THE DESIGN TEAM. SOME EARLY IDEAS RAISED IN CONSULTATION WITH THE WHADJUK ABORIGINAL CORPORATION AND SUBJECT TO FURTHER CONSULTATION:

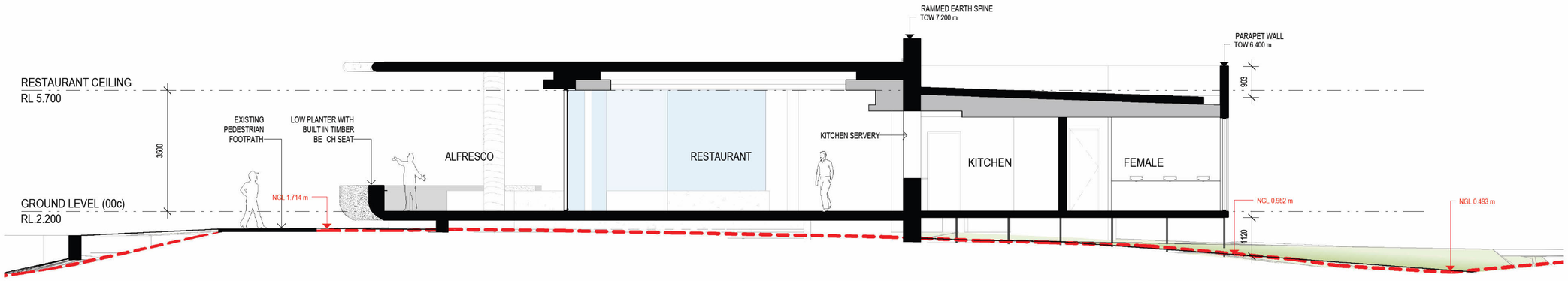
- THE BASE OF THE ARTWORK WILL FEATURE IMPRINTED CONCRETE, REFERENCING THE ANCIENT STONE FISH TRAPS USED BY THE WHADJUK NOONGAR PEOPLE. ENGRAVED NOONGAR SYMBOLS REPRESENTING WATER, FISH, AND GATHERING PLACES WILL FORM A CONTINUOUS MOTIF ACROSS THE WALL.
- EXCERPTS FROM THE WHADJUK FISH TRAP SONG WILL BE ETCHED SUBTLY INTO THE SURFACE, ALLOWING DINERS TO DISCOVER THE WORDS THROUGH TOUCH AND SIGHT.
- NOONGAR LANGUAGE WILL BE HIGHLIGHTED, WITH TRANSLATIONS SUBTLY INCORPORATED TO ENHANCE CULTURAL UNDERSTANDING.
- LASER-CUT METAL OVERLAYS WILL DEPICT FISH MOVING THROUGH FLOWING WATERS, SYMBOLIZING THE CYCLICAL NATURE OF LIFE AND SUSTAINABILITY.
- INTEGRATED LED BACKLIGHTING WILL CREATE SHIFTING SHADOWS, SIMULATING THE MOVEMENT OF WATER AND FISH WHEN LIGHT CHANGES THROUGHOUT THE DAY.
- A QR CODE EMBEDDED INTO THE ARTWORK WILL ALLOW VISITORS TO LISTEN TO A TRADITIONAL RENDITION OF THE FISH TRAP SONG, CONNECTING THE VISUAL AND AUDITORY EXPERIENCE. THE PROJECT WILL BE DEVELOPED IN CONSULTATION WITH WHADJUK NOONGAR ELDERS AND ARTISTS, ENSURING AUTHENTICITY, RESPECT, AND APPROPRIATE STORYTELLING.

Figure 3.6 - Proposed Built Form - Aspect From River
Organic sweeping lines articulate the plan, reflecting the natural movement of the foreshore and Swan River embankment and tie the building to its unique views of significance.

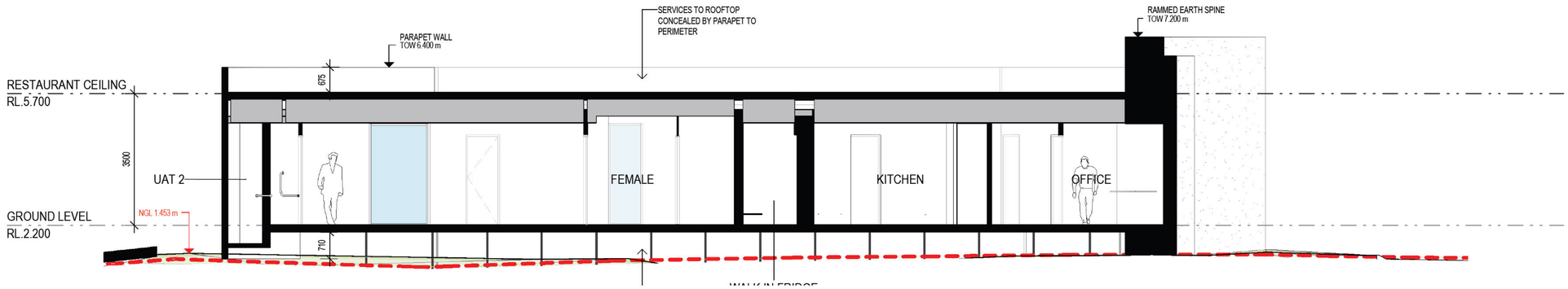
The floor level of the building is set at a slight elevation above the footpath to finished floor level, facilitating a strong visual connection with pedestrians and cyclists passing by on the established footpath.

Figure 3.7 - Proposed Built Form - Aspect From River
Organic sweeping lines articulate the plan, reflecting the natural movement of the foreshore and Swan River embankment and tie the building to its unique views of significance.

The floor level of the building is set at a slight elevation above the footpath to finished floor level, facilitating a strong visual connection with pedestrians and cyclists passing by on the established footpath.



SECTION 1



SECTION 2

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Figure 3.8 - Proposed Built Form - Aspect From Mill Point Road
The development takes on a single storey scale with low profile with consideration to the existing residential properties of Mill Point Road approximately 100m away, appearing from the street as a low profile form nestled into the existing landscape.

Figure 3.9 - Aerial Photo indicating proximity to existing Residences and existing vegetation

4.0 Functionality and Build Quality

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.

Key Design Outcomes - Functional

Ease of Use
Spaces are designed to maximise efficiency and ease of operations of the restaurant and kiosk. This has been driven by an experienced operator with a long history of running successful restaurants locally.

Unimpeded Access
The front of house areas are accessed from the existing node connecting the existing carpark and pedestrian footpath, providing a well defined entry to the maitre de station within. Whilst the building form is articulated as a sculptural composition, the café dining area is rectilinear in footprint with unimpeded access to the outdoor dining fronting the Swan River and amenities to the rear.

Deliveries and rubbish collection are via a service area to the rear of the building directly from the existing carpark to the BOH and from there distribution to Kitchen zones is clear.

Minimal Maintenance
The material palette draws from its history and context, incorporating a limited palette of natural, authentic materials into an exemplary quality and highly articulated form.

A limestone rammed earth spine wall draws from its geological context to sweep over the plan, seperating front and back of house zones and anchoring the building to its context. With a subtle reference to the sites history of a timber collection destination on the southern banks, timber is reimagined to clad the buildings edges and accents. All materials will be of a high quality and specified to withstand the environmental conditions and proximity to the Swan River.

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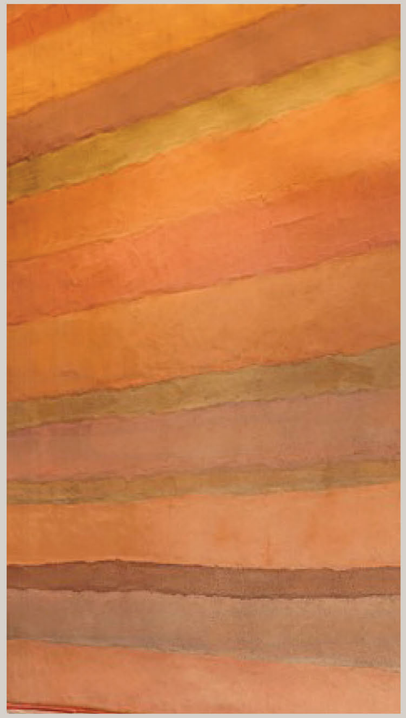
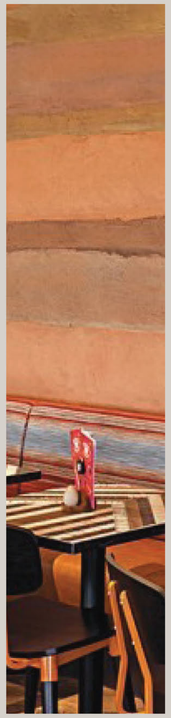
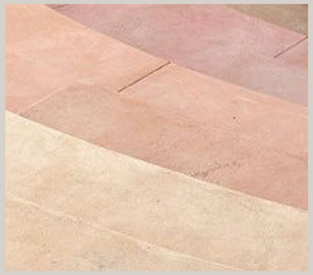
SK06

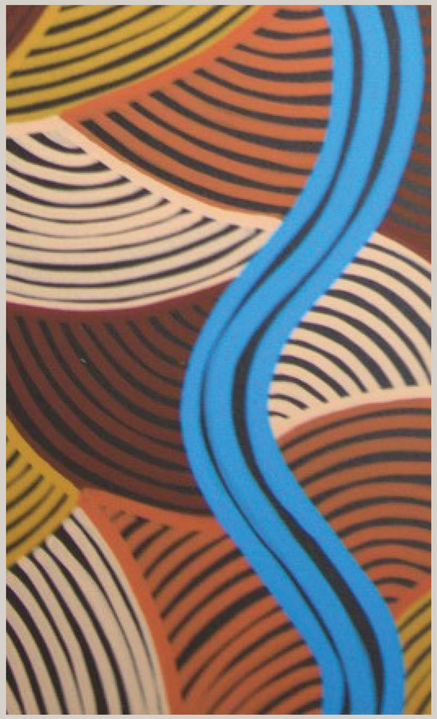
Rammed Earth Spine
'Paperbark Wall'



Concrete

Glazed Tile

Timber



Roof Art

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5.0 Sustainability

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

DESCRIPTION	GOAL	SUSTAINABILITY COMMITMENTS
Clean Air	Improve Indoor Environment Quality and Health and Wellbeing of Occupants.	Improved Natural Ventilation strategies
Light Quality		Above **75%** of the regularly occupied areas have high level of daylight (above 160 Lux).
Exposure to Toxins		The building's paints adhesives, sealants, and carpets are low in TVOC or non-toxic. The building's engineered wood products are low in TVOC or non-toxic. Occupants are not exposed to banned or highly toxic materials in the building.
Urban ecology	Heat Resilience	Light Roof Colour and hardscape elements to reduce Urban Heat Island Effect
	Reduce impacts to Nature	Protect natural wetland ecosystems on site Stormwater retention
Energy use	Reduce Emissions and Water Use.	A minimum of **30%** offset in operational energy usage
		High performance building fabric.
		Provision for Solar PV array to supply renewable energy to building.
Water use		High WELS Ratings (these equal to a **24%** reduction in potable water).
Lighting use		**20%** reduction in lighting power when compared to NCC DTS. External lighting to meet AS 4282 and Wildlife Sensitivity requirements.
Material Efficiency	Waste Efficiency	Consideration of end of life and recyclability of materials used. Operational Waste Efficiency
Movement and place	Low Carbon Transport Options	Provision for EV Charging bays
		Provision for Bicycle parking
Design for Inclusion	Social Health.	Disability Access and Inclusive design
	Indigenous Inclusion	The building's design incorporates design elements using the Indigenous design and planning strategies and principles.

Sustainability Commitments

The sustainability report prepared by EMERGEN provides a comprehensive overview of sustainability commitments that harmonise seamlessly with the core principles of State Planning Policy 7.0: Principle 5 Sustainability. Based on modelling undertaken and sustainable initiatives proposed the development has the ability to achieve a best practice sustainability outcome, delivering positive environmental, social and economic outcomes.

6.0 Amenity

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

An exemplar for high amenity Restaurant offering in Perth, WA

The development presents two distinctive offerings in the form of a restaurant and kiosk, intended to service the public at varying times of the day and evening.

The Restaurant provides for approximately 150 patrons (maximum) and 14 staff. As such, the spaces have been designed to adequately accommodate good amenity with appropriate toilets, storerooms and end of trip facilities in addition to the kitchens and bar service areas. The internal dining spaces are flanked by the alfresco zones, providing unimpeded access to views for all patrons. The restaurant will be light and bright with careful consideration to interior finish selections to optimise the dining experience. The restaurant operation is envisaged for lunch and dinner service, however has been designed with the capability to adapt to change over time.

The Kiosk is inserted to the south east portion of the building with a unique aspect to Millers Pool, fostering an appreciation of the sites natural asset which may be accessed via the existing pedestrian footpath on-grade. With the aspiration for the kiosk to be a space to stop and enjoy a coffee before continuing to enjoy the foreshore, a forecourt area with seating and landscaping has been incorporated, offering a pleasant space to sit and to gather, overlooking Millers Pool and the City beyond. The Kiosk forecourt is passively protected from the prevailing winds due to the nature and shaping of its footprint, and is sheltered from the elements with a sculpural canopy over which serves as an art piece and way finding beacon visible from the pedestrian pathway and foreshore beyond. The kiosk will be a drink and simple food offering, catering to all members of the public.

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7.0 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.

Clear Connections

The general arrangement of the building is oriented upon clear and direct lines of sight and movement and a logical allocation of space.

Clear and considered signage will be implemented with consideration to the exposure of the site in such a prominent location, as viewed from Millers Pool, Swan River, banks and existing footpaths adjacent, Narrows bridge above and Mill Point Road to the rear.

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8.0 Safety

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

The City of South Perth has closed a carpark under the Narrows Bridge. Credit: Justin Bianchini

EXCLUSIVE

Council shuts Millers Pool carpark in bid to put brakes on hoons at South Perth peninsula

Jessica Evensen | PerthNow - Central
March 7, 2024 2:00AM

Jessica Evensen
Comments

TOPICS Central Local Government Local News PerthNow - Southern South

Hoons have forced the City of South Perth to close part of the South Perth peninsula.

The Millers Pool carpark – an isolated area under the Narrows Bridge – and the thoroughfare leading to the Mill Point boat ramp jet ski area have been closed after the proposal was unanimously backed by the council last month.

Millers Pool carpark and the Mill Point boat ramp jet ski area will be closed between 9pm and 5am for three and four weeks respectively.

A portion of Mill Point Road could soon have its speed limit dropped to 40km/h as the South Perth City council continues to slam the brakes on hoons. Credit: Facebook

Hoons could force City of South Perth to drop speed limit on Mill Point road to 40km/h

Jessica Evensen & Claire Sadler | PerthNow - Central
June 8, 2024 2:00AM

Comments

TOPICS Central Local News PerthNow - Southern South

Part of Mill Point Road could soon have its speed limit dropped to 40km/h and a South Perth peninsula carpark will be closed every night as the local council tries to slam the brakes on hoons.

Hoons have long been a headache for South Perth residents and in February forced the City of South Perth to close part of the South Perth peninsula.

The Millers Pool carpark – an isolated area under the Narrows Bridge – and the thoroughfare leading to the Mill Point boat ramp jet ski area were shut

A safe experience for all patrons

The building is set out at a safe distance from the general path of foot and bike traffic to the existing footpath, ensuring movement paths are uninterrupted and interaction between the building and path is complimentary.

Due to a difference in level between the path and the finished floor, and a considered built up edge to the alfresco dining, the alfresco diners feel a sense of enclosure and protection from the activity beyond while maintaining a visual connection at all times. The restaurant is accessed by a singular point and a check in point created in the form of a maitre de station ensuring access and egress is monitored. A secondary rear door will allow egress in case of an emergency event.

The Millers Pool carpark is well known for anti social behaviour and hooning which has forced the carpark to be closed nightly from 10pm to 5am. In the past, hooning has been described as the “single biggest issue” raised by residents living along the South Perth peninsula, who compared their streets to a motorplex. The proposed use will activate this part of the peninsula improving the passive surveillance to the area and addressing the current lack of activity during the evening.

9.0 Community

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.

A place for All

Set within the scenic and culturally rich setting of Millers Pool, the design of the new restaurant seeks to celebrate connection between people, place, and story. The architecture has been carefully conceived to create an inclusive and welcoming destination that invites all members of the community to come together in one of Perth's most iconic riverfront locations.

Through our consultation with the Whadjuk Noongar people, we gained valuable insight into the deep cultural narratives that shape this land. These stories of place and connection to water, landscape and gathering form the foundation of the design approach. The building and its surrounding landscape respond to these narratives through material selection, spatial organisation and orientation, weaving the past into a contemporary expression that will carry these meanings forward for future generations. It is important that these stories can be shared by all walks of life, being incorporated into built form elements but also available through QR coding across the building, for further information to be articulated.

The restaurant and kiosk are designed to serve a diverse range of visitors, from casual walkers and cyclists passing through along the foreshore, to local residents and visitors seeking a memorable dining experience. Open, transparent facades and generous outdoor terraces blur the threshold between inside and out, encouraging movement and interaction. The design fosters a sense of belonging and togetherness through communal dining areas, shaded seating zones and a seamless connection to the surrounding landscape.

The proposed restaurant is envisioned as a place of gathering, creating a comfortable, safe and enjoyable environment where food, culture and community converge. It offers an opportunity to share stories old and new, to engage with the site's cultural heritage, and to experience the beauty of Country through an architecture that is grounded, open, and reflective of its place.

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10.0 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.

Considered at all angles

The concept of 'Meeting Place' draws on the historical context of the site and drives the gestural articulation of the architectural form of the restaurant, presenting as a subtle yet elegant and timeless sculptural addition to the South Perth shoreline.

The composition is made up of three distinctive parts;

- The sculptural front of house and dining zones, maximising connection with the river and views and floating gently adjacent the existing pedestrian and cyclist pathways. Two low profile concrete roofs layer over one another, ensuring generous ceilings to the light and bright internal and alfresco zones within. As the built form transitions to the landscaped edge, a built in seat and planter facilitates a sense of enclosure while maintaning an unimpeded view and visual connection with the established community use beyond.

- A sweeping limestone rammed earth wall, serving as the deliniation between front and back of house, articulated in response to the geometry of the context and lines of site achieved. The wall is permeated with openings within which act as servery areas for Kitchen dining as well as access directly through to the amenities areas and back of house.

- The low profile back of house zones, raised above natural ground with consideration to touching the earth lightly and ensuring existing vegetation may continue to grow below the building footprint. A perimeter parapet wall ensures services are concealed out of sight.

The building ties itself back to the site through the selection of limited and quality materials which are authentic, robust and enduring; utilising limestone and timber extensively throughout.

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Millers Point Restaurant

Lot 502 (#5) Mill Point Road, South Perth

Development Application
SPP 7.0 Design Principles Assessment

Architects + Builders

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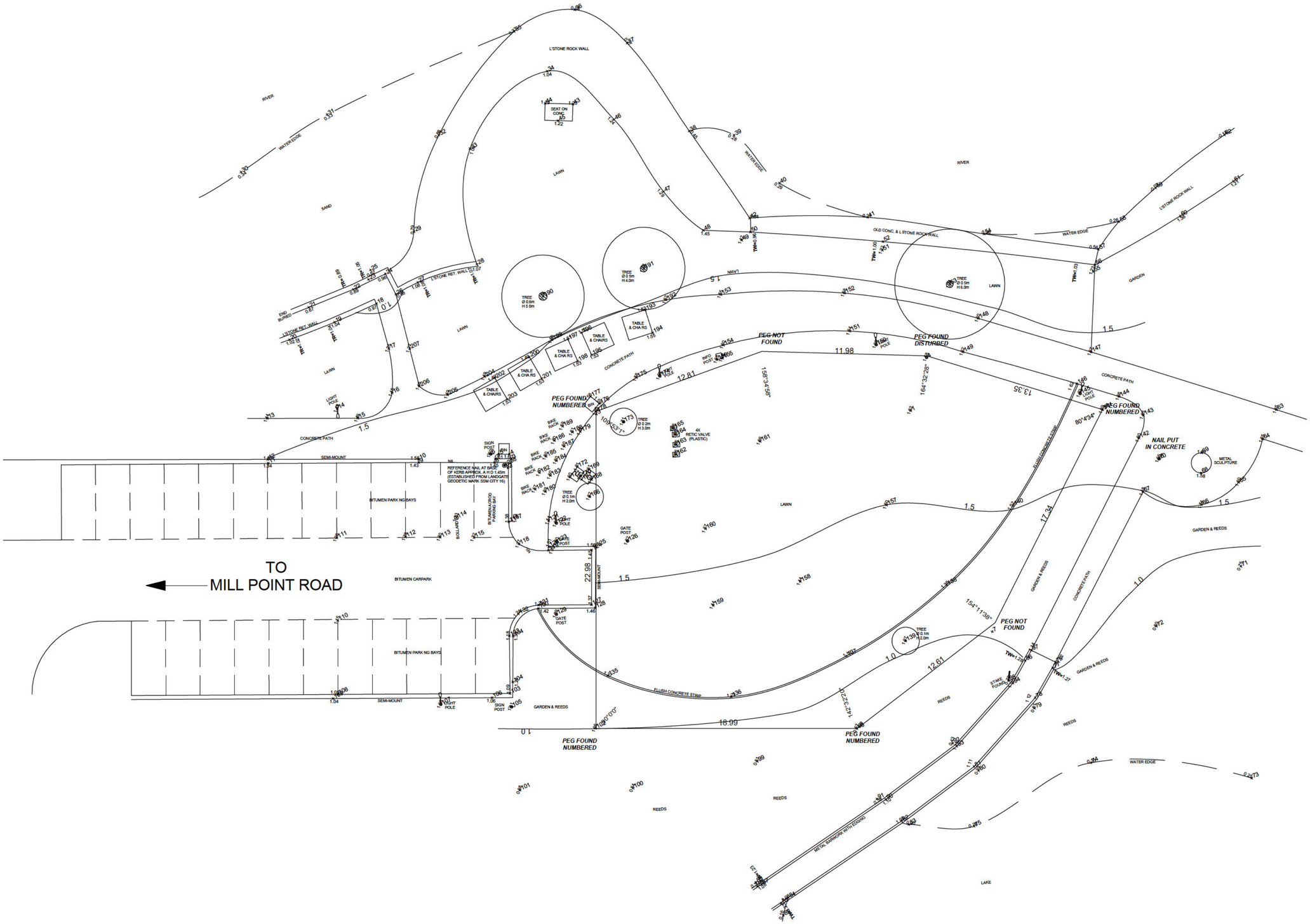
SOUTH PERTH RESTAURANT

5 MILL POINT ROAD, SOUTH PERTH

COVER PAGE

SK05 - DEVELOPMENT APPLICATION

JOB NUMBER
DRAWING NO. **A_100**
SCALE
DATE **OCT 2025**



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SOUTH PERTH RESTAURANT

5 MILL POINT ROAD, SOUTH PERTH

FEATURE SURVEY

SK05 - DEVELOPMENT APPLICATION

JOB NUMBER		SCALE	1 : 200
DRAWING NO.	A_100.1	DATE	OCT 2025

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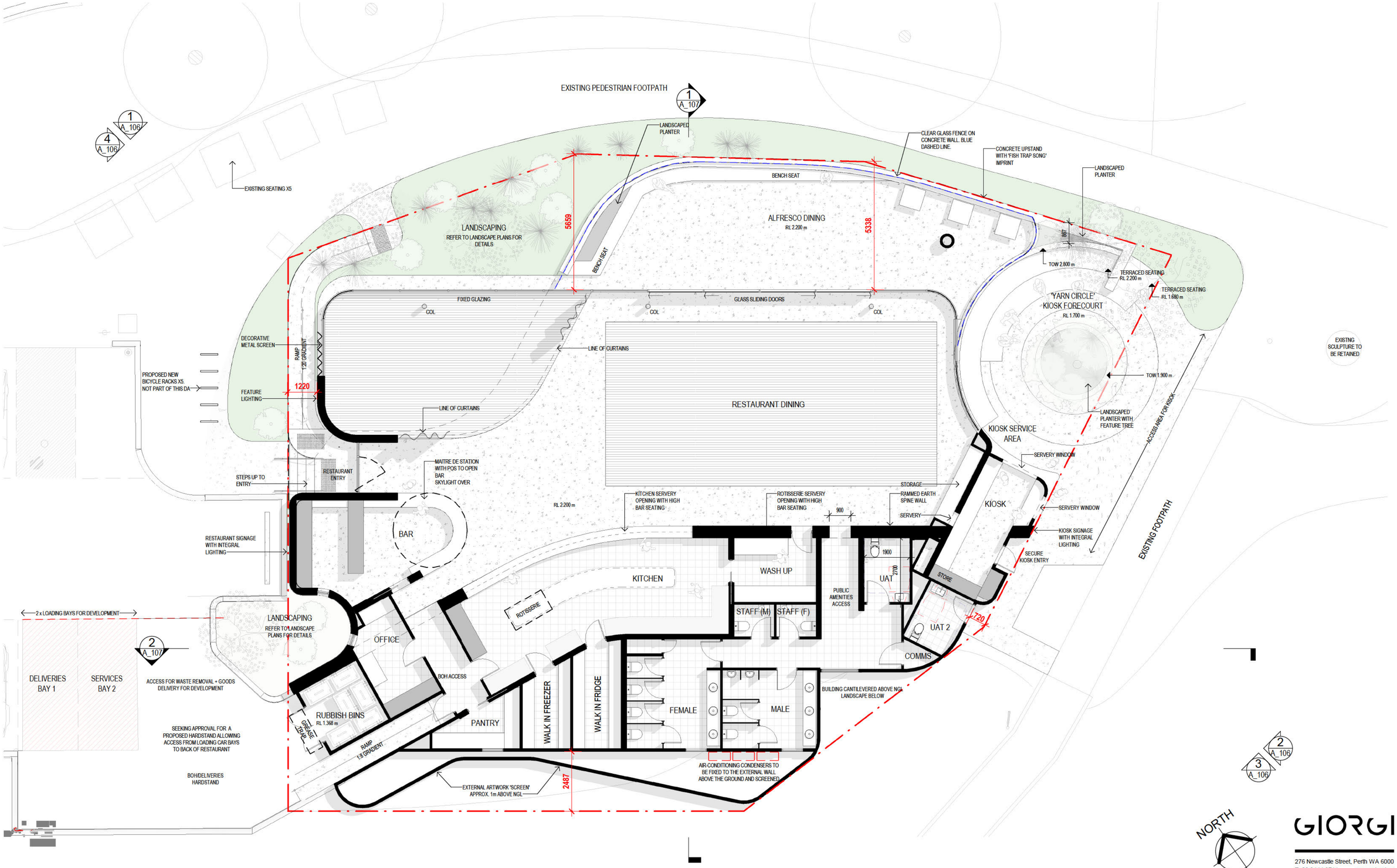
SOUTH PERTH RESTAURANT

5 MILL POINT ROAD, SOUTH PERTH

SITE PLAN

SK05 - DEVELOPMENT APPLICATION

JOB NUMBER		SCALE	1 : 200
DRAWING NO.	A_101	DATE	OCT 2025



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SOUTH PERTH RESTAURANT

5 MILL POINT ROAD, SOUTH PERTH

GROUND FLOOR PLAN

SK05 - DEVELOPMENT APPLICATION

JOB NUMBER		SCALE	1 : 100
DRAWING NO.	A_102	DATE	OCT 2025

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SOUTH PERTH RESTAURANT

5 MILL POINT ROAD, SOUTH PERTH

ROOF PLAN

SK05 - DEVELOPMENT APPLICATION

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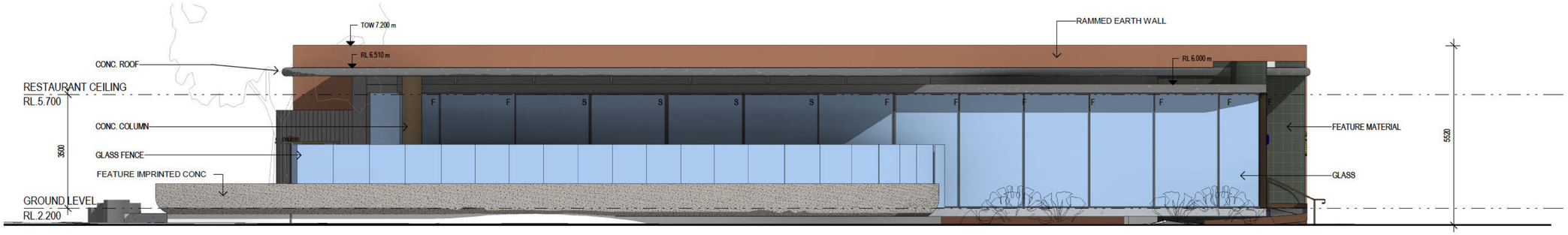
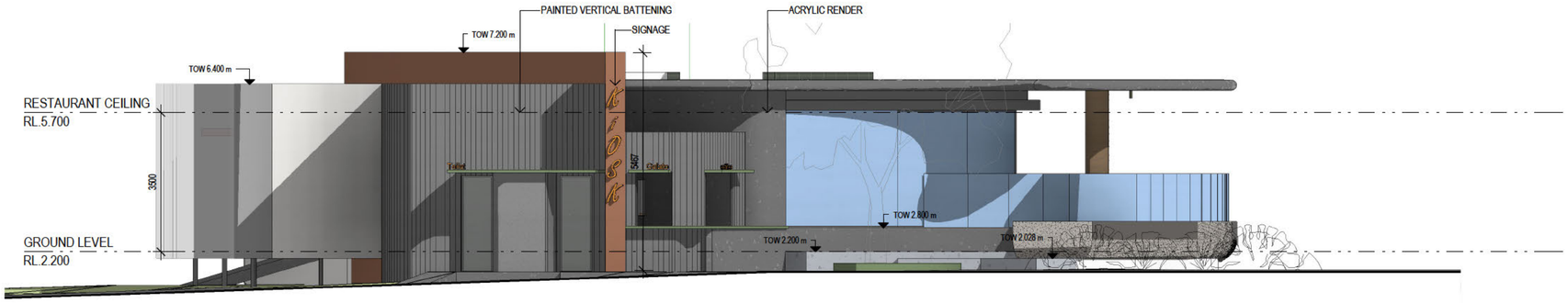
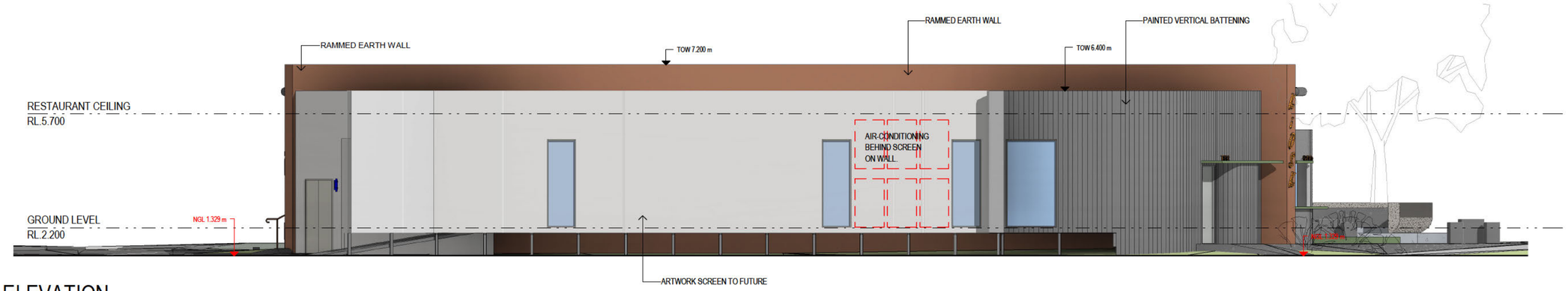
DRAWING NO.	A_105	DATE	OCT 2025



1 A_102 **NORTH ELEVATION**
1 : 100



2 A_102 **EAST ELEVATION**
1 : 100



3 A_102 **SOUTH ELEVATION**
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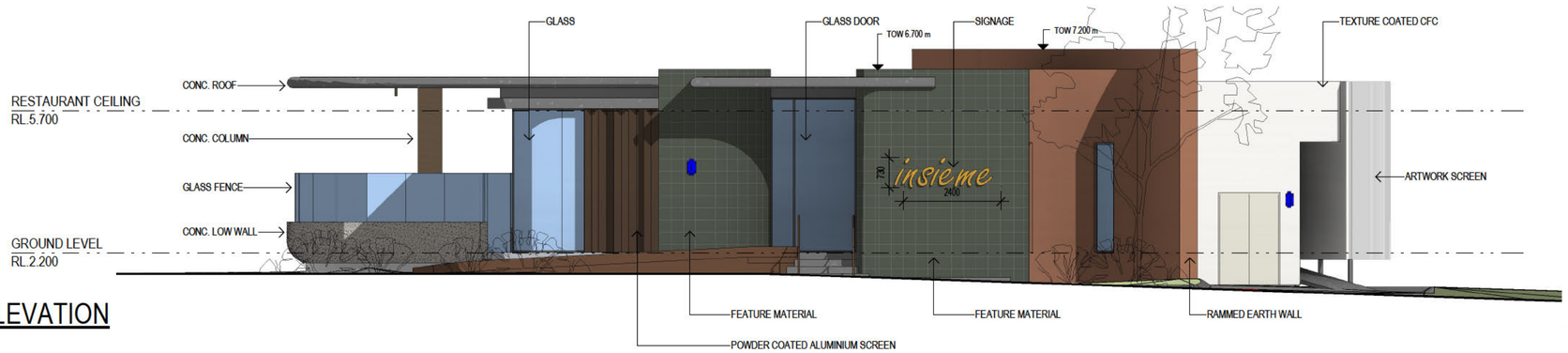

4 A_102 **WEST ELEVATION**
1 : 100

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SOUTH PERTH RESTAURANT

5 MILL POINT ROAD, SOUTH PERTH

ELEVATIONS

SK05 - DEVELOPMENT APPLICATION

JOB NUMBER		SCALE	1 : 100
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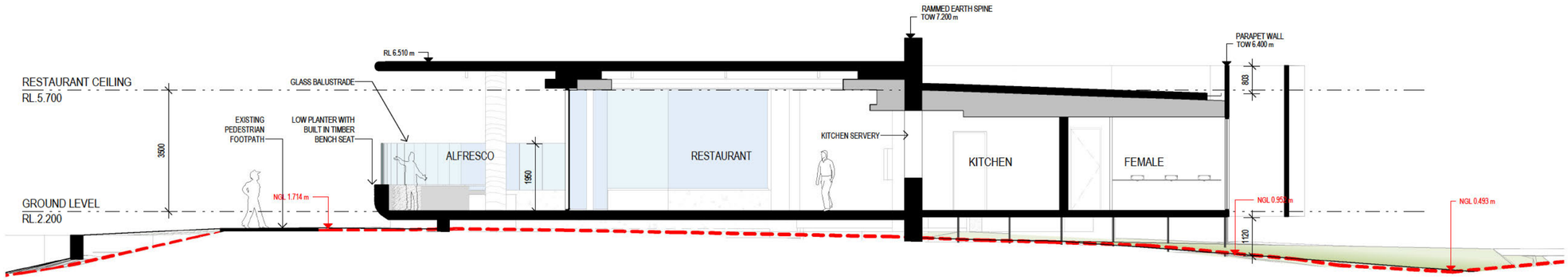

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SECTION 1

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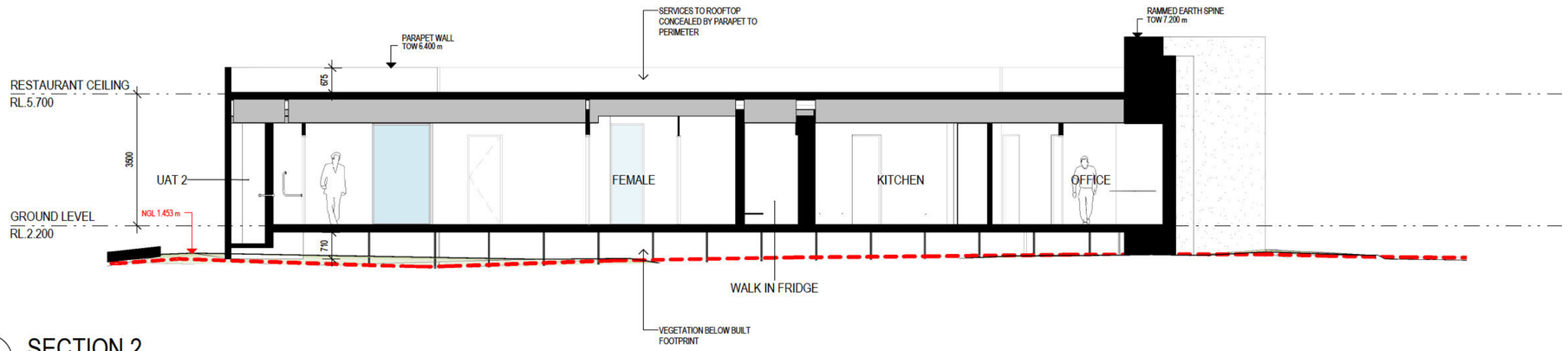

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A_102

SECTION 2

1 : 100

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5 MILL POINT ROAD, SOUTH PERTH

SECTIONS

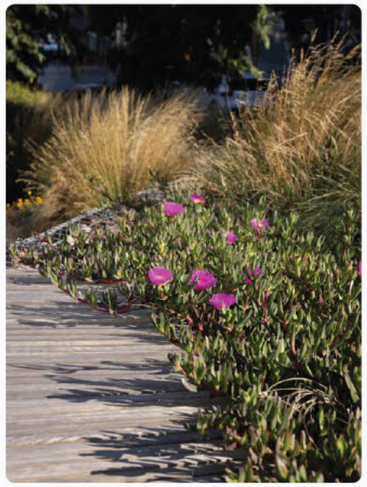
SK05 - DEVELOPMENT APPLICATION

JOB NUMBER		SCALE	1 : 100
DRAWING NO.	A_107	DATE	OCT 2025

SOUTH PERTH RESTAURANT

landscape concept | OCTOBER 2025 [C]

01 | LANDSCAPE IMAGERY



© PLANE

02 | CONCEPT PLAN

LEGEND

01 EXPOSED AGGREGATE INSITU CONCRETE PAVEMENT TO ENTRY & SERVICE AREA

02 FEATURE ENTRY GARDEN WITH LOW SHRUB, GRASS/SEDGE PLANTING & FEATURE LIMESTONE BOULDERS

03 FEATURE ENTRY TREE (BIBOOL/FRESHWATER PAPERBARK)

04 FEATURE TREE PLANTING

05 SHALLOW STORAGE BASIN WITH LOW SHRUB, GROUND COVER & REED SEDGE PLANTING REFLECTING RIVERINE PLANTING

06 LOW PLANTER WITH BUILT IN TIMBER BENCH SEAT. PLANTED WITH LOW GROUND COVERS AND CASCADING PLANTS.

07 FEATURE KIOSK TREE (KONDIL / COMMON SHE OAK)

08 TIMBER CIRCULAR BENCH YARNING SEAT

09 STEPPED SEMI CIRCULAR RAMMED EARTH SEATING/AMPHITHEATRE/GATHERING SPACE WITH EXPOSED AGGREGATE PAVEMENT AND DERBAL YERRIGAN (SWAN RIVER) STORIES

10 BICYCLE RAILS FOR KIOSK

11 REVEGETATION OF DISTURBED VEGETATION TO MILLERS POOL WETLAND (ALL PLANT SPECIES TO BE LOCAL)

12 EXISTING VEGETATION TO MILLERS POOL WETLAND TO BE RETAINED

13 NATIVE SHADE TREES TO CARPARK WITH UNDER PLANTING OF LOW SHRUBS & GROUNDCOVERS

PLAN / E

LANDSCAPE ARCHITECTS

LEVEL 1 278 RAILWAY PDE WEST LEEDERVILLE WA 6007
T: (08) 9388 9566 E: mail@plane.com.au

SOUTH PERTH RESTAURANT
5 MILL POINT ROAD, SOUTH PERTH

PREPARED FOR GIORGI
OCTOBER 2025

REV C
1:250 @ A3

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2418201 SOUTH PERTH RESTAURANT - landscape concept

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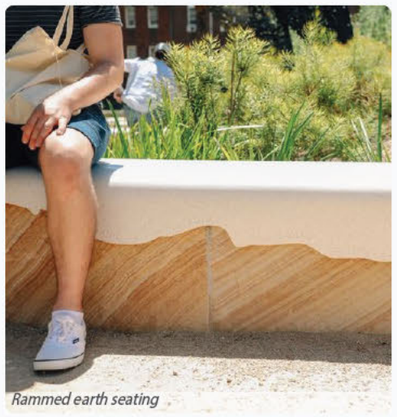
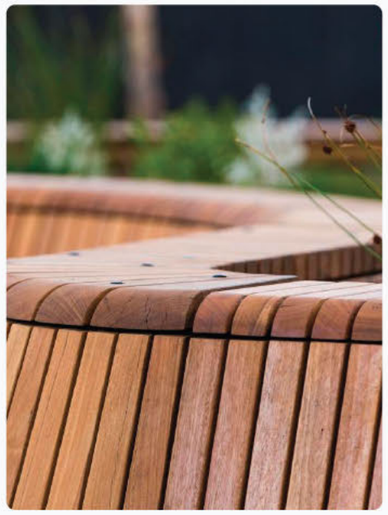
03 | MATERIAL PALETTE

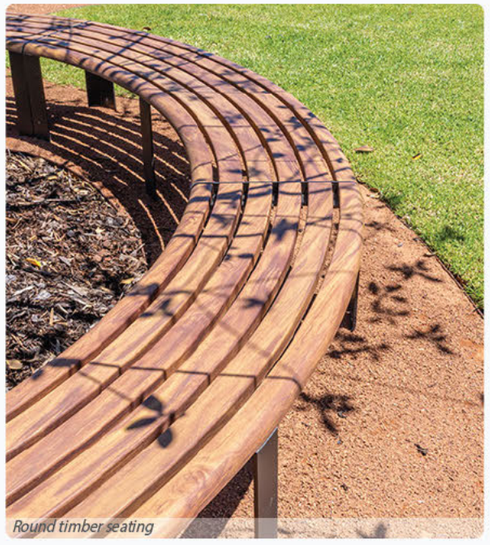
Rammed earth wall & concrete stairs


Rammed earth seating



Exposed aggregate concrete

Compacted gravel


Round timber seating

© PLANE

04 | PLANTING PALETTE

Baumea juncea

Ficinia nodosa

Juncus kraussii

Juncus pallidus

Dianella revoluta

Orthrosanthus laxus

Conostylis candicans

Patersonia occidentalis

Hypocalymma robustum

Calothamnus quadrifidus prostrate

Hemiandra pungens

Eremophila glabra prostrate

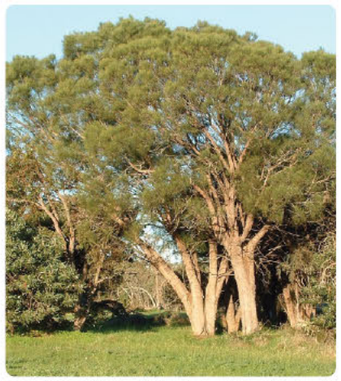
Grevillea crithmifolia

Bossiaea eriocarpa

Anigozanthos manglesii

Banksia ashbyi 'dwarf'

Melaleuca rhaphiophylla


Allocasuarina fraseriana

© PLANE

OPERATION REPORT

Restaurant Operational Report
Restaurant Name: To be announced
Address: Millers Pool, South Perth
Owner/Operator: Tinelli Family
Date: 15/9/25

---

1. Executive Summary
This report outlines the operational capabilities and performance of the restaurant to build on Millers Pool, South Perth. The following is based on the preliminary projections for the factors of trade. We highlight our service model, operational structure, safety compliance, and past performance to demonstrate our readiness and capacity.

---

2. Company Overview

- **Plan to start operations:** Circa 2027
- **Catering Types:** Restaurant, Kiosk, Café
- **Core Services:** Dine-in, takeaway
- **Operating Hours:** Tuesday-Sunday 6am-Late (Depending on Demand)
- **Licenses Held:** Food Service License, Health & Safety Certificate, Restaurant Liquor License

---

3. Operational Overview
Kiosk: Tuesday- Sunday 6am-8pm serving hot and cold drinks, gelato, panini, fish and chips
Restaurant: Tuesday- Sunday 11am – midnight (or earlier) Serving Italian cuisine
(days and timings may change due to public demand)

---

4. Health, Safety & Quality Assurance

- **Food Safety Certifications:** Prior to operation and maintained during the year adhering to local authorities.
- **Health Inspections:** Prior to operation and continuous inspections during the year from The City of South Perth
- **Cleaning Protocols:** Daily scheduled cleaning of restaurant, including toilets, weekly deep cleaning of kitchen, monthly pest control
- **Quality Checks:** Daily supervisor inspections with sanitation check lists, weekly RSA reporting
- **Fire Safety:** Extinguishers up to date with regular inspections
- **Waste Disposal:** Compliant with recycling standards and our Waste Management Plan

---

5. Waste Collection

-General Waste and Recyclable bins: To be removed as per recommended by the waste report by rubbish trucks in the mornings when the restaurant is closed, therefore minimal public foot traffic. Bins will include organic waste, glass/plastics, cardboard and oil/grease

-Glass bins: To be removed by private collection in the mornings when there is minimal foot traffic. At the end of service, glass bottles to be empty into large bins outside between 10am and 9pm

-Sewage Waste: To be pumped out regularly through a pumping station and the installation of a grease trap

All waste and recyclable bins are place in a fenced area at the back of the premise, out of site for the patrons. Removal trucks have a bay near the venue to park to be able to pick up and remove rubbish.

---

6. Community Impact

-Impact Area	**Outcome**
-Employment generated	Jobs created for local residence.
-Target Beneficiaries	Kiosk suppling affordable meals to people utilising the river. Restaurant suppling dine in experience for locals in an area where there is little choice
-Safety	Activating the area well discourage unlawful, disruptive behaviour, which the area has had in the past with hoons
-Noise management	Restaurant is designed to filter noise towards the river and away from residence. Back ground music will be played during normal restaurant times

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7. Staffing & HR

Role	**Number**	**Employed**	**Qualifications/Certifications**
Chefs	4		Culinary Diplomas, HACCP Certified
Kitchen Assistants	2		Food Handler Certified
Management	2		Approved management certificate
Service Staff	6		Customer Service Training with RSA certificate

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8. Logistics & Supply Chain

- **Suppliers:** Reliable, long-term partners for produce, meat, dairy, and dry goods that we have used over the last 20 years
- **Supply Schedule:** Daily morning deliveries for perishables; weekly morning deliveries for dry goods

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9. Maintenance and Property Condition

- **Internal:** Regular Kitchen hood and duct cleaning.
  AC filters replacement and units cleaned regularly
  External: Shop front cleaned/swept every morning
  Signage lighting fully functional
  Maintenance and clean access for rubbish and waste removal
  We will maintain the premise in accordance with the lease requirements and health regulations. We understand that the presentation of the exterior is important as it represents the City of South Perth's foreshore.

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10. Past Experience

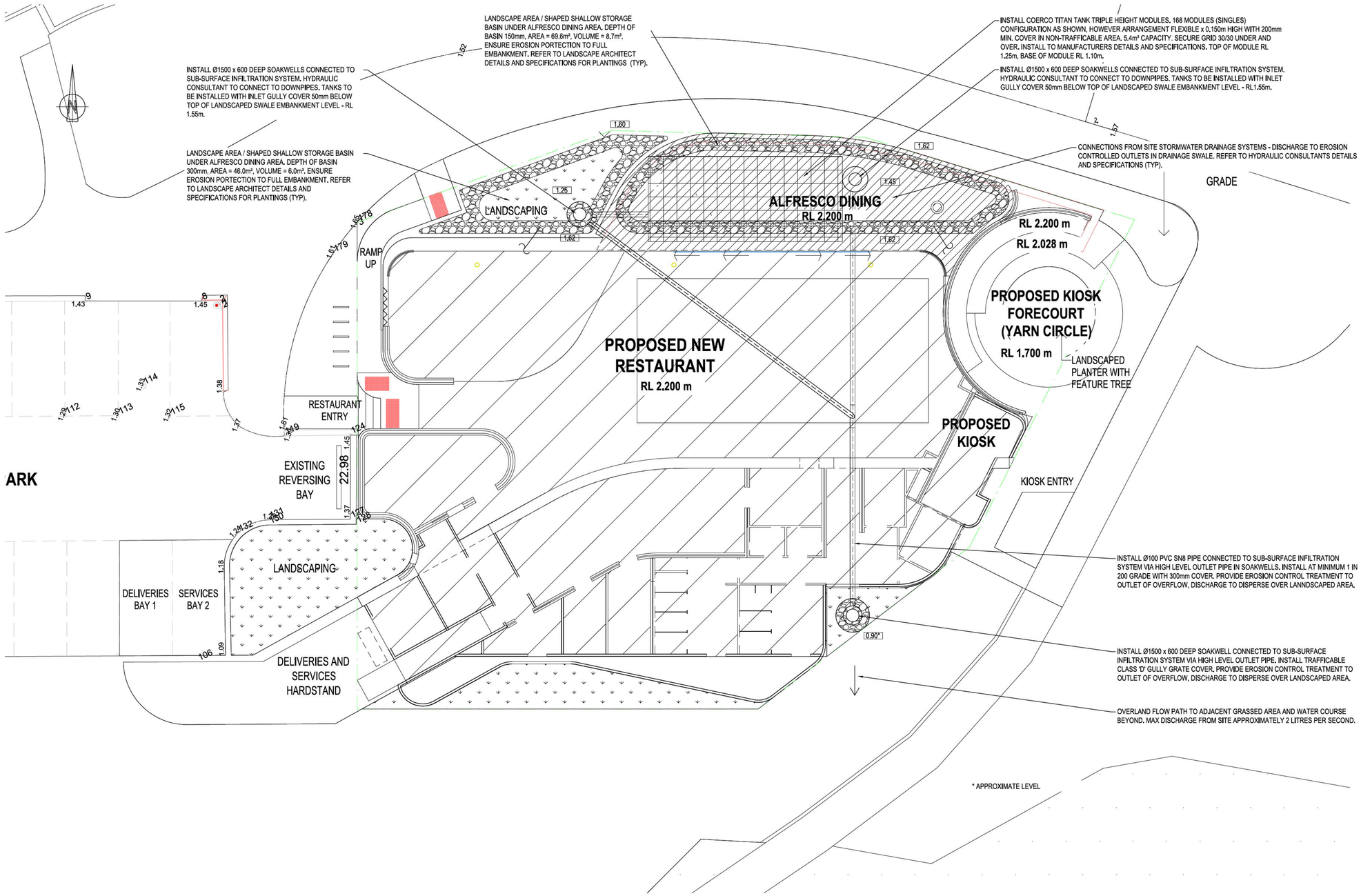
With over 65 years combined experience in hospitality, Umberto and Christian Tinelli have opened and operated 14 Perth venues including kiosks, cafes and restaurants. The last venue, Jojos restaurant and Acqua Viva function centre was situated on the Swan River. Operating for 17 years, this venue has many similarities to the Millers Pool site particularly with the importance of the natural surroundings of the river, its fauna and flora.

Christian will be the full-time site manager and Umberto will be overseeing the operations.

Declaration

We certify that all information provided in this report is accurate and true to the best of our knowledge.

Christian and Umberto Tinelli



STORMWATER PLAN - GENERAL ARRANGEMENT

SCALE 1:100

GENERAL NOTES:

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10. ALL GRAVITY PIPES SHALL BE PVC SN8 UNLESS OTHERWISE SPECIFIED. ALL PIPES TO BE LAID AT MINIMUM GRADE TO FACILITATE SELF CLEANSING
11. ALL BACK FILL TO BE COMPACTED TO A DRY DENSITY NOT LESS THAN THAT OF THE SURROUNDING UNDISTURBED SOIL. BACKFILL OF SEWERS IN ROAD RESERVES SHALL BE COMPACTED TO GIVE A MINIMUM RESISTANCE OF 8 BLOWS PER 300mm USING A STANDARD FALLING WEIGHT PENETROMETER FOR THE FULL DEPTH OF FILL.
12. CONTRACTOR TO MAKE GOOD ALL FENCING, KERBING, ROADS, DRIVEWAYS, ETC IN THE AREA OF EXCAVATION, ALL NECESSARY APPROVALS FROM RELEVANT AUTHORITIES TO BE OBTAINED PRIOR TO THE COMMENCEMENT OF ANY WORK.

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3. SUBGRADE AT BASE OF PRECAST LINER TO BE COMPACTED TO 8 BLOWS PER 300mm WITH A STANDARD PERTH PENETROMETER OR 95% OF MMDD AS PER AS1289.
4. BACKFILL TO PIT TO BE COMPACTED TO 8 BLOWS PER 300mm WITH A STANDARD PERTH PENETROMETER.
5. GULLY DRAINS SHALL BE SUPPLIED AND FITTED TO ALL EXTERNAL DOWNPIPES TO AS3500.
6. GUTTERS AND DOWNPIPES TO BE DIRECTLY CONNECTED TO STORMWATER SYSTEM INTERNALLY BY DRAINAGE CONTRACTOR TO AS3500
7. GROUT (MORTAR) TO BE 4 SAND : 1 CEMENT
8. WHERE MANHOLE LINER DEPTH EXCEEDS 2.0m, BOLT ON GALVANISED DOUBLE STEP IRONS AT 350mm CENTRES. LINER TO BE MADE GOOD EXTERNALLY USING CEMENT MORTAR FOLLOWING STEP IRON INSTALLATION. NOT APPLICABLE FOR SOAKWELLS.
9. STEP IRONS TO BE LOCATED ON SIDE WITH LEAST INTERFERENCE FROM PIPES ON ALL MANHOLES, GULLEYS, SIDE ENTRY AND COMBINATION SIDE ENTRY PITS WHERE DEPTH EXCEEDS 2.0m.
10. DRAINAGE SWALE TO BE LINED WITH JUTE MATTING INSTALLED TO MANUFACTURERS SPECIFICATIONS AND DETAILS.

WARNING
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A	01/10/25	ISSUE FOR APPROVAL	IRMcC
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ISSUED FOR BUILDING LICENCE

STORMWATER CALCULATIONS

DEVELOPMENT SITE AREA
TOTAL DEVELOPMENT SITE AREA (m^2) = 791.5m^2
SOIL TYPE - PERTH GROUNDWATER ATLAS - TAMALA LIMESTONE
GROUNDWATER - HISTORIC MAXIMUM RL 0.5m
NOMINAL SITE LEVELS - APPROX. 2m
DEPTH TO GROUNDWATER - 1.5m APPROX.
BASED ON SITE GEOLOGY / MATERIAL TYPE, & ALLOWING FOR LONG-TERM CLOGGING EFFECTS, THE SITE PERMEABILITY CONSIDERED IS 1.5 METRES PER DAY = 1.74 X 10^-5 m/s

PROPOSED ON-SITE DRAINAGE SYSTEM:
3 x Ø1500 x 600 SOAKWELLS - STORAGE CAPACITY (EACH 1.06m^3) =3.18m^3
LANDSCAPED DRAINAGE INFILTRATION SWALE TOTAL AREA = 27.2m^2, VOLUME = 14.7m^3
COERCO TITAN TANK MODULAR INFILTRATION CELLS, 110 UNITS AREA 37.1m^2, VOLUME 5.4m^3 (NOMINAL DEPTH 0.15m, WITH 200mm COVER)
TOTAL SYSTEM CAPACITY = 23.24m^3.

STORMWATER REQUIREMENTS:

1 IN 10 YEAR - 6 MINUTE EVENT.
8.13m^3 OF TOTAL STORAGE REQUIRED.
TOTAL SYSTEM CAPACITY = 23.64m^3 - SATISFIES REQUIREMENTS

1 IN 100 YEAR - 6 MINUTE EVENT.
14.26m^3 OF TOTAL STORAGE REQUIRED.
TOTAL SYSTEM CAPACITY = 23.67m^3 - SATISFIES REQUIREMENTS

IN 100 YEAR - 3 HOUR EVENT.
47.69m^3 OF TOTAL STORAGE REQUIRED.
TOTAL SYSTEM CAPACITY FOR EVENT DURATION= 34.99m^3 PLUS DISCHARGE TO ADJACENT LANDSCAPED AREA 12.7m^3 AT APPROX. 1.2 l/s- SATISFIES REQUIREMENTS

LEGEND

- PROPOSED DRAINAGE SOAKWELL MANHOLE Ø1500 X 600 WITH 450 x 450 TRAFFICABLE CAST IRON GULLY GRATE ICON SEPTECH BICYCLE SAFE WAVE GRATE OR APPROVED SIMILAR
- T — EXISTING TELECOMMUNICATIONS SERVICE
- G — EXISTING GAS SERVICE
- S — EXISTING SEWER SERVICE
- W — EXISTING WATER SERVICE
- P — EXISTING POWER SERVICE
- 48 — CONTOUR
- PROPOSED STORMWATER DRAINAGE INLET PIPE MINIMUM Ø100 PVC SN8 MINIMUM GRADE 1 IN 200
- PROPOSED STORMWATER DRAINAGE DISCHARGE PIPE MINIMUM Ø100 PVC SN8 MINIMUM GRADE 1 IN 200
- 37.50 — GENERAL PAVEMENT / DRAINAGE STRUCTURE SURFACE LEVEL
- LANDSCAPE AREA. REFER TO ARCHITECTURAL DETAILS AND SPECIFICATIONS.
- SUB-SURFACE INFILTRATION SYSTEM.
- PROPOSED STRUCTURE.

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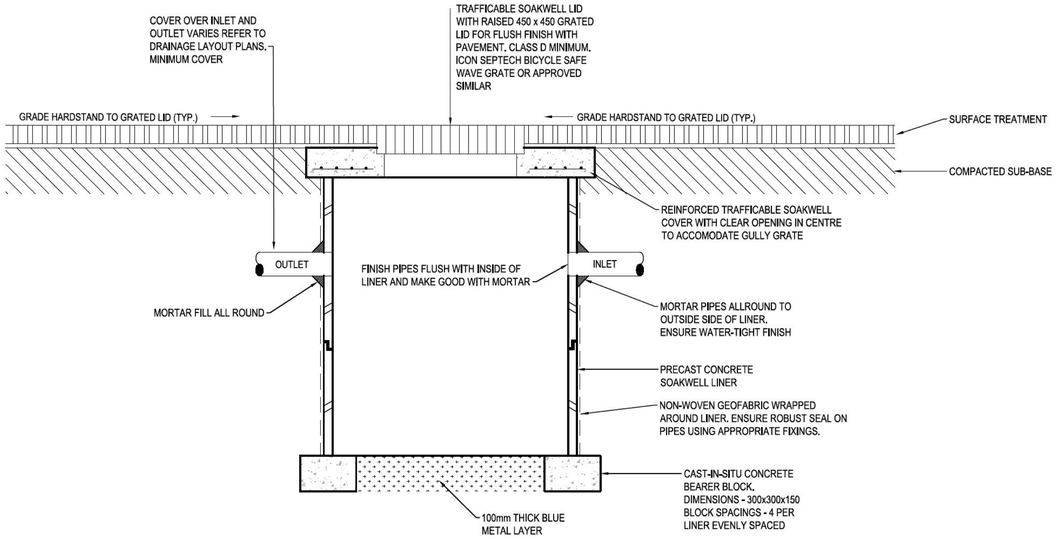
Engineering & Design

COMMERCIAL DEVELOPMENT
#5 MILL POINT ROAD SOUTH PERTH
GIORGI

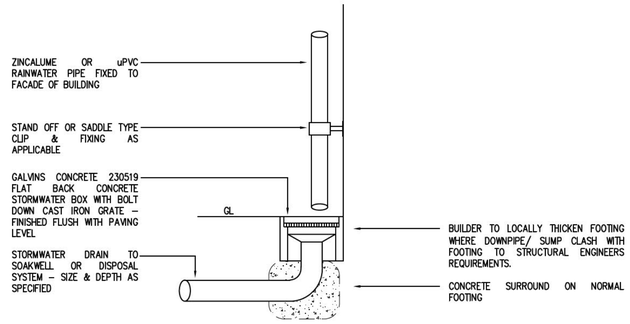
CIVIL - STORMWATER
GENERAL ARRANGEMENT

DRAWN	IRMcC	DESIGNED	IRMcC	TCC JOB No. 25-014
CHECKED	IRMcC	APPROVED	IRMcC	
SCALE: A1 1:100		DATE SEPT 2025		DRAWING No. C200 / REV. B
CAD FILE No. 25-014-C200				



SOAKWELL DETAIL (TRAFFICABLE)

NOT TO SCALE



TYPICAL EXTERNAL RAINWATER PIPE & SUMP BOX DETAIL

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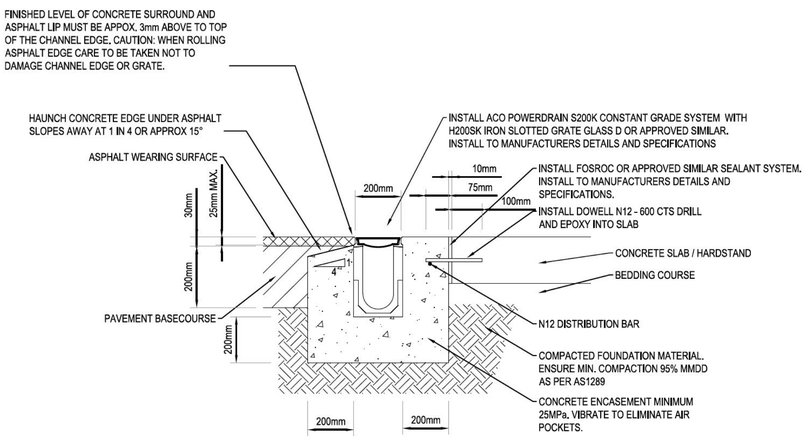

DRAINAGE STRIP DRAIN INSTALLATION DETAIL

NOT TO SCALE

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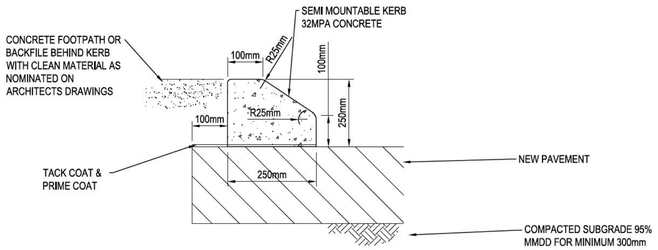
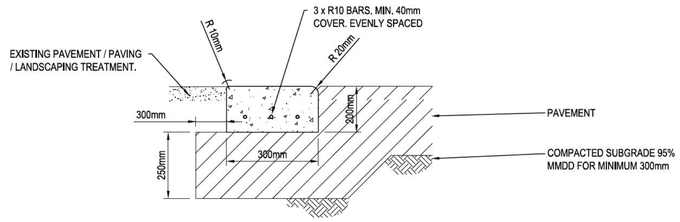


SEMI MOUNTABLE KERB DETAIL ON PAVEMENT

NOT TO SCALE



FLUSH BEAM KERB

NOT TO SCALE

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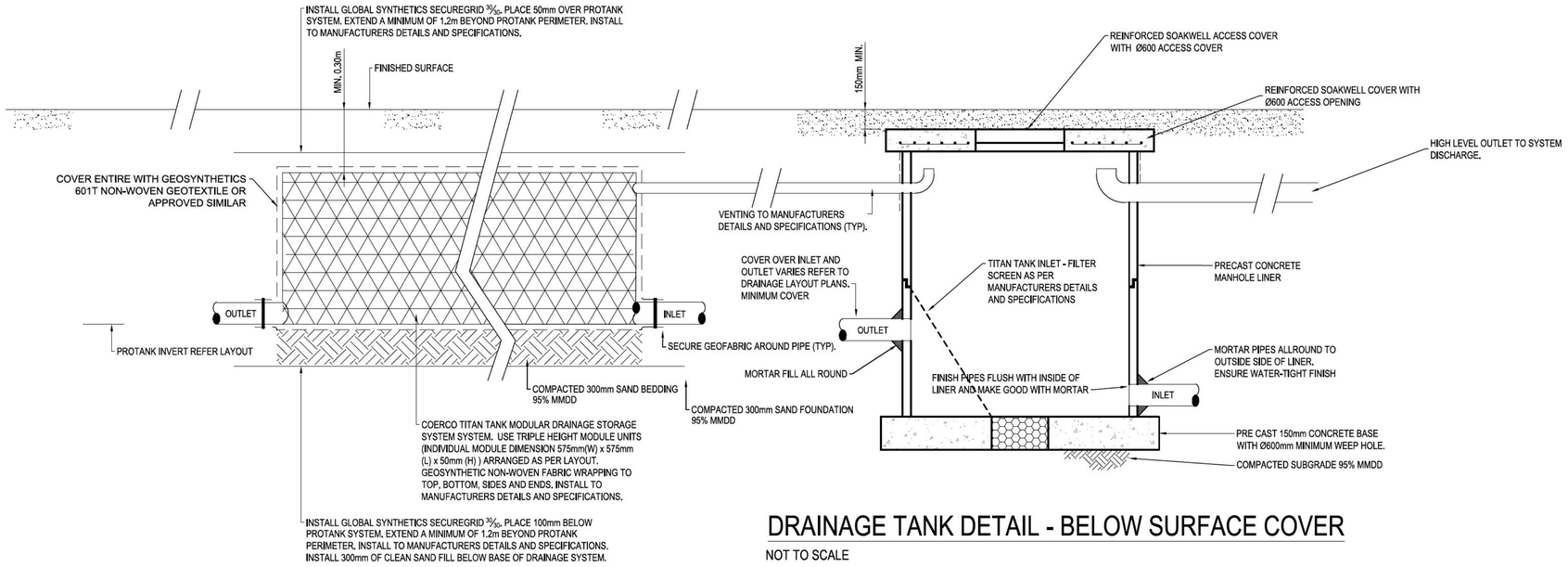
COMMERCIAL DEVELOPMENT
#5 MILL POINT ROAD SOUTH PERTH
GIORGI

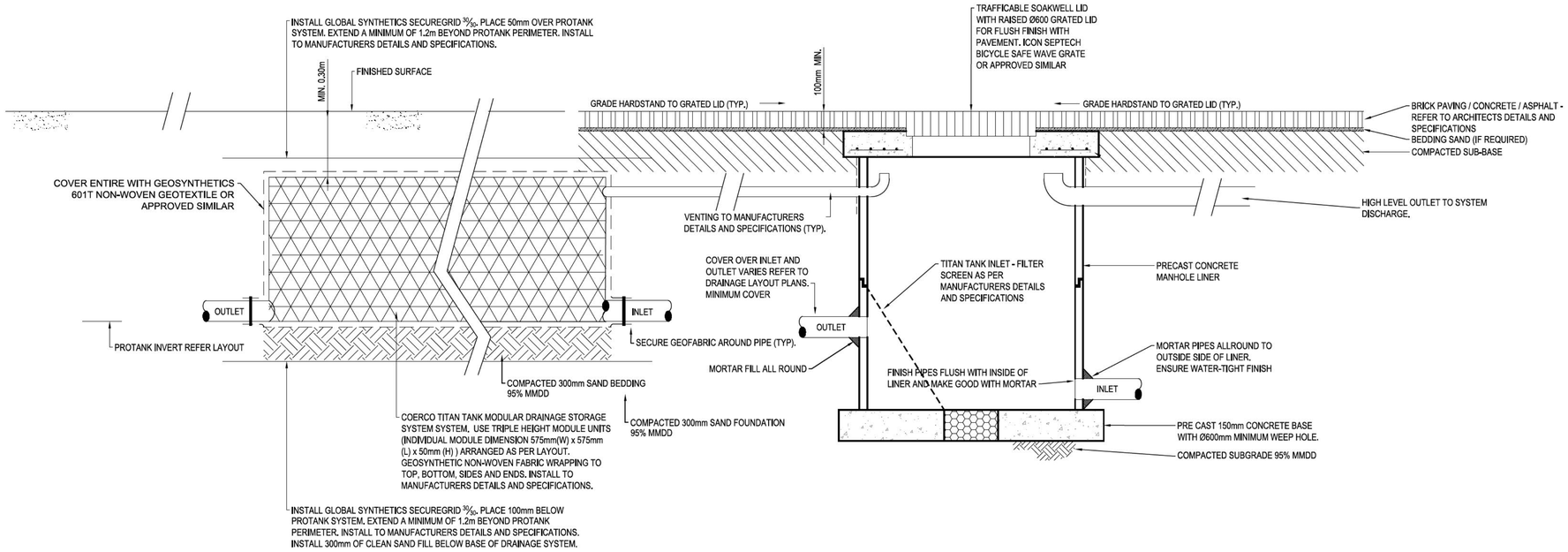
CIVIL - STORMWATER
DETAILS

DRAWN	IRMcC	DESIGNED	IRMcC	TCC JOB No. 25-014
CHECKED	IRMcC	APPROVED	IRMcC	
SCALE: A1	N/A	DATE	SEPT 2025	DRAWING No. C300 / REV. B
CAD FILE No. 25-014-C300				



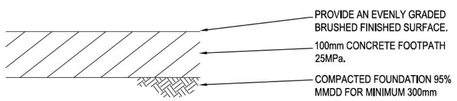
DRAINAGE TANK DETAIL - BELOW SURFACE COVER

NOT TO SCALE



DRAINAGE TANK DETAIL - AT SURFACE COVER

NOT TO SCALE



NOTE: CONCRETE FOOTPATHS
JOINT SPACING
1.5m PATHS - EVERY 1.5m TO MATCH KERB JOINTS WHERE ADJACENT TO KERBS. 2 x FOOTPATH WIDTH ELSEWHERE EXPANSION JOINT TO BE PROVIDED AT SIGNIFICANT CHANGE IN WIDTH AND DIRECTION OR WHERE ADJACENT TO SOLID OBJECT, OTHERWISE AT MAX SPACINGS OF 6m
FOOTPATH TO BE BRUSHED FINISH ACROSS JOINTS, PICTURE FRAMED AT EDGES ONLY.

NEW CONCRETE FOOTPATH DETAIL

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True Civil Consulting WA
Engineering & Design

COMMERCIAL DEVELOPMENT
#5 MILL POINT ROAD SOUTH PERTH
GIORGI

CIVIL - STORMWATER
DETAILS 2

DRAWN	IRMcC	DESIGNED	IRMcC	TCC JOB No. 25-014
CHECKED	IRMcC	APPROVED	IRMcC	
SCALE: A1 N/A		DATE SEPT 2025		DRAWING No. C310 / REV. B
CAD FILE No. 25-014-C310				

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10. ALL DRAINS SHALL BE CLASS 3 CONCRETE UNLESS OTHERWISE SPECIFIED.

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13. AS CONSTRUCTED SURVEY TO BE PROVIDED BY LICENSED SURVEYOR.

FOR COMPACTION / REMEDIATION INFORMATION REFER TO DESIGN DRAWINGS. REPORT PREPARED FOR THE SITE.

SITE WORKS

1. REMOVE FROM SITE - TOP SOIL, SURFACE RUBBISH, ORGANIC DEBRIS, STUMPS, RUBBLE AND EXISTING CLAY FILL. DISPOSE VEGETATION BY HYDROMULCHING AND/OR BY REMOVING FROM SITE. SAND FILL IF REQUIRED.

2. ALL STUMPS AND ROOTS OVER 75 MILLIMETERS DIAMETER SHALL BE GRUBBED TO A DEPTH OF AT LEAST 600 MILLIMETERS BELOW THE LEVEL OF THE FINISHED FOUNDATION UNDER ROAD PAVEMENTS AND STRUCTURES AND AT LEAST 600 MILLIMETERS BELOW THE FINISHED SURFACE ELSEWHERE. GRUB HOLES SHALL BE BACKFILLED WITH FILLING MATERIAL AND COMPACTED TO THE DENSITY OF THE SURROUNDING UNDISTURBED SOIL.

3. ALL EXISTING ESTABLISHED VERGES INCLUDING TREES AND ALL EXISTING SERVICES, MANHOLES, VALVE BOXES AND BORES TO BE PROTECTED BY THE CONTRACTOR.

4. THE CONTRACTOR SHALL LIMIT THE MOVEMENT OF EQUIPMENT AND MANPOWER TO THE WORKS SITE ONLY. ANY WORK TO BE CARRIED OUT ON ADJOINING PROPERTIES SHALL BE APPROVED BY THE SUPERINTENDENT PRIOR TO WORK COMMENCING.

5. ALL WORKS SHALL BE CONDUCTED IN ACCORDANCE WITH THE LOCAL CITY OR COUNCIL'S POLICY STANDARDS AND SPECIFICATIONS. CONTRACTORS TO ADHERE TO WORKING HOURS AS SPECIFIED BY THE LOCAL AUTHORITY.

6. DILAPIDATION SURVEYS ARE TO BE COMPLETED ON PREMISES WITHIN 30.0m OF THE SITE.

7. EARTHWORKS ARE TO BE CARRIED OUT IN ACCORDANCE WITH THE REQUIREMENTS OF THE GEOTECHNICAL REPORT PREPARED FOR THE SITE AND THE REQUIREMENTS WITHIN AUSTRALIAN STANDARD 3798-2007

EARTHWORKS:

1. GEOTECHNICAL INVESTIGATIONS HAVE BEEN CARRIED OUT. THE INFORMATION CONTAINED IN THE REPORT IS INFORMATION ON THE NATURE OF THE GROUND AT EACH TESTED LOCATION. IT IS NOT A COMPLETE DESCRIPTION OF CONDITIONS EXISTING AT OR BELOW GROUND LEVEL ACROSS THE SITE

2. REMOVE FROM SITE - TOP SOIL, SURFACE RUBBISH, ORGANIC DEBRIS, STUMPS, RUBBLE AND EXISTING CLAY FILL. DISPOSE VEGETATION BY HYDROMULCHING. SAND FILL IF REQUIRED.

3. SITE IS TO BE PROOFED ROLLED AT FOUNDATION LEVEL TO IDENTIFY ANY SOFT OR LOOSE ZONES. ANY SOFT OR LOOSE AREAS ARE TO BE EXCAVATED AND COMPACTED DURING REPLACEMENT WITH SUITABLE FILL MATERIAL.

4. SURFACE FILLING TO BE PLACED IN LAYERS AND COMPACTED TO A MAXIMUM THICKNESS OF 300mm PER LAYER. THE FILL IS TO BE PLACED AT A MOISTURE CONTENT THAT WILL ALLOW COMPACTION TO 95% MODIFIED MAXIMUM DRY DENSITY (MMDD) FOR COHESIVE SOILS AND 95% MMDD FOR PERTH SANDS.

5. BOX OUT HARDSTAND/ CARPARK AREA TO +5 OR-25mm TO ALLOW FOR FINAL TRIM.

6. RETURN FOR FINAL TRIM AFTER INSTALLATION OF SERVICES. THE CONTRACTOR SHALL PROVIDE COMPACTION CERTIFICATES FOR CUT AND FILL AREAS CERTIFYING THAT THE AREAS HAVE BEEN ADEQUATELY COMPACTE

7. EARTHWORKS TO MATCH NEATLY TO EXISTING LEVELS AND ADJOINING PROPERTIES IF A BATTER IS REQUIRED. THE FILL SHALL BE CARRIED 0.5m INSIDE THE DEVELOPMENT (NOT ADJOINING PROPERTY) AND BATTERED AT A MAXIMUM GRADE 1:6.

8. ALL CUT AND FILL AREA TO BE COMPACTED TO 95% OF MAXIMUM DRY DENSITY AS DETERMINED BY MODIFIED COMPACTION TEST UNDER A.S 1289. MAX LAYER THICKNESS SHALL BE NO MORE THAN 300mm COMPACTED

9. THE CONTRACTOR SHALL PROVIDE COMPACTION CERTIFICATES FOR CUT AND FILL AREAS CERTIFYING THAT THE AREAS HAVE BEEN ADEQUATELY COMPACTED.

10. THE MAXIMUM SLOPE FROM VERGE TO BUILDING PAD SHALL BE 1 VERTICAL TO 6 HORIZONTAL.

11. SURFACE SHAPE, INCLUDING CLAY SURFACE LAYER, SHALL BE SUCH THAT WATER DOES NOT POND AT ANY POINT. CLAY SURFACE LAYER TO GRADE TO SUB-SOIL DRAINAGE SYSTEM.

PAVEMENT CONSTRUCTION

1. WATER USED IN ANY PAVEMENT CONSTRUCTION OR PAVEMENT MATERIAL MANUFACTURE PROCESS SHALL COMPLY WITH THE REQUIREMENTS OF MAIN ROADS WESTERN AUSTRALIA PUBLICATION 6708-02-133 "WATER TO BE USED IN PAVEMENT CONSTRUCTION" AND SHALL BE FREE FROM SIGNIFICANT QUANTITIES OF SUSPENDED MATERIAL, ORGANIC MATTER, OIL OR ACID.

2. HOLD POINT - PRIOR TO THE CONSTRUCTION OF ANY PAVEMENT LAYER, THE CONTRACTOR SHALL CERTIFY TO THE SUPERINTENDENT THAT THE UNDERLYING LAYER HAS BEEN CONSTRUCTED AS SPECIFIED.

3. PAVEMENT CONSTRUCTION SHALL NOT COMMENCE UNTIL THE LAYER 150mm BELOW THE SUB GRADE SURFACE HAS DRIED BACK SUCH THAT THE DRYBACK CHARACTERISTIC MOISTURE CONTENT (DMc) IS EQUAL TO OR LESS THAN 85% OF THE OPTIMUM MOISTURE CONTENT AS DETERMINED BY TEST METHOD WA 133.1 OR TEST METHOD WA 133.2 AS APPROPRIATE. WHERE THE MATERIAL IN THE LAYER 150mm BELOW THE SUB GRADE SURFACE CONTAINS MORE THEN 20% BY MASS OF MATERIAL RETAINED ON A 37.5mm SIEVE THE OPTIMUM MOISTURE CONTENT AND THE DRYBACK CHARACTERISTIC MOISTURE CONTENT SHALL BE DETERMINED ON THAT PORTION OF MATERIAL THAT PASSES A 37.5mm SIEVE.

4. SUB-BASE SHALL BE WORKED IN COMPACTED LAYERS NOT GREATER THAN 250mm NOR LESS THAN 100mm. WHERE LESS THAN 100mm IS REQUIRED TO BE WORKED THE UNDERLYING SUB-BASE SHALL BE SCARIFIED TO SUCH A DEPTH THAT THE RESULTING COMPACTED THICKNESS OF THE LAYER TO BE WORKED IS NOT LESS THAN 100mm.

5. PAVEMENT MATERIAL SHALL BE SPREAD, MIXED AND COMPACTED TO ACHIEVE UNIFORMITY FREE FROM ANY EVIDENCE OF SEGREGATION.

6. COMPACTION SHALL BE CARRIED OUT AT A CONSTRUCTION CHARACTERISTIC MOISTURE CONTENT (CMc) THAT IS GREATER THAN 95% OF THE OPTIMUM MOISTURE CONTENT AND WITH A UNIFORM COMPACTION EFFORT APPLIED LONGITUDINALLY AND TRANSVERSELY TO THE ROAD ALIGNMENT TO ACHIEVE THE REQUIRED DENSITY OF 96% MINIMUM CHARACTERISTIC DRY DENSITY RATIO AS WELL AS THE WIDTH, SHAPE, LEVEL AND SURFACE FINISH AS SPECIFIED.

7. HOLD POINT - PRIOR TO THE DATE OF PRACTICAL COMPLETION, THE CONTRACTOR SHALL CERTIFY TO THE SUPERINTENDENT THAT THE PAVEMENT MATERIAL SUPPLIED BY THE CONTRACTOR COMPLIES WITH THE SPECIFIED LINER SHRINKAGE AND PARTICLE SIZE DISTRIBUTION AFTER COMPACTION INTO THE PAVEMENT.

8. EACH PAVEMENT LAYER SHALL BE CONSTRUCTED TO THE DIMENSIONS AND DETAILS SHOWN ON THE DRAWINGS AND TO THE REQUIREMENTS OF THE SPECIFICATION AND SHALL BE COMPACTED TO THE CHARACTERISTIC DRY DENSITY RATIO OF 85%. EACH PAVEMENT LAYER SHALL BE DRIED BACK TO THE DRYBACK CHARACTERISTIC MOISTURE CONTENT OF 85% OR LOWER. WHERE THE SUB-BASE MATERIAL CONTAINS MORE THAN 20% BY MASS OF MATERIAL RETAINED ON A 35.7mm SIEVE, THE OPTIMUM MOISTURE CONTENT AND THE MAXIMUM DRY DENSITY SHALL BE DETERMINED ON THAT PORTION OF THE MATERIAL THAT PASSES A 37.5mm SIEVE.

9. COMPLETED PAVEMENT LAYERS SHALL BE IN A HOMOGENEOUS, UNIFORMLY BONDED CONDITION WITH NO EVIDENCE OF LAYERING, CRACKING, DISINTEGRATION OR SURFACE TEARING.THE FINISHED SURFACE SHOULD APPEAR AS A STONE MOSAIC INTERLOCKED WITH FINE MATERIAL AND SHALL BE DENSE, EVEN TEXTURED AND TIGHTLY BONDED.

10. COMPLETED SUB-GRADE AND SUB-BASE CONSTRUCTION SHALL BE MAINTAINED TO THE SPECIFIED STANDARDS OF SURFACE SHAPE, LEVEL, DRYBACK AND COMPACTION UP TO THE TIME OF CONSTRUCTION OF THE NEXT LAYER.

11. WATERING SHALL BE CONTINUED AS NECESSARY TO PREVENT DUSTING OR LOOSENING OF THE SURFACE.

12. COMPLETED SUB-GRADE CONSTRUCTION SHALL ALSO BE MAINTAINED TO THE SPECIFIED STANDARD OF DRYBACK UP TO THE TIME OF APPLICATION OF THE BITUMINOUS SURFACING.

KERBING

1. KERBING TO BE GRADE 25MPa AND SHALL HAVE A MAXIMUM AGGREGATE SIZE OF BETWEEN 6.7mm AND 19mm AND A SLUMP NOT EXCEEDING 100mm.

2. THE CONTRACTOR SHALL CLEAN THE AREA BETWEEN THE RECEIVING SURFACE AND THE NEW KERB OF ALL LOOSE SAND, STONES,DUST AND OTHER FOREIGN MATTER AND SHALL WET THE SURFACE WITH WATER IMMEDIATELY PRIOR TO PLACEMENT OF NEW KERBING.

3. WHERE THE KERB IS ON A STRAIGHT LINE OF 10m OR LESS, OR ON A RADIUS OF 3m OR LESS, OR WHERE THE LACK OF CLEARANCE PREVENTS THE KERB BEING PLACED BY AN EXTRUSION MACHINE, THE SECTION OF KERB MAY BE HAND PLACED. HAND PLACED KERB SHALL BE RODDED AND SHAPED, TO GIVE A FINISHED KERB MEETING THE REQUIREMENTS OF SPECIFICATION 407 - KERBING, MAIN ROADS WA.

4. KERBS ON STRAIGHT ALIGNMENTS EXCEEDING 10 m AND ON CURVES OF RADII EXCEEDING 3m SHALL BE PLACED BY AN EXTRUSION MACHINE.

5. EXTRUDED KERBS SHALL BE DENSE WITH REGULAR SIDES, EDGES AND CHAMPFERS FINISHED TO A FINE SURFACE FREE FROM BLOWS HOLES AND DRAGGING AND SHALL BE IMPERVIOUS. FINISHING WITH GROUT WILL NOT BE PERMITTED.

6. ALL EXPOSED FACES OF THE COMPLETED KERB SHALL BE KEPT PERMANENTLY WET FOR THE CURING PERIOD OF A MINIMUM 72 HOURS AFTER PLACING. CONCRETE MAY BE CURED BY SPRAYING WITH APPROVED CURING COMPOUNDS.

7. ANY WATER APPLIED SHALL NOT CAUSE EROSION OF THE CONCRETE SURFACE.

8. THE CONCRETE SHALL BE PROTECTED WITHIN 15 MINUTES AFTER COMPLETION OF CASTING THE KERB.

9. THE KERB SHALL BE PROTECTED FROM RAIN FOR AT LEAST TWENTY FOUR (24) HOURS FOLLOWING PLACEMENT.

10. THE KERB SHALL BE PROTECTED FROM TRAFFIC FOR A PERIOD OF TWELVE (12) HOURS FOLLOWING PLACEMENT.

11. JOINT FILLERS SHALL COMPRISE EITHER A CLOSED CELL POLYETHYLENE ROD OF 10mm DIAMETER, OR A STRIP OF POLY URETHANE FOAM 12mm WIDE.

12. JOINT SEALING COMPOUND FOR SURFACE SEALING SHALL BE A GREY BUTYL MASTIC SEALANT.

13. IMMEDIATELY AFTER PLACING THE KERBING, CONTRACTION JOINTS SHALL BE FORMED BY GROOVING THE EXPOSED FACES OF THE KERBS. CONTRACTION JOINTS SHALL BE FORMED AT SPACINGS NOT EXCEEDING 4m.

14. NOT LESS THAN 24 HOURS NOR MORE THAN 72 HOURS AFTER PLACING CONCRETE, EXPANSION JOINTS SHALL BE CONSTRUCTED AT THE MID POINT BETWEEN CONTRACTION JOINTS BY SAWING A 6mm WIDE GAP THROUGH THE FULL CROSS SECTION OF THE KERB. KERB CUTTING SHALL BE CARRIED OUT WITH WATER TO MINIMISE DUST IN THE SAWING PROCESS.

15. AN APPROVED JOINT FILLER SHALL THEN BE FORCED INTO THE SAWN JOINT SUCH THAT A 12mm DEEP SPACE REMAINS TO THE CONCRETE SURFACE. THIS SPACE SHALL BE COMPLETELY FILLED WITH AN APPROVED JOINT SEALANT SUCH AS SIKAFLEX CONSTRUCTION POLYURETHANE JOINT SEALANT OR EQUIVALENT APPROVED AND USED AS PER MANUFACTURER'S INSTRUCTIONS.

16. WHERE REQUIRED, THE AREA BEHIND KERBS SHALL BE BACKFILLED WITH SUITABLE FILL MATERIAL COMPACTED TO MINIMUM 95% MMDD.

17. ANY KERB SECTIONS DISLODGED DURING BACKFILLING OR OTHERWISE MISALIGNED SHALL BE REMOVED AND RE-LAID AT NO COST TO THE PRINCIPAL. CARE SHALL BE TAKEN IN BACKFILLING TO ENSURE THAT NO DAMAGE, DEFACEMENT OR STAINING IS CAUSED TO THE KERBS AND THAT THE COMPACTION REQUIREMENTS OF THE SPECIFICATION ARE ACHIEVED.

18. BROKEN OR DAMAGED KERBING SHALL BE REMOVED AND THE EXPOSED CONCRETE REPAIR SURFACE SHALL BE ROUGHENED TO REMOVE ALL LAITANCE AND EXPOSE THE AGGREGATE TO PROVIDE A THOROUGH BOND WITH CONCRETE CAST SUBSEQUENTLY. THE ROUGHENED SURFACE SHALL BE CLEANED WITH WATER TO REMOVE LOOSE CHIPS AND FOREIGN MATERIAL.

19. IMMEDIATELY BEFORE FRESH CONCRETE IS CAST AGAINST THE EXISTING SURFACE, THE EXISTING SURFACE SHALL BE THOROUGHLY WETTED.

20. GRADE 32MPa CONCRETE OR RAPID SETTING CONCRETE PRODUCTS OF LIKE STRENGTH SHALL BE PLACED AND COMPACTED.

SETTING OUT

1. ALL SET-OUT WORK TO BE COMPLETED BY THE CONTRACTOR FOR ELECTRICAL, PLUMBING, BITUMEN, EARTHWORKS AND CONCRETE LABOUR WORKS.

TOLERANCES

1. THE THICKNESS OF THE BASE AND SUB BASE LAYERS SHALL BE TO THE DESIGN THICKNESS SPECIFIED WITH A TOLERANCE OF + 10MM - 0MM.

2. THE TOTAL WIDTH OF THE BASE AND SUB BASE LAYERS SHALL BE + 300MM 0MM. THE FINISHED BASE COURSE SURFACE LEVEL SHALL BE +/- 10MM.

3. THE FINISHED BASE COURSE SURFACE SHAPE SHALL BE +/- 15MM WHEN TESTED WITH A STRAIGHT EDGE LAID IN ANY DIRECTION.

4. THE LONGITUDINAL GRADE ALONG THE GUTTER LINE SHALL BE +/- 20% OF THE DESIGN GRADE.

5. THE SHAPE OF THE SUB-BASE SHALL BE JUDGED TO BE ACCEPTABLE WHEN THE MAXIMUM DEVIATION FROM A 3 METER STRAIGHT EDGE PLACED IN ANY POSITION ON THE SURFACE DOES NOT EXCEED 6mm

6. THE LEVEL OF THE COMPLETED SUB-BASE SURFACE SHALL BE DEEMED TO BE CONFORMING WHEN THE LEVEL MEASURED AT ANY POINT ON THE SURFACE IS WITHIN +5mm, -25mm OF THE SUB-BASE LEVEL AT THAT POINT AS DETERMINED BY THE DRAWINGS.

7. THE WIDTH OF PRIMER SEAL AND SECOND SEAL COATS SHALL BE +150MM 0MM ON EACH SIDE OF THE ROAD. APPLICATION RATES SHALL BE WITHIN +/- 5% OF SPECIFIED RATES.

8.AGGREGATE SPREADING RATES SHALL BE WITHIN +/- 5% OF SPECIFIED RATES.

KERBING

1. TOP SURFACE OF KERB SHALL BE PARALLEL TO THE GRADE OF THE PAVEMENT, AND SHALL BE FREE FROM DEPRESSIONS EXCEEDING 5MM WHEN MEASURED WITH A 3M LONG STRAIGHT EDGE, EXCEPT AT CHANGES OF GRADE OR CURVES.

2. KERBS SHALL BE EQUAL DISTANCE FROM THE ROAD CENTERLINE AND SHALL BE +20MM - 0MM OF DESIGN ROAD WIDTH.

3. THE FINISHED CONCRETE SHALL NOT VARY FROM HORIZONTAL ALIGNMENT OR LEVEL BY MORE THAN 10MM AT ANY POINT.

4. PROFILE DIMENSIONS SHALL NOT DIFFER BY MORE THAN 5MM, EXCEPT THAT THE OVERALL WIDTH SHALL NOT DIFFER BY MORE THAN 15MM.

ASPHALT

1. ALL ASPHALT TYPES ARE TO BE LAID TO A TOLERANCE OF + 5MM - 0MM OF FINAL DESIGN SURFACE LEVEL AND ASPHALT THICKNESS.

2. NO POINT ON THE FINISHED SURFACE SHALL DIFFER MORE THAN 3MM STRAIGHT EDGE LAID BOTH PARALLEL TO AND AT RIGHT ANGLES TO THE CENTERLINE, EXCEPT ON CROWN SECTIONS.

3. ASPHALT WEARING COURSE TO THE FIRE TRUCK ACCESS TRACK SHALL BE COLOURED RED OXIDE. COLOUR OXIDE MINIMUM 2% AND MAXIMUM 3%.

AS CONSTRUCTED INFORMATION

1. THE CONTRACTOR IS TO PROVIDE MARKED-UP AS CONSTRUCTED INFORMATION FOLLOWING COMPLETION OF ALL APPROVED WORKS.

2. DETAILS TO PROVIDE AN ACCURATE RECORD OF THE "AS CONSTRUCTED" COMPLETED WORKS FOR LOCATION, LEVEL AND ATTRIBUTE INFORMATION.

3. THE PROVISION OF "AS CONSTRUCTED" INFORMATION IS TO BE PROVIDED AT THE FULL COST OF THE CONTRACTOR.

PAVEMENT TESTING & CERTIFICATION

1. TESTING AND CERTIFICATION OF PAVEMENTS WORKS TO BE IN COMPLIANCE WITH MAIN ROADS WESTERN AUSTRALIA SPECIFICATION 501 FOR PAVEMENTS AND AUSTRALIAN STANDARD AS3798-2007 GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS.

2. THE CONTRACTOR IS TO APPOINT A SUITABLY QUALIFIED GTA (GEOTECHNICAL TESTING AUTHORITY) TO PROVIDE LEVEL 2 INSPECTION AND TESTING (SAMPLE, TEST AND REPORT) ON THE WORKS IN ACCORDANCE WITH SECTION 8.3 OF AS3798-2007.

3. WHERE APPLICABLE, CERTIFICATES TO BE PROVIDED FOR THE FOLLOWING:

- PARTICLE SIZE DISTRIBUTION OF SUPPLIED MATERIAL (1 PER DELIVERY)
- ASBESTOS CONTENT AND FOREIGN MATERIAL CONTENT OF RECYCLED CRUSHED CONCRETE (1 PER DELIVERY)
- MODIFIED MAXIMUM DRY DENSITY (MMDD) TESTS AND OPTIMUM MOISTURE CONTENT (OMC) TESTS FOR SUPPLIED MATERIAL (1 PER DELIVERY)
- ON-SITE FIELD DENSITY TESTS (REFER TO FREQUENCY REQUIREMENTS BELOW)
- ON-SITE DRY-BACK CHARACTERISTIC MOISTURE CONTENT (DMC) OF IN-SITU LAYER PRIOR TO PLACEMENT OF SUBSEQUENT LAYER (REFER TO FREQUENCY REQUIREMENTS BELOW)
- CALIBRATION CERTIFICATE FOR PERTH SAND PENETROMETER TEST RELATIVE TO NUCLEAR DENSOMETER TEST FOR SAMPLE MATERIAL

FREQUENCY OF FIELD DENSITY TESTS
(REFER TO TABLE 8.1 AS 3798-2007)

TYPE OF EARTHWORKS FREQUENCY OF TESTS

LARGE SCALE OPERATIONS 3 TESTS PER LAYER PER MATERIAL PER GREATER THAN 1500m2
OR
1 TEST PER 250m2 DISTRIBUTED EVENLY THROUGHOUT FULL DEPTH OF AREA
OR
3 TESTS PER LOT
WHICHEVER REQUIRES THE MOST TESTS

SMALL SCALE OPERATIONS 3 TESTS PER LAYER PER 1000m2
OR
1 TEST PER 150m2 DISTRIBUTED EVENLY
OR
3 TEST PER WORK LOT PER LAYER
WHICHEVER REQUIRES THE MOST TESTS

CONCENTRATED OPERATIONS 1 TEST PER LAYER PER 50m2
LESS THAN 500m2 OR
1 TEST PER 100m2 DISTRIBUTED EVENLY
OR
3 TESTS PER WORK LOT WHICHEVER REQUIRES MORE TESTS

CONFINED OPERATIONS 2 TEST PER LAYER PER 50m2

TRENCHES 2 TEST PER LAYER PER 40 LINEAR METRES

MATERIAL PROPERTY LIMITS

GRAVEL SUB-BASE

1. THE SUB-BASE MATERIAL SHALL MEET THE GRADING REQUIREMENTS SHOWN BELOW WHEN TESTED IN ACCORDANCE WITH TEST METHOD WA 115.1

2. PARTICLE SIZE DISTRIBUTION (GRAVEL SUB-BASE):

AS SIEVE SIZE (mm):% PASSING BY MASS MINIMUM AND MAXIMUM LIMITS

75.0	100
37.5	80-100
19.0	50-100
9.5	36-81
4.75	25-66
2.36	18-53
1.18	13-43
0.425	8-32
0.075	3-19

3. THE MATERIAL SHALL ALSO COMPLY WITH THE LIMITS SHOWN BELOW

TEST:	LIMITS:	TEST METHOD:
LIQUID LIMIT	30.0%	MAXIMUM WA 120.2
PLASTICITY INDEX	10.0%	MAXIMUM WA 122.1
LINEAR SHRINKAGE	4.0%	MAXIMUM WA 123.1
CBR (SOAKED 4 DAYS)	30%	MINIMUM WA 141.1
AT 94% OF MDD AND 100% OF OMC		

CRUSHED LIMESTONE SUB-BASE

1. THE SUB-BASE MATERIAL SHALL MEET THE GRADING REQUIREMENTS SHOWN BELOW WHEN TESTED IN ACCORDANCE WITH TEST METHOD WA 115.1

2. PARTICLE SIZE DISTRIBUTION (LIMESTONE SUB-BASE):

AS SIEVE SIZE (mm):% PASSING BY MASS MINIMUM AND MAXIMUM LIMITS

75.0	100
19.0	55-85
2.36	35-65

3. THE MATERIAL SHALL ALSO COMPLY WITH THE LIMITS SHOWN BELOW

TEST:	LIMITS:	TEST METHOD:
LOS ANGELES ABRASION VALUE OF CRUSHED LIMESTONE	20%	MINIMUM WA 220.2
CALCIUM CARBOATE CONTENT	60%	MINIMUM WA 915.1
CBR (SOAKED 4 DAYS)	50%	MINIMUM WA 141.1

GRAVEL BASECOURSE

1. THE BASECOURSE MATERIAL SHALL MEET THE GRADING REQUIREMENTS SHOWN BELOW WHEN TESTED IN ACCORDANCE WITH TEST METHOD WA 115.1

2. PARTICLE SIZE DISTRIBUTION (GRAVEL SUB-BASE):

AS SIEVE SIZE (mm):	% PASSING BY MASS MIN AND MAX LIMITS	% PASSING BY MASS TARGET GRADING
37.5	100	100
19.0	80 - 72	100
9.5	57 - 50	78
4.75	43 - 36	58
2.36	31 - 25	44
1.18	23 - 18	35
0.6	18 - 13	28
0.425	15 - 11	25
0.3	13 - 9	22
0.15	9 - 6	17
0.075	7 - 4	13
0.0135	4 - 2	9

3. THE MATERIAL SHALL ALSO COMPLY WITH THE LIMITS SHOWN BELOW

TEST:	LIMITS:	TEST METHOD:
LIQUID LIMIT	25.0%	MAXIMUM WA 120.2
LINEAR SHRINKAGE	2.0%	MAXIMUM WA 123.1
MAX DRY COMPRESSIVE STRENGTH	2.3MPa	MINIMUM WA 140.1
CBR (SOAKED 4 DAYS)	80%	MINIMUM WA 141.1
AT 96% OF MDD AND 100% OF OMC		
SECONDARY MINERAL CONTENT IN BASIC IGNEOUS ROCK	25 %	MAXIMUM AS 1141.26
ACCELERATED SOUNDNESS INDEX BY REFLUX	94 %	MINIMUM AS 1141.29

CRUSHED ROCK BASECOURSE

1. THE BASECOURSE MATERIAL SHALL MEET THE GRADING REQUIREMENTS BELOW WHEN TESTED IN ACCORDANCE WITH TEST METHOD WA 115.1

2. PARTICLE SIZE DISTRIBUTION (CRUSHED ROCK BASECOURSE):

AS SIEVE SIZE (mm):	% PASSING BY MASS TARGET GRADING	%PASSING BY MASS MIN AND MAX LIMITS
26.5		100
19.0	100	95-100
13.2	82	70-90
9.5	70	60-80
4.75	50	40-60
2.36	38	30-45
1.18	25	20-35
0.6	19	13-27
0.425	17	11-23
0.3	13	8-20
0.15	10	5-14

3. THE MATERIAL SHALL ALSO COMPLY WITH THE LIMITS SHOWN BELOW

TEST:	LIMITS:	TEST METHOD:
LIQUID LIMIT	25.0%	MAXIMUM WA 120.2
LINEAR SHRINKAGE	2.0%	MAXIMUM WA 123.1
0.4% MINIMUM		
FLAKINESS INDEX	30%	MINIMUM WA 216.1
LOS ANGELES ABRASION VALUE	35%	MAXIMUM WA 220.1
MAX DRY COMPRESSIVE STRENGTH	1.7MPa	MINIMUM WA 140.1
CBR (SOAKED 4 DAYS)	100%	MINIMUM WA 141.1
AT 99% OF MDD AND 100% OF OMC		
WET/DRY STRENGTH VARIATION	35%	MAXIMUM AS 1141.26
SECONDARY MINERAL CONTENT IN BASIC IGNEOUS ROCK	25%	MAXIMUM AS 1141.26
ACCELERATED SOUNDNESS INDEX BY REFLUX	94%	MINIMUM AS 1141.29

CONCRETE

1. CONCRETE QUALITY:

LOCATION	fcMAX.	AGG	MAX SLUMP OF
GROUND SLAB	32 MPa	20mm	80mm
KERBS	25 MPa	19mm	100mm

2. UNLESS STATED ABOVE USE ORDINARY PORTLAND CEMENT TYPE GP.

3. SLUMP AND COMPRESSION TESTS SHALL BE CARRIED OUT AT THE FOLLOWING FREQUENCY -
UP TO 3 TRUCKS - ONE (1) SAMPLES
4 TO 30 TRUCKS - THREE (3) SAMPLES
OVER 30 TRUCKS - SIX (6) SAMPLES

4. ANY SLUMP TEST WITH A +15mm FROM REQUIREMENT WILL RESULT IN THE CONCRETE BATCH BEING REJECTED.

5. NO WATER SHALL BE ADDED TO THE CONCRETE MIX PRIOR TO OR FOLLOWING THE SLUMP TEST WITHOUT PRIOR APPROVAL FROM THE SUPERINTENDENT.

6. ALL CONCRETE TO BE SUPPLIED BY AN APPROVED PREMIXING COMPANY.

7. COMPACT CONCRETE BY USING APPROVED IMMERSION VIBRATORS.

8. THICKENINGS AND SLABS TO BE POURED MONOLITHICALLY.

9. CURE ALL CONCRETE BY KEEPING MOIST, OR SIMILAR APPROVED, FOR 7 DAYS AFTER POURING.

STABILISATION AND DUST CONTROL:

1. THE CONTRACTOR SHALL ALLOW FOR DUST CONTROL MEASURES AS REQUIRED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION MEASURES (DUST CONTROL GUIDELINES) AND THE APPROVED DUST MANAGEMENT PLAN.

2. WIND FENCING TO BE INSTALLED ON SITE AS REQUIRED.

3. SURFACE STABILISATION TO BE APPLIED TO THE TOTAL DISTRIBUTED AREA OF THE SITE AS SOON AS POSSIBLE AFTER COMPLETION OF SECTIONS OF WORKS.

4. NO BURNING IS PERMITTED ON SITE.

5. SUITABLE WATER CARTS SHALL BE AVAILABLE ON SITE TO COMMENCE IMMEDIATE WATERING.

6. UPON FINAL COMPLETION OF GRADING AND TOPSOIL SPREADING, SURFACES SHALL BE STABILISED BY MULCHING.

7. UPON FINAL COMPLETION OF GRADING AND TOPSOIL SPREADING, SURFACES SHALL BE STABILISED BY MULCHING.

BOLLARDS:

1. PERMANENT BOLLARDS - RAMGUARD PR-165BG ARE TO BE INSTALLED TO MANUFACTURERS DETAILS AND SPECIFICATIONS AND THE DESIGN DRAWINGS.

2. RETRACTABLE BOLLARDS - RAMGUARD PBB2-Ø165 ARE TO BE INSTALLED TO MANUFACTURERS DETAILS AND SPECIFICATIONS AND THE DESIGN DRAWINGS.

3. RETRACTABLE BOLLARDS - ARE TO BE KEYED TO SUIT THE FESA ACCESS KEYS FOR THE SCHOOL AREA/REGION.

4. RETRACTABLE BOLLARDS FOOTINGS REQUIRE 32MPa CONCRETE. PERMANENT BOLLARD FOOTINGS REQUIRE MINIMUM 25MPa CONCRETE. FOOTING SIZES AS PER MANUFACTURERS DETAILS AND SPECIFICATIONS AND DESIGN DRAWINGS.

5. BOLLARD COLOURS WHITE WITH RED REFLECTIVE MARKERS. REFER MANUFACTURERS DETAILS AND SPECIFICATIONS. BOLLARDS AND METAL CAPS SHALL BE COVERED WITH EXTERIOR GRADE LEAD FREE POLYESTER POWDER COAT.

6. THE FINISHED COLOUR AND SPECULAR GLOSS VALUE SHALL BE EQUIVALENT TO WHITE N14 AND SIGNAL RED R13 AS SPECIFIED IN AS2700. RED REFLECTIVE TAPE SHALL BE CLASS 1.

7. MAXIMUM SPACINGS BETWEEN BOLLARDS SHALL BE 1500mm CTS.

No.	DATE	AMENDMENT	ISSUED BY
A	01/10/25	ISSUE FOR APPROVAL	IRMcC
B	08/10/25	REISSUE FOR APPROVAL	IRMcC

ISSUED FOR BUILDING LICENCE

WARNING
ALL SERVICES ARE SHOWN DIAGRAMMATICALLY. IT IS THE CONTRACTORS RESPONSIBILITY TO LOCATE ALL SERVICES PRIOR TO COMMENCEMENT OF WORKS.

NOTE
THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL RELEVANT CONSULTANTS DRAWINGS.

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EMERGEN

SUSTAINABLE DESIGN ASSESSMENT REPORT

PROPOSED NEW RESTAURANT

MILLERS POOL, 5 MILL POINT RD, SOUTH PERTH

PREPARED BY

MICHELLE PEGLER

Project: 131140

Published Date: 5/05/2025

EMERGEN

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SK04	Architectural Drawings	Design Approval

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1 OVERVIEW

EMERGEN has developed a sustainable design report on the proposed Restaurant/ Cafe development at 5 Mill Point Road, South Perth in consultation with GIORGI.

The purpose of this report is to support the development application by identifying the principles incorporated in the design that meet sustainable objectives and targets for the site.

1.1 STATE PLANNING POLICY SUMMARY

EMERGEN (a division of CADDS GROUP), in collaboration with the project design team (GIORGI) has developed a sustainable design strategy aligning with *State Planning Policy 7.0*, which focuses on the Design of the Built Environment - specifically, Principle 5: Sustainability.

This report serves the vital purpose of bolstering the development application by articulating the sustainability principles and commitments for the project site. We acknowledge the significance of State Planning Policy 7.0 in promoting sustainability within the built environment. Good design, as outlined in the policy, is not only about aesthetics but also optimises the sustainability of our built surroundings, yielding positive outcomes on environmental, social, and economic fronts.

Our approach to sustainable landscape and urban design adheres closely to the established water-sensitive urban design principles, ensuring minimal adverse impacts on existing natural features and ecological processes while promoting green infrastructure at all scales of the project. Furthermore, our strategy for sustainable built environments embraces passive environmental design measures tailored to local climate and site conditions. This includes careful consideration of optimal orientation, shading, building envelope, and natural ventilation, ultimately reducing reliance on energy-intensive heating and cooling technologies. This, in turn, results in reduced energy consumption, decreased resource usage, and lowered operating costs throughout the project's lifecycle.

1.2 DESIGN AND CONSTRUCT TO AUSTRALIAN BEST PRACTICE

The design team will utilise a structured approach to a sustainable outcome for the design and construction of the development including the following Sustainable Targets.

Table 1:Sustainability Targets

DESCRIPTION	GOAL	SUSTAINABILITY COMMITMENTS
Clean Air	Improve Indoor Environment Quality and Health and Wellbeing of Occupants.	Improved Natural Ventilation strategies
Light Quality		Above **40%** of the regularly occupied areas have high level of daylight (above 160 Lux).
Exposure to Toxins		The building's paints adhesives, sealants, and carpets are low in TVOC or non-toxic. The building's engineered wood products are low in TVOC or non-toxic. Occupants are not exposed to banned or highly toxic materials in the building.
Urban ecology	Heat Resilience	Light Roof Colour and hardscape elements to reduce Urban Heat Island Effect
	Reduce impacts to Nature	Protect natural wetland ecosystems on site Stormwater retention
Energy use	Reduce Emissions and Water Use.	A minimum of **30%** offset in operational energy usage
		High performance building fabric.
		Provision for Solar PV array to supply renewable energy to building.
Water use		High WELS Ratings (these equal to above **20%** reduction in potable water).
Lighting use		**20%** reduction in lighting power when compared to NCC DTS. External lighting to meet AS 4282 and Wildlife Sensitivity requirements, regarding light quality, light pollution and light spill
Material Efficiency	Waste Efficiency	Consideration of end of life and recyclability of materials used. Operational Waste Efficiency
Movement and place	Low Carbon Transport Options	Provision for EV Charging bays
		Provision for Bicycle parking
Design for Inclusion	Social Health.	Accessible and Inclusive design
	Indigenous Inclusion	The building's design incorporates design elements using the Indigenous design and planning strategies and principles.

2 PROJECT INFORMATION

The proposed project is located at Millers Pool, 5 Mill Point Road, South Perth WA. The proposed development will be located on land that has previously been cleared and landscaped (grass reserve) on the South Perth Swan River Reserve, part of the Swan Canning Riverpark Area. The objective is to transform the site, activating the precinct by providing a food and beverage offering and social gathering space. Best efforts will be made to retain existing landforms and topography, with minimal disturbance to the surrounding natural ecosystems.

Figure 1: Existing Site Image/ Proposed Development

3 ENERGY REDUCTION STRATEGY

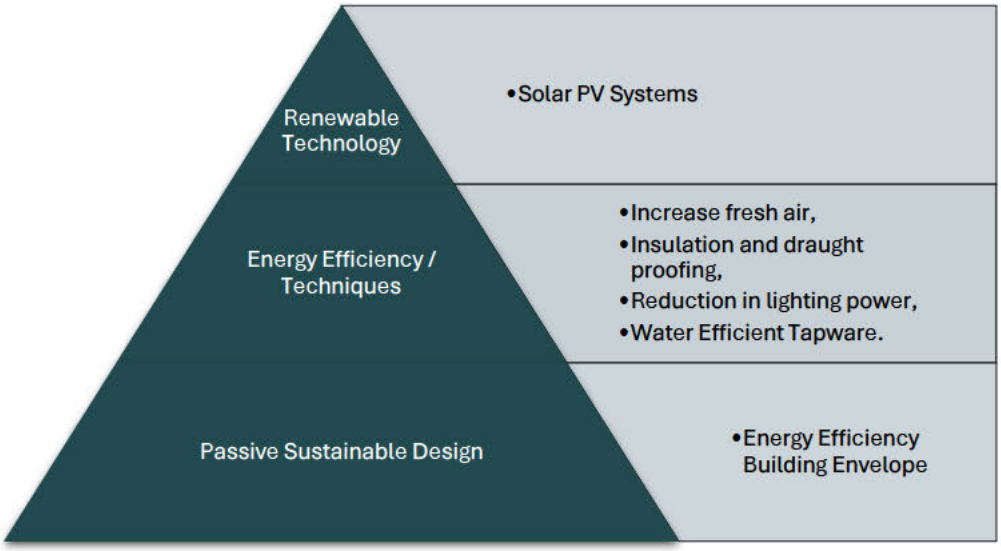

Figure 2: Energy Reduction Strategy

3.1 BUILDING ENVELOPE

Energy savings in a building can be realised by minimising the need for heating and cooling through a well-designed and insulated façade. The design team will focus on enhancing energy efficiency by exceeding the minimum NCC Section J requirements. This will involve optimising the building envelope, air conditioning and ventilation systems, and lighting to ensure lower energy consumption.

The construction for the proposed building envelope is as per plans provided and outlined below.

3.1.1 BUILDING FABRIC

Table 2:Proposed Building Fabric

CONSTRUCTION		DESCRIPTION	REQUIREMENT
ENVELOPE WALLS	External Concrete Wall	150mm Concrete wall with 92mm steel stud frame internally lined with 13mm plasterboard. External finishes as per elevations.	**R2.5HD Insulation Batts + R0.2 Thermal Break.** ***Total R-Value=1.67***
	Steel Framed Wall	FC cladding on 92mm steel stud frame internally lined with 13mm plasterboard. External finishes as per elevations.	**R2.5HD Insulation Batts + R0.2 Thermal Break.** ***Total R-Value=1.62***
INTERNAL WALLS	Steel Framed Wall	Steel framed wall with plasterboard lining.	**No Insulation Required.**
	Rammed Earth Wall	300 mm Rammed Earth Wall	**No Insulation Required.**

FLOORS	Slab on Ground	Concrete slab with ground contact. Floor coverings as per plans.	**No Insulation Required.**
	Suspended Framed floor	Suspended steel framed floor. Floor coverings as per plans.	**R2.5 Insulation batts or Rigid insulation board + R0.2 Thermal Break.**
ROOFS	Roof Type 1	Suspended concrete deck roof	**R4.0 Insulation Batts** to dropped plasterboard ceilings. Or **R4.0 Rigid insulation board** to concrete Soffit
	Roof Type 2	Metal deck roof sheet. Cladding in **Surfmist (SA=0.33)**, or similar.	**60mm Anticon (R1.3)** with **R4.0 Insulation Batts** to dropped plasterboard ceilings.

WINDOW SPECIFICATION		U-VALUE	SHGC
EXTERNAL GLAZING	Double Low E toned glazing in aluminium frame. (i.e.,**6.38 Viridian ComfortPlus Neutral 59/ 12mm air/ 6mm clear**, or equal)	**3.0**	**0.40**
SKYLIGHT	Double Glazed Skylight	**2.6**	**0.24**

Note: Glazing values provided are for Whole System (Frame + Glass)

3.2 RENEWABLE TECHNOLOGY

Integrating solar panels into the building offers a multitude of benefits, ranging from financial savings and energy independence to environmental protection and community resilience. As the site will potentially be 'all electric' a Solar photovoltaic (PV) system would provide significant benefits in further reducing greenhouse gas emissions and offsetting the overall grid energy consumption.

Emergen have calculated potential estimated energy savings based on 3 standard sized PV systems.

Table 3:Estimated Energy reductions based on Solar PV System

SOLAR PV SYSTEM	15kW SYSTEM	20kW SYSTEM	50KW SYSTEM
Area required (m^2)	68.8m^2	92.8m^2	228.8m^2
Potential % Energy use reduction	**28.73%**	**38.76%**	**95.55%**

3.3 LIGHTING COMFORT

Lighting within the building must meet the following criteria:

- All lighting must be flicker-free.
- Light sources must have a minimum Colour Rendering Index (CRI) average R1 to R8 of 85 or higher and have a CRI R9 of 50 or higher.
- Light sources must meet best practice illuminance levels for each task within each space type with a maintained illuminance that meets the levels recommended in AS/NZS 1680.1:2006 series applicable to the project type and including maintenance.
- The maintained Illuminance values must achieve a uniformity of no less than that specified in Table 3.2 of AS/NZS 1680.1:2006, with a maintenance factor method as defined in AS/NZS 1680.4.; and
- All light sources must have a minimum of 3 MacAdam Ellipses.
- The walls within the field of view of occupants in regularly occupied spaces must have an average surface reflectance value of 0.70 and an average surface illuminance of at least 50% of the horizontal illuminance levels required for task.
- Vertical illuminance in workspaces: ensure that 50% of the horizontal task illuminance reaches the average eye height for 90% of primary spaces using vertical illuminance calculation grid.
- The illuminance values must be calculated in accordance with AS/NZS 1680 series for the relevant task.

External Lighting must meet the following criteria:

- External lighting to meet AS 4282 and Wildlife Sensitivity requirements, regarding light quality, light pollution and light spill.

3.3.1 EFFICIENT LIGHTING AND CONTROL

The installed aggregate illumination power has been designed to be **20%** below the maximum illumination power based on maximum allowable lighting power densities defined in Table J7D3b of the NCC 2022. Motion Detectors and daylight sensors are provided to reduce demand.

Table 4: Lighting Characteristics

PARAMETER	PROPOSED BUILDING	REFERENCE BUILDING
LIGHTING TYPE	LED light fittings	LED light fittings
DESIGN ILLUMINANCE (LUX)	Various lux	Various lux
NOMINAL LIGHTING POWER DENSITY (W/M^2)	**20%** less compared to NCC max requirements.	As per NCC max requirements.
OCCUPANT SENSOR CONTROLS	Motion sensors	N/A
DAYLIGHT CONTROLS	Yes	N/A
OTHER LIGHTING CONTROLS	Timer switches	N/A
ADJUSTMENT FACTOR APPLIED	0.9 – Motion sensor 1 0.7 – Motion sensor 2 0.55 – Motion sensor 3	Room Aspect Ratio

3.4 DAYLIGHTING

The purpose of this analysis is to ensure the building is providing daylight access above typical federal, state, or local regulations by showing how the building's design and glazing specification maximises natural lighting to regularly occupied spaces.

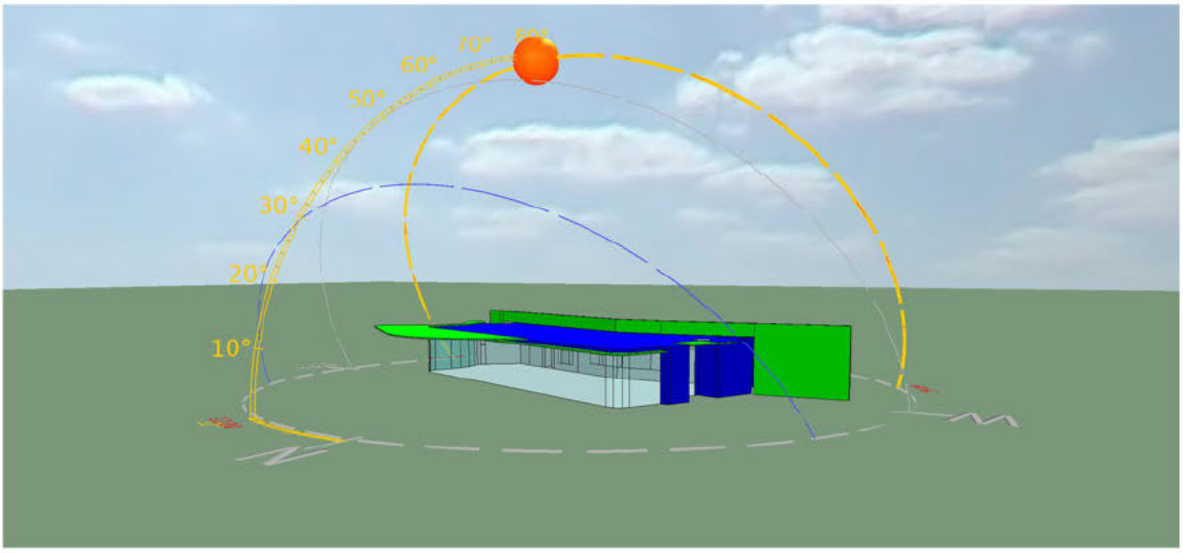

Figure 3: Daylighting Model

CALCULATION CONDITIONS	
TEST FACTOR	Daylight Factor
SKY FACTOR	CIE Overcast Sky
DATE	September 21st 12:00pm

AREA/ SPACES	PROPOSE USAGE	NOMINATED AREA (m^2)	COMPLIANT AREA (m^2)	COMPLIANT AREA (%)
Restaurant/ Bar	Primary	299.68	285.89	**95.4%**
Kitchen/ Rotisserie		61.29	0.0	**0%**
Office		9.30	2.77	**29.7%**
Kiosk		9.54	5.96	**62.5%**
Wash Up		7.73	7.00	**90.6%**
TOTAL	**PRIMARY**	13,386.31	5,179.10	**77.80%**

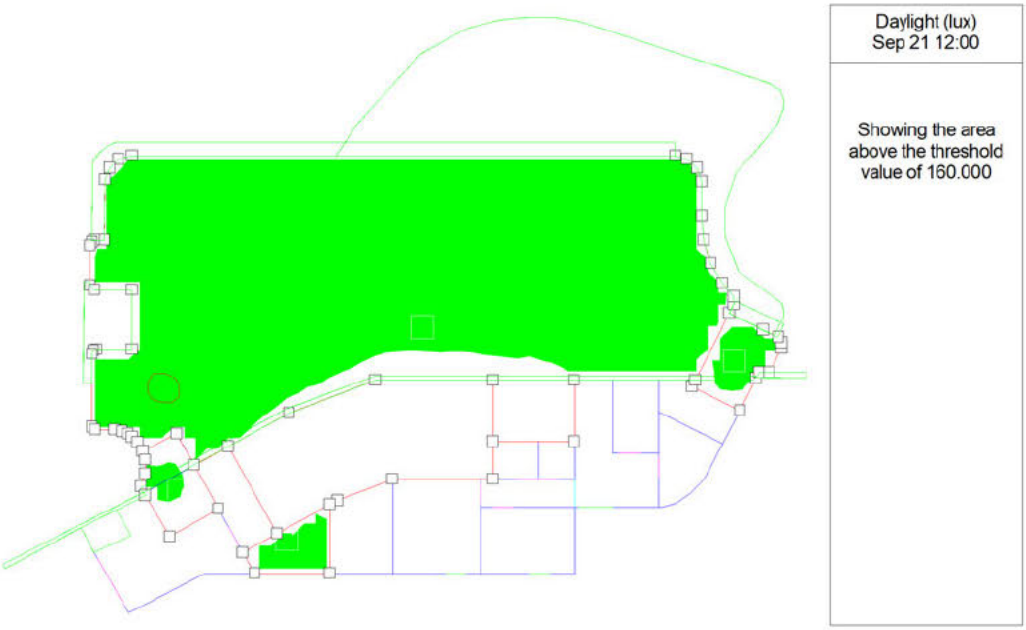

Figure 4: Daylighting for Primary Areas

For non-residential buildings, at least 40% of the regularly occupied areas across the building must receive high levels of daylight (above 160 lux). These thresholds align with commonly accepted standards for daylighting compliance

While on average the Primary use areas of the building will achieve high levels of daylight, with above 75% of floor area receiving high levels of daylight (above 160 lux). The Kitchen and Rotisserie space have limited access to natural daylight. The large open servery however connects occupants to adjacent well-lit spaces and high quality external views.

3.5 ARTIFICIAL LIGHTING AND CONTROLS

All lighting will be equipped with light-emitting diodes (LEDs), covering all primary areas. Transitory area (bathrooms, passages) lighting will include controls like occupancy sensors (PIRs) and time switches to minimise energy usage when lighting is not needed.

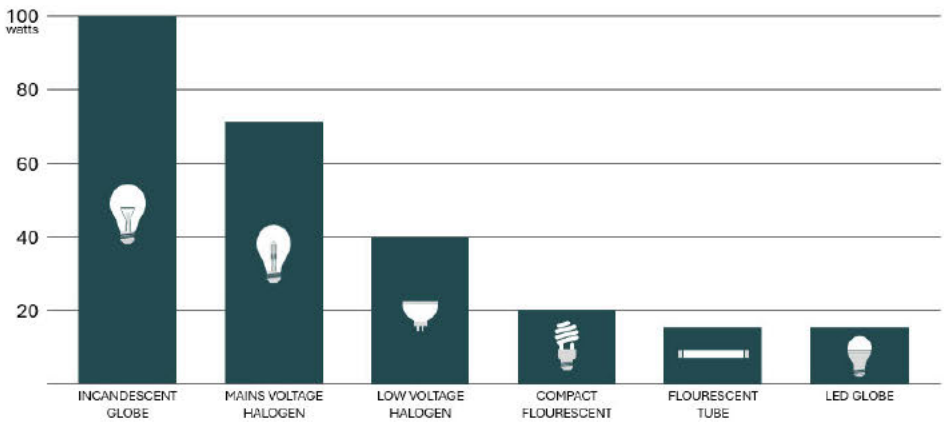

Figure 5: Comparison of LED lighting with other conventional lighting

3.6 SOLAR ANALYSIS

Consideration has been given to Solar Passive Design Principles for the development. With majority of glazing facing North to maximise Solar gains in the winter months, while strategically designed shading will provide protection throughout the summer months. Further shading considerations are being made to improve shading to the West orientated glazing, with the objective to maximise views and building occupants connection to nature, while providing protection from afternoon sun and glare. Considerations such as Landscaping/ plant selections to provide shade or vertical screens or louvres are being reviewed.

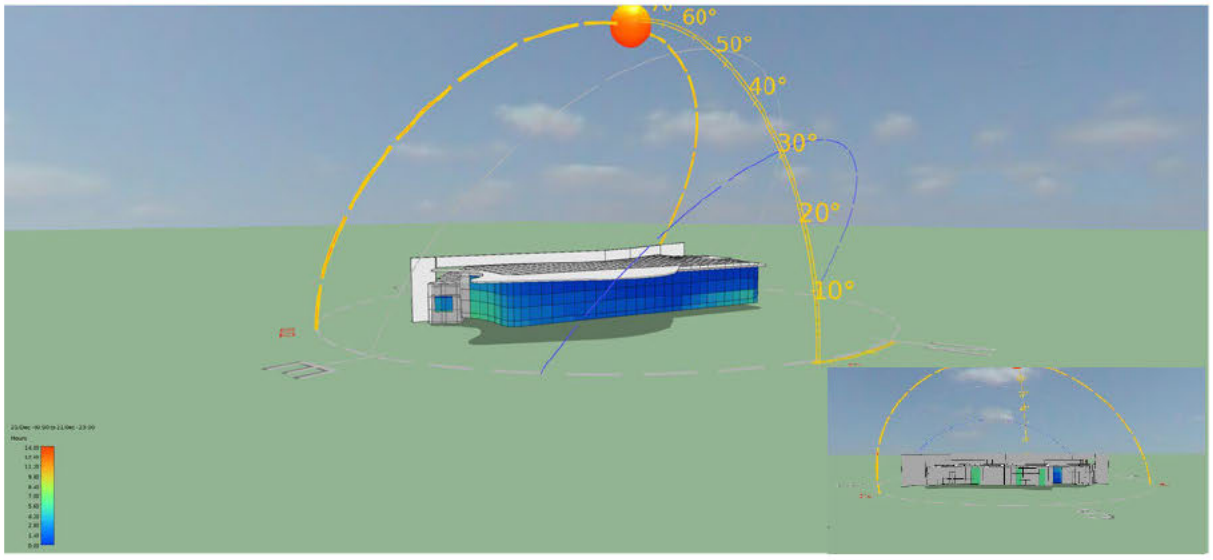

Figure 6: Solar Analysis during Summer

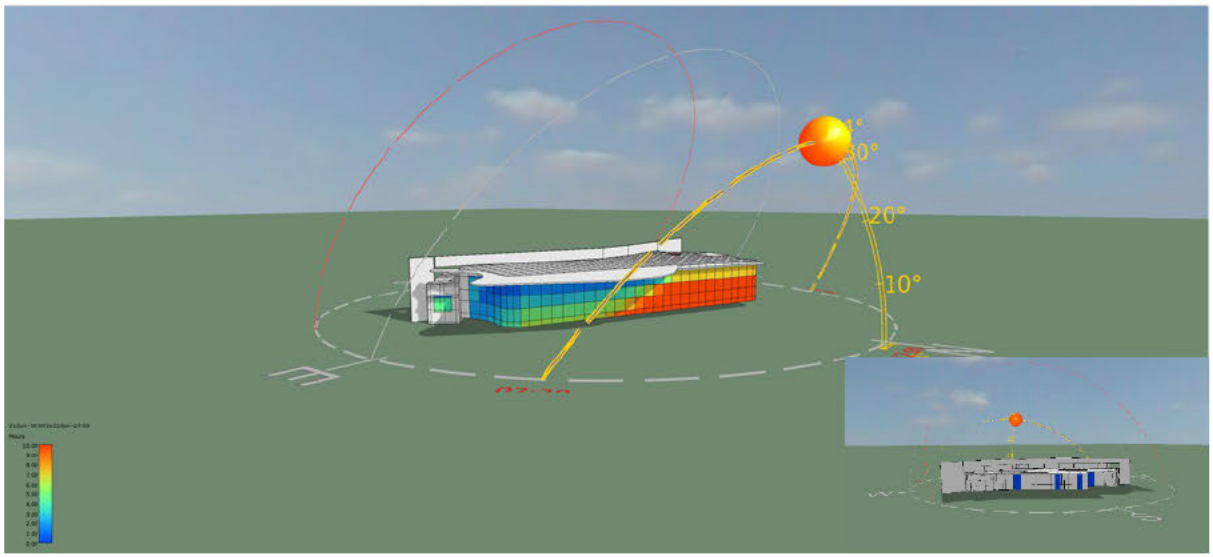

Figure 7: Solar Analysis during Winter

3.7 RESULTS

The figures shown below demonstrate the difference in performance between the Proposed Building and the Reference Building, allowing for a quantifiable comparison on the performance of each building. It's important to note that a **15kW solar photovoltaic (PV) system** and **20% Lighting reduction** have been integrated into the proposed building's design to assist in offsetting the overall energy consumption by 30% over an NCC deemed to satisfy building.

Table 5 - Estimated Energy Use

MODEL	HEATING	COOLING	FANS	LIGHTS	EQUIP	PV	TOTAL
REFERENCE (kWh/m^2)	6.5	61.8	43.9	57.2	21.1	-	**190.6**
PROPOSED (kWh/m^2)	6.2	60.7	43.8	45.8	21.1	-47.7	**129.9**
ENERGY REDUCTION							**31.86%**

Table 6 - Annual Greenhouse Gas Emissions

MODEL		ANNUAL GREENHOUSE GAS EMISSIONS
REFERENCE	$kgCO_2$-e	65,957.13
PROPOSED	$kgCO_2$-e	44,944.07

4 URBAN ECOLOGY

Urban ecology is crucial for conserving biodiversity and enhancing urban life. Well-planned buildings and landscapes protect biodiversity and support sustainable practices, including low water and fertiliser use and the selection of native plants.

4.1 MINIMISING HEAT ISLAND EFFECT

The heat island effect occurs when urban areas are warmer than their rural surroundings due to the built environment. The design has incorporated light-coloured roof materials, light coloured hardscaping and shaded landscaped areas, which significantly mitigates this effect and enhances energy savings.

The development will dedicate more than **75%** of the entire site area to include one or a combination of the following:

- Vegetation.
- Roofing materials, including shading structures, having the following:
  - For roof pitched <15°– a three-year SRI of minimum 64; or
- Only where the three-year Solar Reflectance Index (SRI) for products is not available, use the following:
  - For roof pitched <15° – an initial SRI of minimum 82;
- Unshaded hard-scaping elements with a three-year SRI of minimum 34 or an initial SRI of minimum 39.

- Hardscaping elements shaded by overhanging vegetation or roof structures, including photovoltaic panels.

4.2 CONSERVING BIODIVERSITY

The proposed development incorporates a 500 mm raised floor system to the back portion of the building designed to minimise disturbance to the existing surrounding wetland environment. By elevating the structure above natural ground level, the design preserves native vegetation, maintains natural water flows, and protects soil health and biodiversity. The raised construction also allows small fauna to continue moving through the site, supporting ecological connectivity. This approach demonstrates a commitment to long-term environmental stewardship.

Stormwater will also be retained under the Alfresco area to support natural stormwater infiltration. This approach reduces the risk of erosion, nutrient loading, and polluted runoff entering the Swan River system. It also helps maintain groundwater recharge and supports the health of adjacent wetland ecosystems.

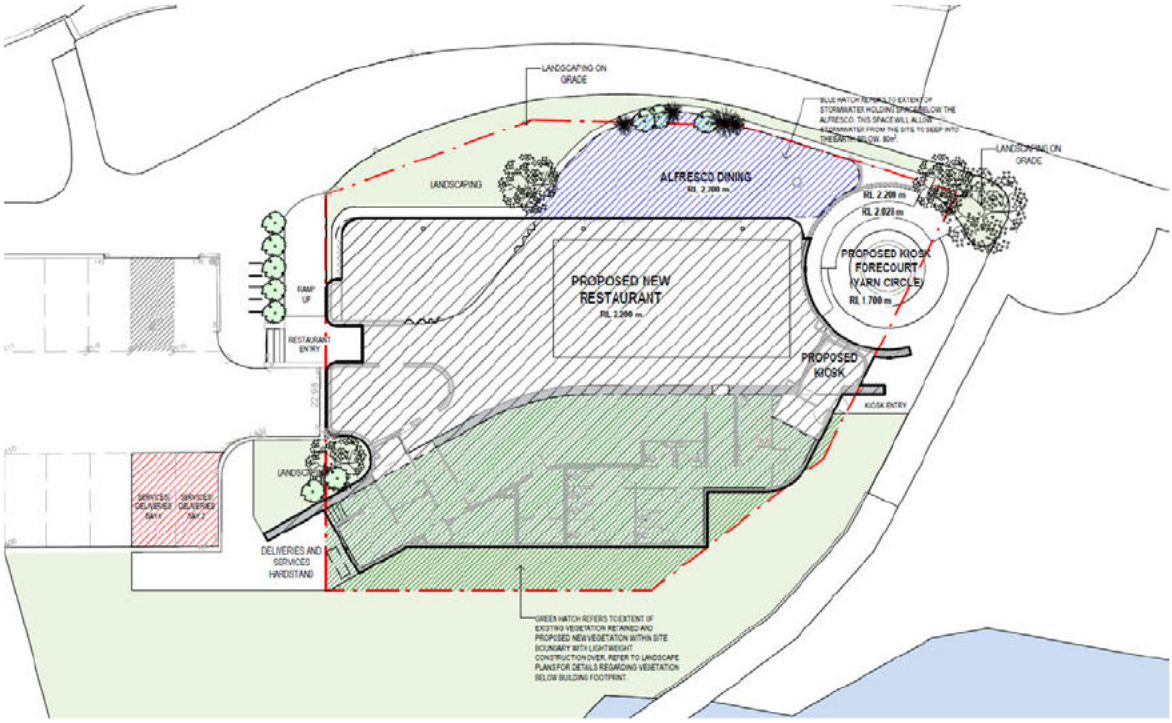

Figure 8: Proposed Raised Construction area (Green) and Stormwater Retention (Blue)

5 WATER EFFICIENCY

5.1 SUSTAINABLE WATER INITIATIVES

Non-potable water use is minimal throughout the proposed design due to the application of water efficient toilets and taps and relatively small areas of irrigated plantings. The design team has identified water capture, grey and black water capture and treatment during the target setting workshop but did not preference these options due to:

- Low non-potable water use requirements of the development
- Logistical constraints, energy use and operational costs associated with grey and black water treatment in commercial buildings influenced heavily by health regulations (significant periodic inspection and testing required in the applications)
- Proximity to natural water bodies and potential risk of contamination.
- Space requirements of rainwater harvesting and/or grey and black water treatment tanks
- Relative cost vs benefit of these strategies versus competing strategies which delivered much larger environmental benefits at a lower cost.

All new water fixtures are to ensure that high WELS rating fixtures and fitting are to be specified in line with minimum benchmarks below.

Table 7: WELS Ratings

FIXTURE / EQUIPMENT TYPE	WELS RATING	MINIMUM WATER EFFICIENCY
TAPS	5 Star	5L/min
URINALS	5 Star	1L/min
TOILETS	4 Star	3.5L/flush
SHOWERS	4 Star	7L/min

Table 8: Estimated Potable Water Use

FITTINGS	PROPOSED BUILDING WATER DEMAND (KL/YEAR)	STANDARD PRACTICE BUILDING WATER DEMAND (KL/YEAR)
TOILETS	364	415
URINALS	80	160
INDOOR TAPS	180	225
LANDSCAPE IRRIGATION	83	123
REDUCTION	**24.0%**	

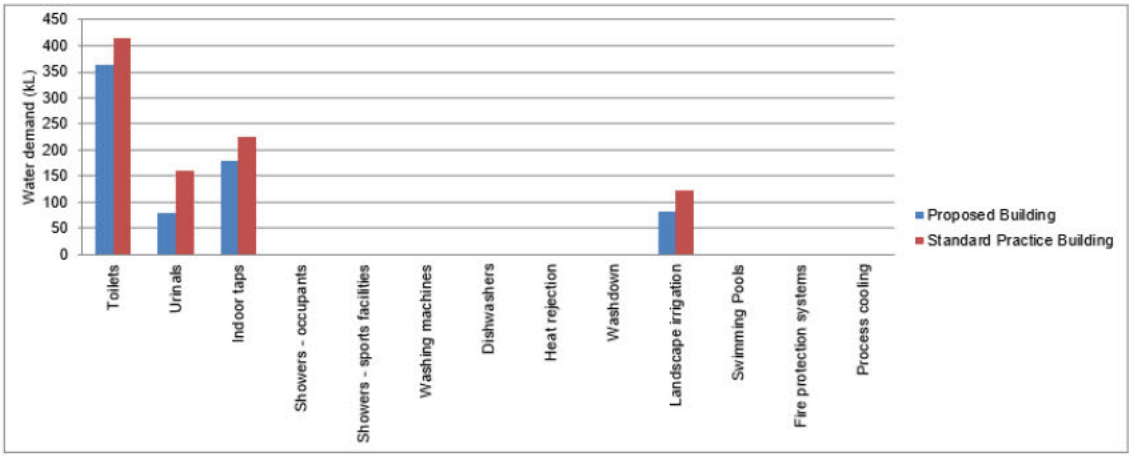

Figure 9: Graph for Estimated Annual Potable Water Use

5.1.1 LANDSCAPE AND IRRIGATION PLAN

The development's location in South Perth, Western Australia is considered a drying climate and as such, water conservation is critically important. The use of water-wise landscaping will be considered for the project. The landscaping will include a large diversity of species and prioritises the use of climate resilient, local native and indigenous plant species.

To reduce the amount of water used for the landscaped areas a drip system with moisture sensor control will be installed for irrigation.

6 MOVEMENT AND PLACE

6.1 SUSTAINABLE TRANSPORT FACILITIES

It is the intention of this category to reduce occupant's dependency on carbon intensive vehicles. The development has incorporated Bicycle racks for building occupants and visitors. Infrastructure to allow for future installation of minimum x2 metered EV charging stations in the nearby carpark will also be discussed with the City of South Perth.

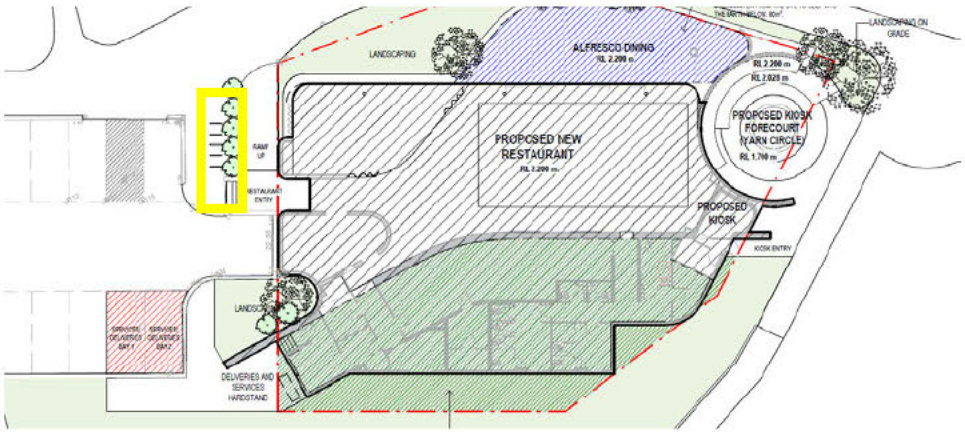

Figure 10: Proposed Bicycle parking

7 MATERIAL EFFICIENCY

7.1 SUSTAINABLE MATERIALS

A well-thought-out materials strategy contributes significantly to the sustainability and resilience of the built environment. Implementing efficient use of materials involves selecting, sourcing, and using materials in ways that minimise environmental impacts, reduce waste, and improve the life cycle performance of the built environment. The following considerations should be made when selecting materials for the development:

- **Low Embodied Energy:** Choose materials that require minimal energy to produce, process, and transport. Examples include locally sourced stone, timber, and recycled materials.
- **Sustainably Sourced:** Prioritise materials certified by sustainability standards, such as FSC-certified timber or low-carbon concrete.
- **Recycled and Reused Content:** Use materials with high recycled content or those that can be reclaimed and reused (e.g., recycled steel, reclaimed timber, or concrete with recycled aggregate).
- **Durability and Longevity:** Select materials that have a long lifespan and are resistant to wear and damage. Longer-lasting materials reduce the need for replacements and the associated environmental impact.
- **Local Sourcing:** Prioritise local materials to reduce transportation emissions and support local economies.
- **Design for Deconstruction and Disassembly:** Design buildings and structures in a way that allows for easy disassembly and reuse of materials at the end of their life

7.2 WASTE EFFICIENCY

A waste planning expert will produce a Waste Management Plan (OWMP) that addresses best practice in waste management, including:

- Identifying the objectives of the plan, by setting diversion from landfill targets and / or target for reducing total materials generation (general waste materials + recyclable / reusable materials);
- Clearly identify waste streams including general waste, paper and cardboard, glass and plastic;
- Clearly identify applicable bins for various waste streams, that allow for separation of recyclable streams – or use of comingled systems where appropriate.
- Clearly identify at least one other waste stream that can be recycled, and for which recycling facilities are provided.
- Clearly identify storage areas for all waste streams identified in the OWMP.
    - Area to be sized sufficiently for all streams nominated above, based on waste generated by the project and the collection frequency for each stream; and
    - Calculations shall be based on third-party best practice guidelines.
- Outline best practice access requirements for the collection of all waste streams identified in the OWMP.
- Outline individual roles responsible for delivering and reviewing the OWMP

8 DESIGN FOR INCLUSION

8.1 ACCESSIBLE DESIGN

The proposed development has been designed following the principles of accessible and universal design to ensure it is welcoming and usable for all members of the community. Step-free access will be provided from public pathways to all key areas, including the entry, indoor seating, alfresco area, and accessible bathroom facilities.

8.2 INDIGENOUS INCLUSION

Consultation with the Whadjuk Aboriginal Corporation has been undertaken to incorporate and celebrate the deep cultural and historical significance of the Whadjuk Nyoongar people with the site and surrounding area into the design.

The consultation process with the Whadjuk Aboriginal corporation has strengthened the design with design elements recognising the Indigenous culture of the site, such as:

- Paperbark spine (rammed earth wall) reinforcing cultural narratives and the significance of paperbark trees in cultural traditions.
- Amphitheatre/ Yarning circle situated outside the kiosk providing a space for gathering and storytelling; and
- Fish trap wall incorporating the Whadjuk Fish trap song into the restaurants exterior concrete wall.

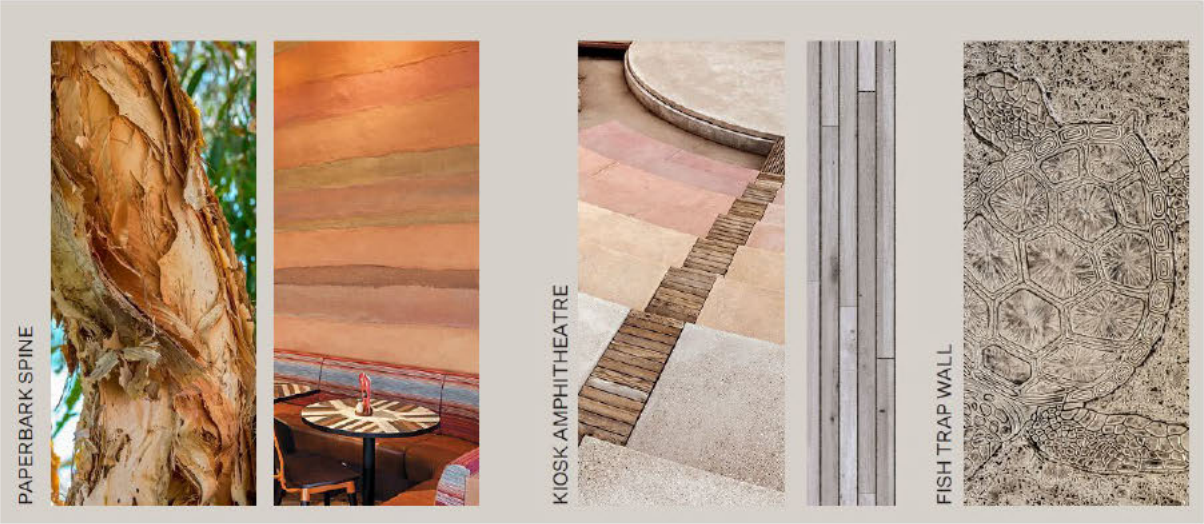

Figure 11: Proposed Design Elements recognising Indigenous culture of the site.

9 EXPOSURE TO TOXINS

9.1 INTERNAL FINISHES

Internal Finishes (paints, adhesives, sealants, carpets) with low VOC and formaldehyde content will be prioritised.

Using low VOC (volatile organic compounds) products offers numerous benefits, primarily by enhancing indoor air quality and promoting better health. These products release fewer harmful chemicals, reducing the risk of respiratory issues, headaches, dizziness, and long-term health problems. Environmentally, low VOC products contribute less to air pollution and smog formation, supporting a healthier ecosystem.

9.1.1 PAINTS, ADHESIVES, AND SEALANTS

To meet the requirements, at least 95% of internally applied paints, adhesives, sealants (by volume), and carpets (by area) must meet TVOC (Total Volatile Organic Compounds) limits. Compliance with these limits can be achieved through one of the following methods:

1. **Product Certification Scheme:** These schemes assess and verify the TVOC content of the materials, ensuring they meet the specified limits.
2. **Laboratory Product Testing:** If there are no certified products available, the contractor can conduct laboratory testing on the paints, adhesives, and sealants, to determine their TVOC content.
3. **Absence of Non-compliant Materials**: No paints, adhesives, sealants, and carpets are present at the time of practical completion (PC)

All paints used for internal application on the project are to have a low TVOC content as outlined below. TVOC content must be based on whole paint (water and tinters included):

Table 9: Paint VOC limits

PRODUCT TYPE / SUBCATEGORY	MAX TVOC CONTENT (G/L OF READY TO USE PRODUCT)
Walls and ceilings – Any gloss level	16
Trim, varnishes and wood stains	75
Primers, sealers and prep coats	65

Maximum TVOC Content Limits for Paints, Varnishes and Protective Coatings
*EU Directive
The TVOC content of the 'ready-to-use' paint shall be theoretically calculated as the sum total of the VOCs of each of the raw material component comprising the paint.

Where the TVOC content of individual components is not known, it must be determined experimentally by one of the following testing methods as appropriate:

- ISO Method 17895 (2005), for a material with a presumed VOC content <1%;
- ISO Method 11890-2 (2006), for a material with a presumed VOC <15%;
- ISO Method 11890-1 (2007), for a material with a presumed VOC content >15%;
- ASTM D3960, which is comprised of four individual testing procedures that measures TVOC (D2369) as well as density (D1475) and water content (D4017). Exempt compounds (D4457) must not be subtracted in the calculation of VOC content.

All sealants used in an internal application on the project are to have a low TVOC content as outlined below.

Table 10: Adhesives/Sealants VOC limits

PRODUCT	MAXIMUM TVOC CONTENT (G/LITRE)
General purpose adhesives and sealants	50
Acoustic sealants, architectural sealant, waterproofing membranes and sealant, fire retardant sealants and adhesives	250
Structural glazing adhesive, wood flooring and laminate adhesives and sealants	100
Primers, sealers and prep coats	65
One and two pack performance coatings for floors	140

Maximum TVOC limits for Adhesives & Sealants
*Sealants used to enhance the fire- and water-proofing properties are included.

The testing method applicable to adhesive and sealants is only ASTM D3960 as detailed above for paints. For more information on ASTM D3960 refer to South Coast Air Quality Management District Rule 1168.

All carpets and/or other flooring used on the project are to have low TVOC emission rates as outlined below.

Table 11: Carpet VOC limits

ALL CARPET/FLOORING PRODUCTS MUST COMPLY WITH TVOC EMISSION LEVELS	
Total VOC limit	0.5 mg/m^2 per hour
4-pc (4-Phenolcycohexene) limit	0.05 mg/m^2 per hour

Compliance Testing: Refer to Carpet and Rug Institute Green Label (US) OR American Society for Testing and Materials (ASTM) D5116 Guide for Small-Scale Environmental Chamber Determinations of Organic Emissions from Indoor Material/Products OR

For carpets and laminate floor coverings, an option for demonstrating compliance with TVOC levels is as follows: ISO 10580 (also known as ISO/TC 219) – Document N238 – Resilient,

Textile and Laminate Floor Coverings Evaluation of Volatile Organic Compounds Emissions, with a limit of 500µg/m^2/hr at 24 hours. OR For floor coverings (other than carpet), an option for demonstrating compliance with TVOC levels is as follows:

ISO16000 parts 9, 10 and 11 (also known as the EN 13419), with a TVOC limit at three days of 5mg/m^2/h and 0.5mg/m^2/h at 28 days.

The contractor must obtain written approval from the design team before using any sealant, adhesive, paint, flooring or fit out items. This approval will be contingent on the provision of proof that the product

has a VOC content below that noted above. At the end of construction, the contractor is required to undertake a final audit to ensure that the correct products have been used.

All carpets comply with the Total VOC (TVOC) limits within Table below. The emission levels detailed in this table must be established by a NATA or another ISO/IEC17025 accreditation laboratory.

Table 12: Flooring VOC limits

ALL CARPET/FLOORING PRODUCTS MUST COMPLY WITH TVOC EMISSION LEVELS – TO ASTM D5116 TEST PROTOCOL	
Carpets using ASTM D5116 Test Protocol:	
Total VOC limit	0.5 mg/m² per hour
4-pc (4-Phenolcycohexene) limit	0.05 mg/m² per hour
Carpet using ISO 16000 test protocol (also known as EN 13419)	
TVOC at three days-	0.5 mg/sqm per hour
Flooring using ISO 10580 (also known as ISO/TC 219) – Document	
TVOC at 24 hours - 0	0.5mg/sqm per hour

9.2 FORMALDEHYDE MINIMISATION

All engineered wood products used internally, including exposed and concealed applications, must have low formaldehyde emissions as defined in the table below, or contain no formaldehyde. Engineered wood products are defined as particleboard, plywood, veneer, MDF, Laminated Veneer Lumber (LVL), High-Pressure Laminate (HPL), Compact Laminate and decorative overlaid wood panels and include both finished and unfinished products.

These requirements are not applicable to exterior applications, formwork, internal car park applications, reused engineered wood products or raw timber.

The contractor must obtain approval from the design team before substituting any product.

The limits listed here are defined according to the test method. The levels listed are equivalent results for different test procedures.

Table 13: Formaldehyde emission limits

TEST PROTOCOL	EMISSION LIMIT/ UNIT OF MEASUREMENTS
AS/NZS 2269:2004, testing procedure AS/NZS 2098.11:2005 method 10 for Plywood	< 1.0 mg/L
AS/NZS 1859.1:2004 - Particle Board, with use of testing procedure AS/NZS 4266.16:2004 method 16	< 1.5 mg/L

AS/NZS 1859.2:2004 - MDF, with use of testing procedure AS/NZS 4266.16:2004 method 16	< 1.0 mg/L
JIS A 5908:2003- Particle Board and Plywood, with use of testing procedure JIS A 1460	< 1.0 mg/L
JIS A 5905:2003 - MDF, with use of testing procedure JIS A 1460	< 1.0 mg/L
JIS A1901 (not applicable to Plywood)	< 1.0 mg/L
ASTM D5116	<0.1 (+/- 0.0005) mg/m^2hr (may also be represented as $mg/m^2/hr$)
ISO 16000 part 9, 10 and 11 (also known as EN 13419)	<0.1 (+/- 0.0005) mg/m^2hr (may also be represented as $mg/m^2/hr$)
ASTM D6007	$0.12mg/m^3$*
ASTM E1333	$0.12mg/m^3$**
EN 717-1 (also known as DIN EN 717-1)	$0.12\ mg/m^3$
EN 717-2 (also known as DIN EN 717-2)	3.5 mg/m^2hr (may also be represented as $mg/m^2/hr$).
*The test report must confirm that the conditions of Table 1 comply for the particular wood product type, the final results must be presented in EN 717-1 equivalent (as presented in the table) using the correlation ratio of 0.98.	
** The final results must be presented in EN 717-1 equivalent (as presented in the table), using the correlation ratio of 0.98.	

10 CONCLUSION

In conclusion, the presented report provides a comprehensive overview of sustainability commitments that harmonise seamlessly with the core principles of State Planning Policy 7.0: Principle 5 Sustainability. Based on modelling undertaken and sustainable initiatives proposed the development has the ability to achieve a best practice sustainability outcome, delivering positive environmental, social and economic outcomes.

Table 14: Sustainability Commitments

DESCRIPTION	GOAL	SUSTAINABILITY COMMITMENTS
Clean Air	Improve Indoor Environment Quality and Health and Wellbeing of Occupants.	Improved Natural Ventilation strategies
Light Quality		Above **75%** of the regularly occupied areas have high level of daylight (above 160 Lux).
Exposure to Toxins		The building's paints adhesives, sealants, and carpets are low in TVOC or non-toxic. The building's engineered wood products are low in TVOC or non-toxic. Occupants are not exposed to banned or highly toxic materials in the building.
Urban ecology	Heat Resilience	Light Roof Colour and hardscape elements to reduce Urban Heat Island Effect
	Reduce impacts to Nature	Protect natural wetland ecosystems on site Stormwater retention
Energy use	Reduce Emissions and Water Use.	A minimum of **30%** offset in operational energy usage
		High performance building fabric.
		Provision for Solar PV array to supply renewable energy to building.
Water use		High WELS Ratings (these equal to a **24%** reduction in potable water).
Lighting use		**20%** reduction in lighting power when compared to NCC DTS. External lighting to meet AS 4282 and Wildlife Sensitivity requirements.
Material Efficiency	Waste Efficiency	Consideration of end of life and recyclability of materials used. Operational Waste Efficiency
Movement and place	Low Carbon Transport Options	Provision for EV Charging bays
		Provision for Bicycle parking
Design for Inclusion	Social Health.	Disability Access and Inclusive design
	Indigenous Inclusion	The building's design incorporates design elements using the Indigenous design and planning strategies and principles.

PROPOSED MILLERS POOL RESTAURANT, BAR AND KIOSK

LOT 125 (5) MILL POINT RD, SOUTH PERTH

LOCAL AUTHORITY: CITY OF SOUTH PERTH

TRANSPORT IMPACT STATEMENT

Final

Prepared by i3 consultants WA for

Giorgi

Prepared by

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Description

A Transport Impact Statement for the proposed restaurant, bar and kiosk on Lot 501 street no 5 Mill Point Rd (eastern end of Millers Pool Carpark 11), prepared in accordance with Volume 4 of the WAPC Transport Impact Assessment Guidelines.

Client

Giorgi

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About the Author

David Wilkins is an RTA NSW Certified Level 3 Lead Auditor (RSA-08-0178) and Main Roads Western Australia (MRWA) accredited Senior Road Safety Auditor (SRSA 0101). In addition to this, David is an MRWA accredited Crash Investigation Team Leader and Roadworks Traffic Manager (MRWA-RTM-10-RTM20). David has undertaken over 670 road safety audits in Australia since 2001 across the full range of stages from feasibility through to pre-opening, including roadworks, existing roads, schools, events & mine sites.

David specialises in undertaking and preparing traffic impact assessments in accordance with either the WAPC *Transport Impact Assessment Guidelines* or Austroads *Guide to Traffic Management Part 12: Integrated Transport Assessments for Developments* (1). David has authored over 250 of these since 2001.

David is a past member of Engineers Australia and committee member of Transport Australia society and is still guided by its Charter and Code of Ethics which states that its members act in the interest of the community, ahead of sectional or personal interests towards a sustainable future.

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1 Introduction

This Transport Impact Statement (TIS) has been prepared in accordance with Volume 4 (Subdivision) of the WAPC publication Transport Impact Assessment Guidelines (2).

Table 1 of Volume 4 of the WAPC Guidelines indicates the level of TIA required by land use and size. It has been reproduced as Table 1 below.

The guidelines indicate that a Transport Impact Statement (TIS) is required for proposed restaurants, bars and kiosks that accommodate between 100 and 1,000 seats or between 200 and 2,000 m^2 gross floor area.

The proposed development has 180 m^2 of internal restaurant/ bar area with an additional 80 m^2 Alfresco seating. It therefore warrants a TIS.

LAND USE	MODERATE IMPACT	HIGH IMPACT
	Transport Impact Statement required	Transport Impact Assessment required
	10 – 100 vehicle trips in the peak hour	> 100 vehicle trips in the peak hour
Residential	10–100 dwellings	>100 dwellings
Schools	10–100 students	>100 students
Entertainment venues, restaurants, etc.	100–1000 persons (seats) OR 200–2000 m^2 gross floor area	>1000 persons (seats) OR >2000 m^2 gross floor area
Fast food restaurants	50–500 m^2 gross floor area	>500 m^2 gross floor area
Food retail /Shopping centres with a significant food retail content	100–1000 m^2 gross floor area	>1000 m^2 gross floor area
Non-food retail	250–2500 m^2 gross floor area	>2500 m^2 gross floor area
Offices	500–5000 m^2 gross floor area	>5000 m^2 gross floor area
Service Station	1–7 refuelling positions	>7 refuelling positions
Industrial/Warehouse	1000–10,000 m^2 gross floor area	>10,000 m^2 gross floor area
Other Uses	Discuss with approving authority	Discuss with approving authority

Table 1 – Land use warrants for Transport Impact Statements and Assessments

Volume 4 of the WAPC Guidelines states:

"A transport impact statement is a brief statement outlining the transport aspects of the proposed development. The intent of the statement is to provide the approving authority with sufficient transport information to confirm that the proponent has adequately considered the transport aspects of the development and that it would not have an adverse transport impact on the surrounding area.

It is envisaged that the transport impact statement will generally be from two to three pages up to several pages in length, but this will depend upon the number and nature of any specific issues that need to be addressed.

It is expected that most, if not all, of the information to be provided will be of a non-technical nature, that is, will not require input from a specialist in transportation planning or traffic engineering. This will, however, depend upon the nature of the specific issues to be addressed and specialist technical input may be required on occasions."

The preparation of a TIS in accordance with the WAPC Guidelines is consistent with, and ensures compliance with, Clause 67(t) of the Planning and Development (Local Planning Schemes) Regulations 2015 (3), i.e.:

In considering an application for development approval the local government is to have due regard to the following matters to the extent that, in the opinion of the local government, those matters are relevant to the development the subject of the application — (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.

Executive summary

Proposal

A proposed restaurant, bar and kiosk on Lot 501 street no 5 Mill Point Rd (eastern end of Millers Pool Carpark 11) with an internal restaurant/ bar floor area of 180 m^2 and alfresco area of 80 m^2, as shown in the Development Drawings included in **Appendix A**.

Forecast Impact

The following diagram is based on the WAPC traffic impact definitions and shows the assessed forecast impact of the development in this context, i.e., Low.

PM/ Evening Max: 13
1 trip every 4 min 37 secs

Mid-day Max: 2
1 trip every 30 mins

Trips per hour	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115	120
Impact Description	Negligible		Low	<< Moderate >>																		High >>			
1 trip every mm:ss	00:00	12:00	06:00	04:00	03:00	02:24	02:00	01:43	01:30	01:20	01:12	01:05	01:00	00:55	00:51	00:48	00:45	00:42	00:40	00:38	00:36	00:34	00:33	00:31	00:30
Trips per 2 minutes	0.0	0.2	0.3	0.5	0.7	0.8	1.0	1.2	1.3	1.5	1.7	1.8	2.0	2.2	2.3	2.5	2.7	2.8	3.0	3.2	3.3	3.5	3.7	3.8	4.0

Figure 1 – Assessed Forecast Impact of proposed development in terms of additional trips in each peak hour and the WAPC definition of Low, Moderate and High Impacts

Refer **Section 6:** Daily traffic volumes and vehicle types of this TIS report for determination of these forecast volumes.

Summary of recommended remedial measures

This TIS has not identified any warrant for remedial measures as a result of the proposed development.

2 Proposed development

- **Show on a plan/ describe the proposed development land uses and their quantities (for example, retail floorspace, number of dwellings);**
- **Comment on any existing uses or changes of use;**
- **Show on a plan/ describe the development's relationship/context with the surrounding land uses.**

Detailed drawings of the proposed restaurant, bar and kiosk are included in **Appendix A**. These show an internal floor area of 180 m^2 for the restaurant and bar with an additional 80 m^2 of alfresco seating.

The existing site is a greenfield site that was previously part of a car park before being demolished in October 2016 as part of the redevelopment of the South Perth Foreshore. It is now located at the western end of a new car park (Miller Pool No 11), as shown in Aerial Photograph 1 below.

Aerial Photograph 1 – Lot 125 (development site) at the eastern end of Millers Pool Carpark 11

The surrounding land uses are predominantly residential to the south and recreational on the east (foreshore) side.

3 Vehicle access and parking

- **Show on a plan/ describe the vehicle access arrangements to the development from the frontage road(s);**
- **Show the locations and indicate the number of proposed public and/or private car and disabled parking spaces and the provision for set down, pick up and taxis (if appropriate);**
- **Include details of parking management**

Vehicle access to and from the development site is via the Millers Pool Carpark and its access to and from Mill Point Rd, as shown in Figure 2 below.

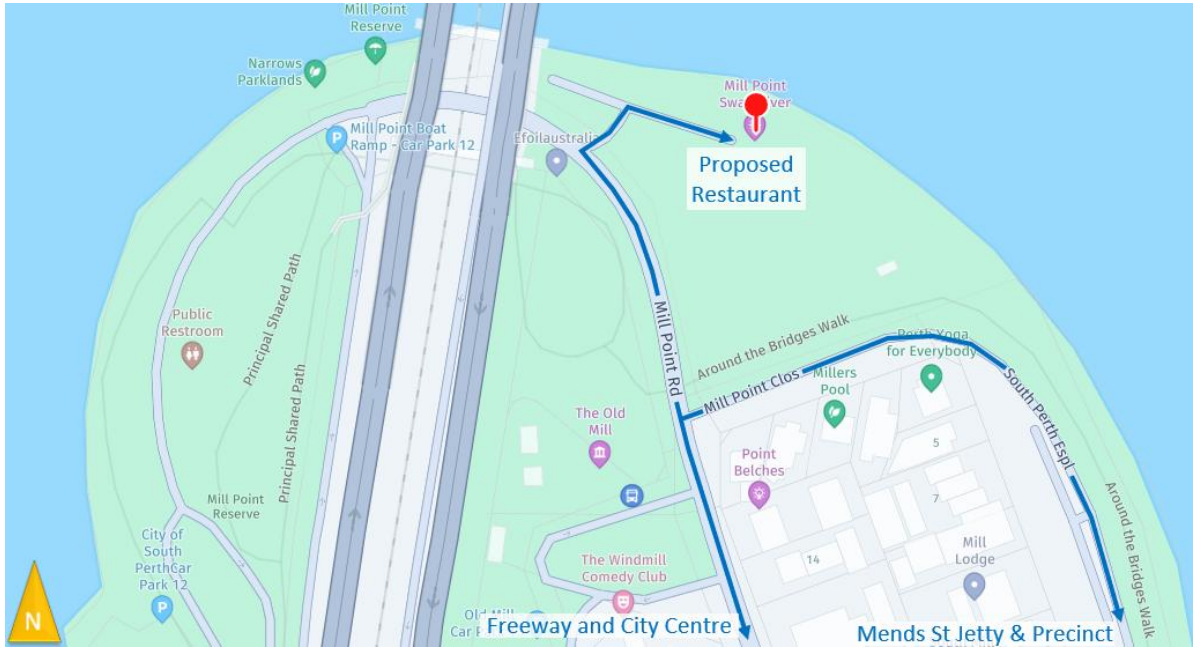


Figure 2 – Vehicular access routes to and from the proposed restaurant, bar and kiosk

The development is intended to be visited primarily by pedestrians already in the area due to an excellent network of pedestrian paths, cycle paths and ferry services (refer **Sections 8, 9** and **10**).

Patrons who drive to the proposed restaurant, bar and kiosk are expected to utilise the existing Millers Pool Carpark adjacent to the site or existing pay on-street parking bays along South Perth Esplanade. Drop-off and pick-up can occur within the car park using a service bay to turn around.

A disabled parking space within the Millers Pool Carpark 11 adjacent to the proposed restaurant, bar and kiosk will be retained as part of the proposal. Two existing bays in the southeast corner of the Millers Pool Carpark 11 will be marked for service vehicles only (refer **Section 4**).

The existing Millers Pool Carpark 11 is closed (locked) via a gate at its access point with Mill Point Rd between 10 PM and 5 AM. This will require adjusting to suit the restaurant, bar and kiosk's opening times (refer **Section 5**) although it is also noted that the activity created and oversight of the carpark by the restaurant, bar and kiosk is likely to address the antisocial behaviours that resulted in the night time closure of the carpark.

The Millers Pool Carpark 11 contains 65 parking bays in total (57 regular, 2 disabled, 2 authorised vehicles only and 5 small car bays).

4 Provision for service vehicles

- **For the non-residential developments (or the non-residential components of mixed use developments), briefly describe/ show the access arrangements and on-site loading or unloading facilities for service vehicles;**
- **For residential developments, discuss/ show the access to the site for rubbish collection and emergency vehicles**

The proponent has indicated that the restaurant, bar and kiosk will be serviced by small service vehicles, i.e. the Small Rigid Vehicle (SRV), as described in Australian Standard AS 2890.2 (4). This vehicle is 6.4 m long and 2.3 m wide with a wheelbase of 3.8 m, turning radius of 7.1 m and clearance height of 3.50 m. The SRV represents light trucks to a maximum load capacity of 4.0 t and typically having a single rear axle and either single or dual tyres. AS 28902 states: The SRV is the design vehicle which should be adopted where the service area is to be used by small commercial vehicles only.

Two SRV bays will be provided within the eastern end of the Millers Pool Carpark adjacent to the 'Deliveries and Services Hardstand and Service Doors', as shown in Figure 3 on the following page. Note that only the Service Bay furthest from the restaurant, bar and kiosk can be revered into by an SRV. The Service Bay closest to the restaurant, bar and kiosk will be used by staff in a regular vehicle (car).

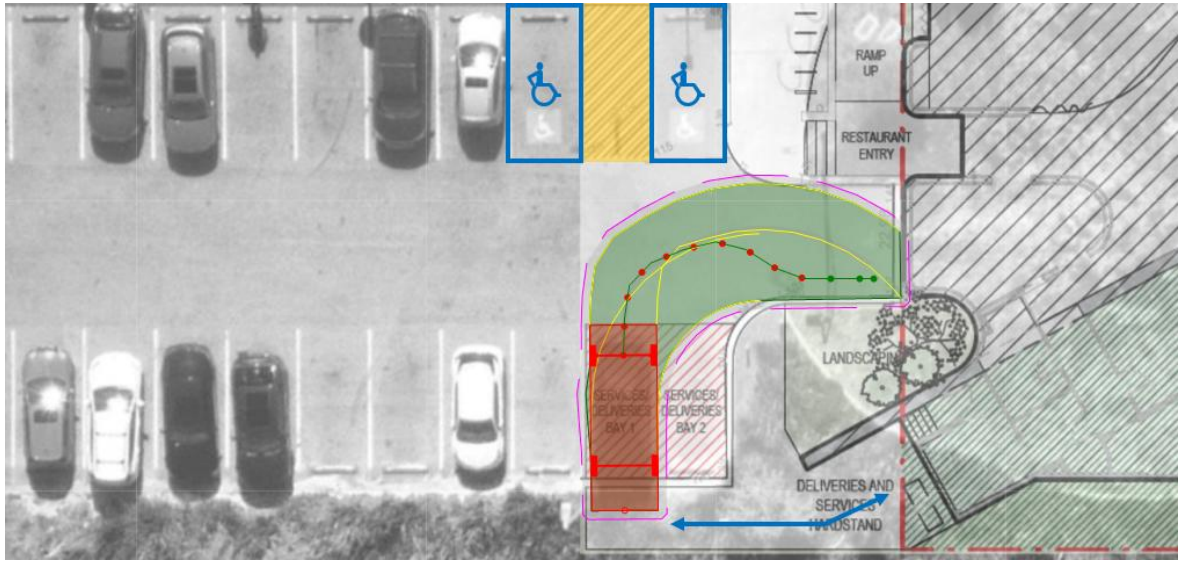


Figure 3 – Swept path of SRV reversing into service bay

5 Hours of operation

For non-residential developments only, outline the proposed hours of operation.

Restaurant & Bar: Tuesday – Sunday 11.30 AM – before midnight.

Kiosk: 5.30 AM – 7.00 PM.

6 Daily traffic volumes and vehicle types

- **For non-residential developments, provide where possible a rough estimate of the likely daily, and/ or peak, traffic volumes generated by the development, split by types of vehicle, for example, car, light commercial or heavy commercial.**

Note that this is not intended to be a comprehensive assessment carried out by a transport specialist but a rough guide only to the amount and type of traffic likely to be generated.

The restaurant, bar and kiosk is expected to generate up to 13 vehicle trips during its busiest hour, based on data from Gogo's Indian Restaurant (35 Mends St), The Italian on Mends St Restaurant (time and days of the week) and ITE Trip Generation database (5) . Popular times are likely to be 11 AM – 3 PM and 4 PM to 10 PM, as shown in Figure 4 below.

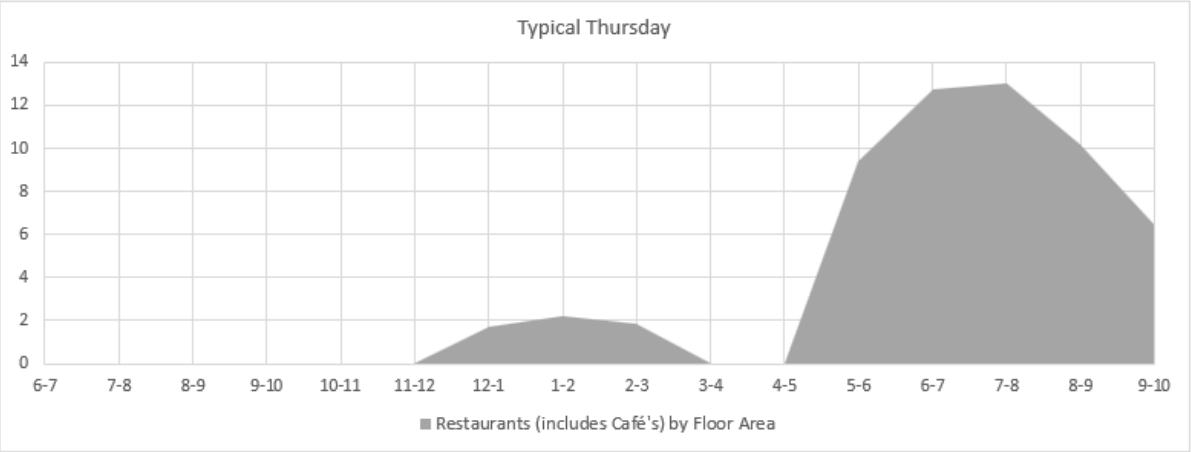


Figure 4 – Forecast trip generation and hourly volumes for the proposed restaurant, bar and kiosk on a busy weekday

The restaurant, bar and kiosk will be attended by patrons predominantly in light vehicles, e.g. personal cars, utes, rideshares and taxis. Larger vehicles are those associated with servicing (refer **Section 4**).

7 Traffic management on frontage streets

- **Describe/ show the existing traffic management on the roads fronting the development and for 100 metres either side of the development.**
- **Information to include:**
  - **road width/ number of lanes;**
  - **footpaths/ cycleways;**
  - **any parking provision or restrictions;**
  - **posted traffic speed;**
  - **intersections and type of control (for example, give way, roundabout**
  - **accesses/ driveways to properties**

The Millers Pool Carpark 11 contains 65 parking bays in total (57 regular, 2 disabled, 2 authorised vehicles only and 5 small car bays). Parking Fees apply 8 AM to 10 PM Daily and it is locked between 10 PM and 5 AM Daily. The first hour is free with 'Pay by Plate' or the 'EasyPark' app (Location 30132). Fees apply for parking beyond one hour ($2.60 per hour, maximum $9.00).

The access driveway between the carpark and Mill Point Rd is a minimum width of 6.3 m and suitable for all anticipated vehicles, including the waste collection vehicles that currently service the car park and foreshore bins.

Mill Point Rd is an 8.5 m wide sealed and kerbed carriageway with a single marked lane in each direction and is subject to the default urban speed limit of 50 km/h. It contains several humps and plateaux's to maintain lower speed, including one adjacent to the car park access.

There are no access driveways in the vicinity of Millers Pool Carpark 11.

There is an excellent network of shared paths and other facilities for pedestrians and cyclists to and from the proposed restaurant, bar and kiosk , as well as other attractions in the locality (refer **Sections 8, 9** and **10**).

8 Public transport access

- **Identify/ show the nearest bus and train routes to the development and the locations of the nearest bus stops and train stations.**
- **Describe/ show briefly the pedestrian and cycle links between the development and the bus stops and train station**

The nearest bus stop to the site is the PTA Bus Stop '11824' on Mill Point Rd near the Old Mill (a walking distance of 200 m or 1 minute). This is served by PTA Bus Route 35, travelling at frequent and regular times between the Old Mill and Elizabeth Quay Bus Station.

The nearest train route to the proposed restaurant, bar and kiosk is the Perth-Mandurah Rail line accessed via the nearest train station at Elizabeth Quay (2kms / 28 minute walk), as shown in Figure 5 below.

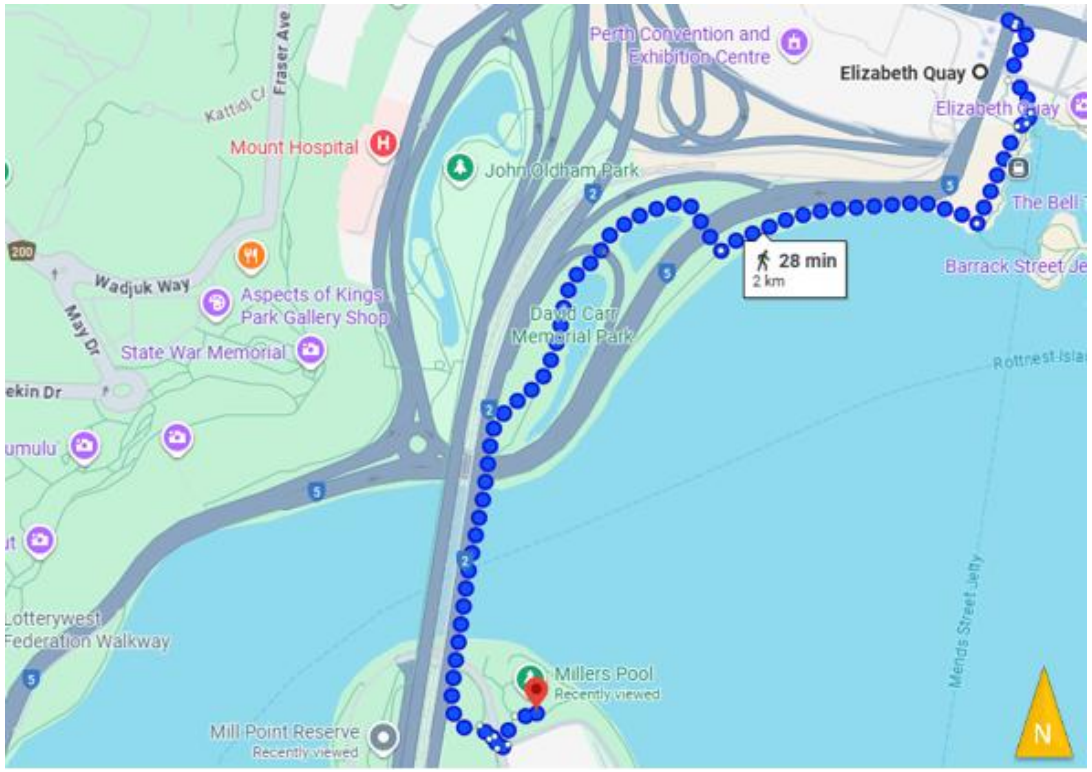


Figure 5 – Assessed walking route between proposed restaurant, bar and kiosk and Elizabeth Quay Bus and Train Station

9 Pedestrian access

- **Describe/ show the existing pedestrian facilities, for example, footpaths, signalised crossings, within the development (if any).**
- **Describe/ show any proposed pedestrian facilities within the development.**
- **Describe/ show the pedestrian facilities on the roads surrounding the development. Outline any proposals by the applicant to improve pedestrian access.**

There are a number of paths leading to the proposed restaurant, bar and kiosk as well as in the vicinity of the restaurant, bar and kiosk, as shown in Aerial Photograph 2 below. These paths link the restaurant, bar and kiosk with the Old Mill, including its Bus Stop, the Elizabeth Quay Train and Bus Station (via the Narrows Bridge PSP) and the Mends St Precinct, including the Mends St Jetty and Ferry Service to Elizabeth Quay.

Aerial Photograph 2 – Showing paths in the vicinity of the proposed restaurant, bar and kiosk

The network of paths and pedestrian crossings is of a very high standard and there is no warrant to change these.

10 Cycle access

- **Describe/show any existing cycle facilities, (for example, cycle parking) within the development.**
- **Describe/show any proposed cycle facilities within the development.**
- **Describe/show any existing cycle facilities on the roads surrounding the development. Outline any proposals by the applicant to improve cycle access.**

The Long Term Cycle Network (LTCN) includes a Primary route past the proposed restaurant, bar and kiosk that links with Elizabeth Quay Train and Bus Station via the Narrows Bridge PSP as well as the Mends St Precinct via The Esplanade PSP. This provides a link to the Mends St Ferry Services as well as Perth Zoo and South Perth in general. The LTCN in the vicinity of the proposed restaurant, bar and kiosk is shown in Figure 6 below.

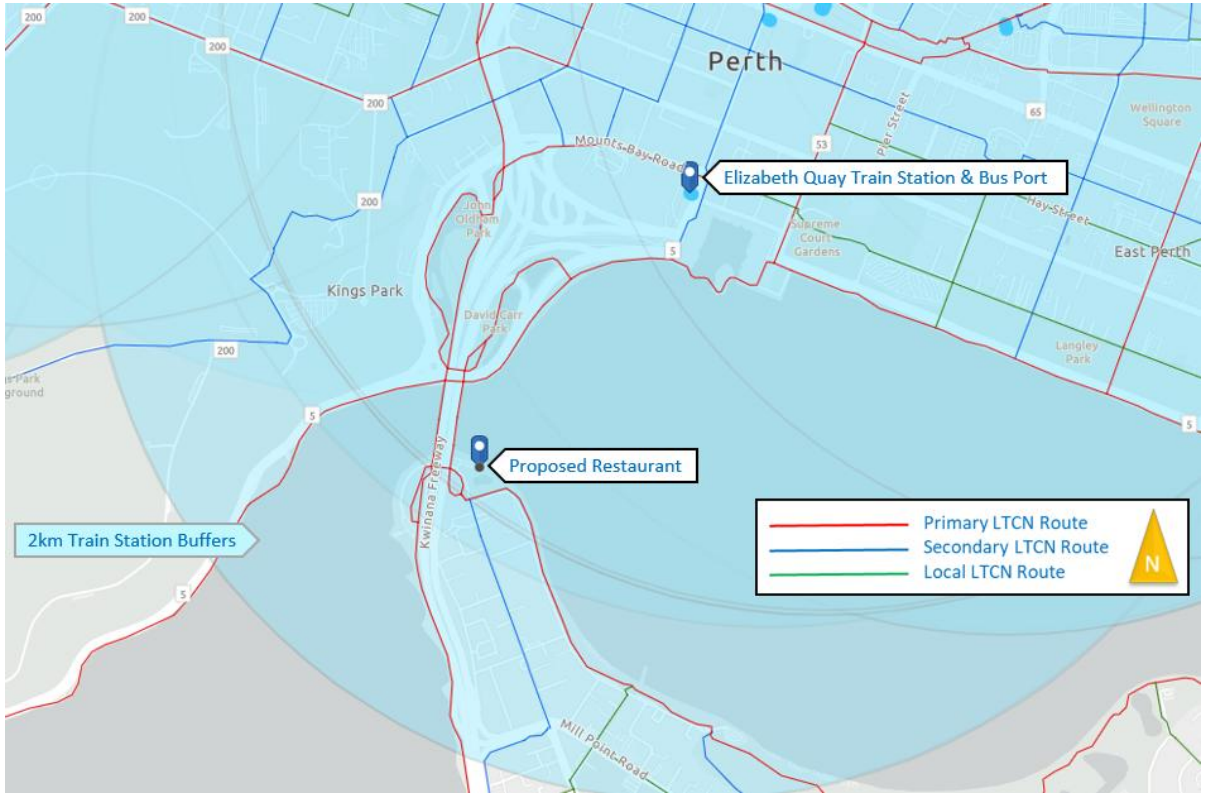


Figure 6 – Long Term Cycle Network, Train Station and 2 km Buffer in vicinity of the proposed restaurant, bar and kiosk

11 Site specific issues

- **Provide details of any site specific transport issues.**

Some flexibility is required here to address these specific issues, as they will be different for each development. The general approach should be along the following lines :

- **Describe any transport issues specific to the development, as discussed and agreed with the approving authority.**
- **Demonstrate that these will not have an adverse impact on the surrounding area, or, if they may, propose remedial measures to redress these impacts.**

Alternatively, the specific issues may relate to demonstrating that the development satisfies a certain policy objective, for example, that a development close to a major train station provides a high level of access to the station and would encourage increased use of the train.

No site specific issues have been identified.

12 Safety issues

- **Identify and discuss any existing or potential safety issues. Where appropriate, suggest remedial measures.**

The previous sections may have identified existing or potential safety issues that should be expanded upon. Examples of possible safety issues include:

- **an access to the development crossing a busy footpath, especially one used by school children;**
- **the development increasing traffic through a busy priority intersection;**
- **direct access onto a busy road; and**
- **the need for pedestrians/cyclists to cross a busy road to access the development.**

This section should also include a discussion of possible measures to address these issues

A review of the reported crash record for the five-year period ending 31 Dec 2024 for the section of Mill Point Rd in the vicinity of the Millers Pool Carpark 11 access and The Esplanade intersection has revealed there has been 1 reported property damage only crash during this time. It involved a car reversing into another car at low speed at the car park access at 8 PM on a Saturday, as shown in Figure 7 below.

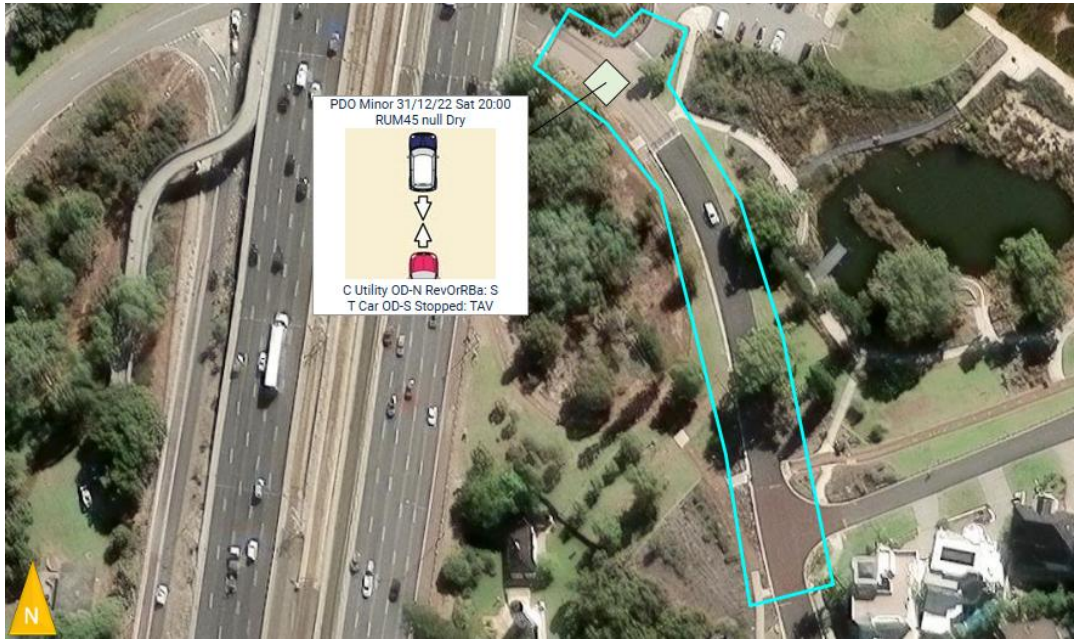


Figure 7 – Crash record location and details, including assessment area

An onsite assessment of the required sight lines at the Millers Pool Carpark 11 access driveway in accordance with AS 2890.1 (4) has indicated that the Minimum Stopping Sight Distance required in both directions of 45 m, measured 2.5 m back from Mill Point Rd, is met.

The onsite assessment and crash record does not raise any concerns regarding the safety of the roads, intersection or access with the proposed restaurant, bar and kiosk.

References

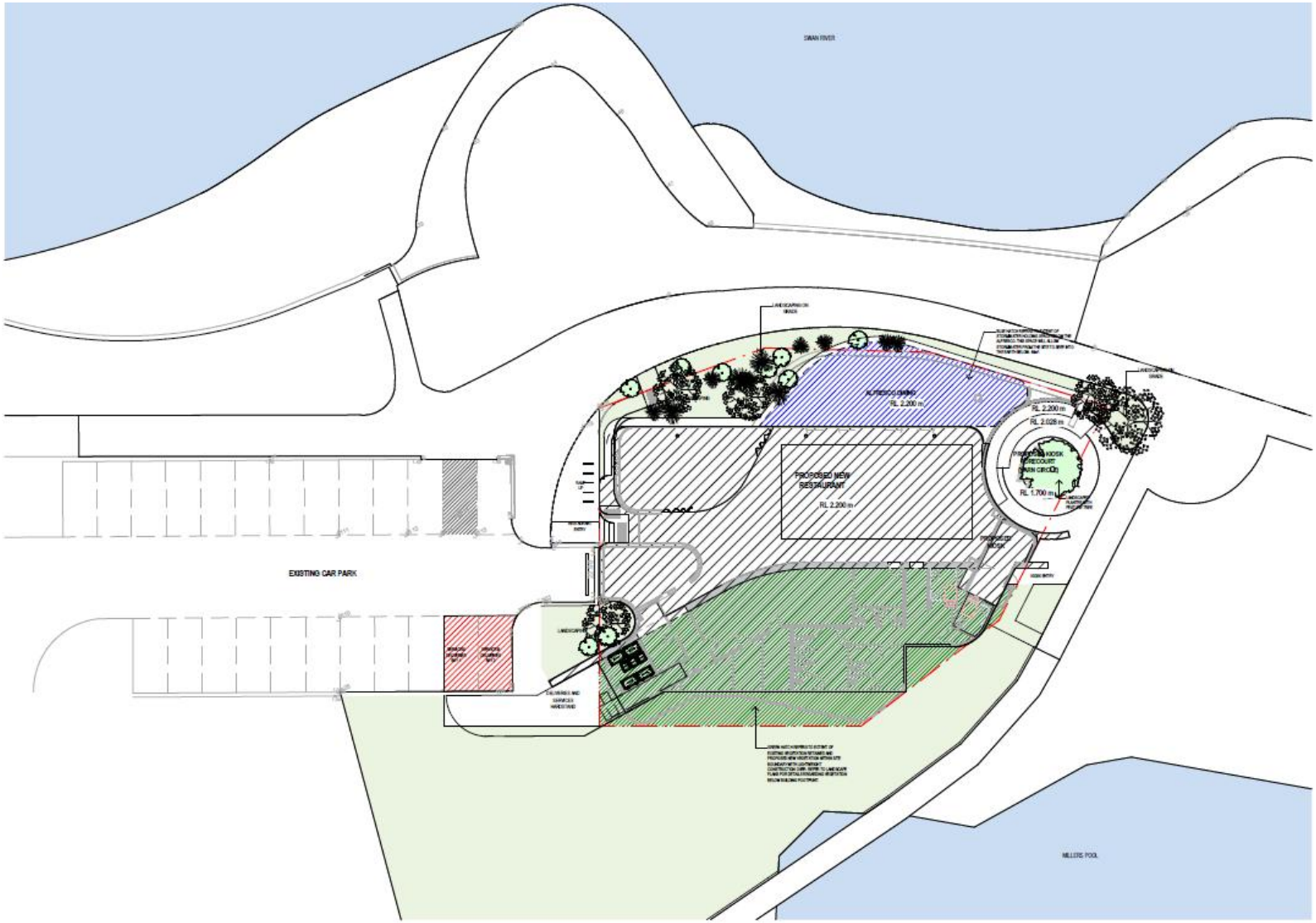
1. **Austroads.** *Guide to Traffic Management Part 12: Integrated Transport Assessments for Developments.* Austroads. Sydney, NSW : Austroads Ltd, April 2020. p. 113, Guide to Traffic Management. ISBN 978-1-925854-86-2.

2. **Western Australian Planning Commission.** *Transport Impact Assessment Guidelines.* Department of Planning, Government of Western Australia. Perth, Western Australia : Western Australian Planning Commission, August 2016. p. 182, Revised August 2016. The current version of the TIA guidelines (August 2016) has been endorsed by the WAPC.

3. **Government of Western Australia.** *Planning and Development (Local Planning Schemes) Regulations 2015.* Perth : Government of Western Australia, As at 01 Jul 2016. p. 205. Version 00-d0-02.

4. **Standards Australia.** *AS/NZS 2890.1 - 2004 Parking facilities Part 1: Off-street car parking.* Sydney : Standards Australia/ Standards New Zealand, 2004. p. 77. (Incorporating Amendment No 1). ISBN 0 7337 5742 1.

APPENDIX A Relevant development drawings

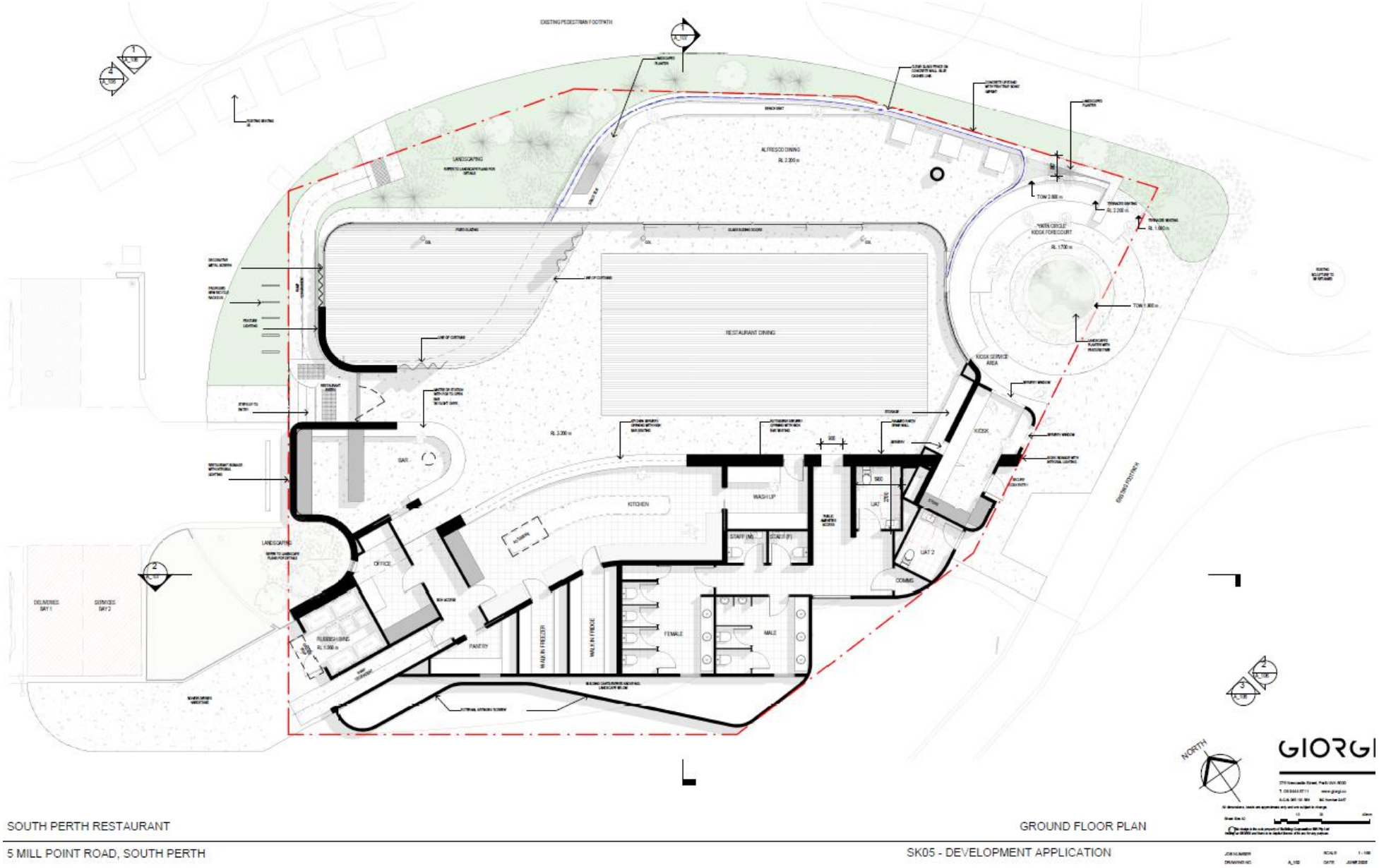


SOUTH PERTH RESTAURANT

SITE PLAN

5 MILL POINT ROAD, SOUTH PERTH

SK05 - DEVELOPMENT APPLICATION

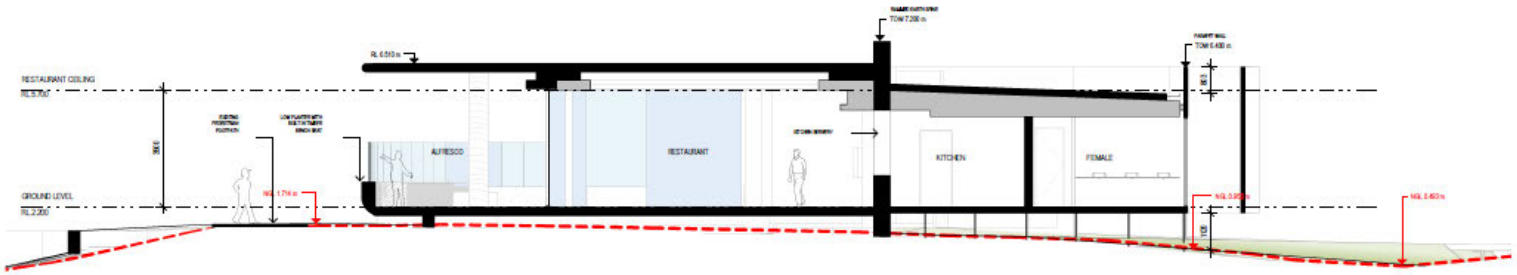


SOUTH PERTH RESTAURANT

GROUND FLOOR PLAN

5 MILL POINT ROAD, SOUTH PERTH

SK05 - DEVELOPMENT APPLICATION



1 A_102 SECTION 1
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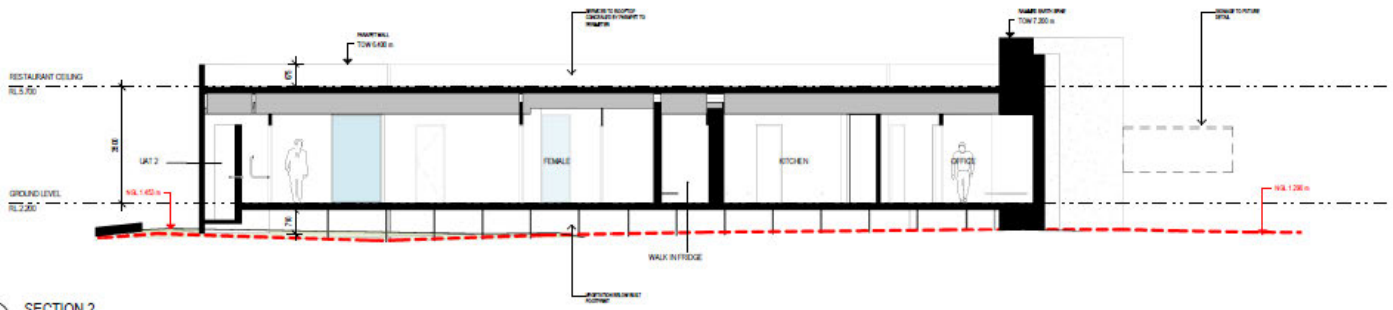

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GIORGI

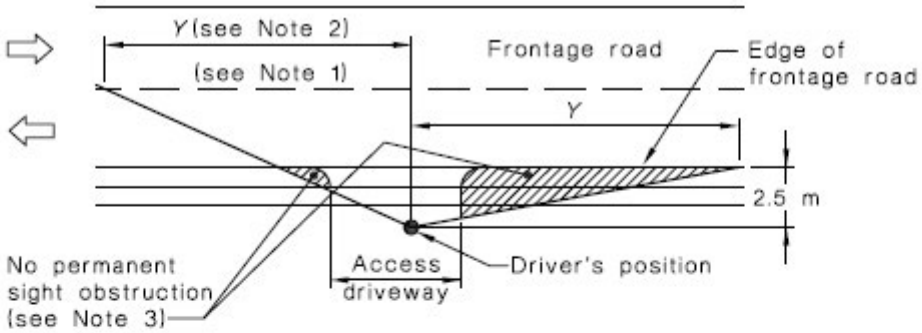
SOUTH PERTH RESTAURANT

SECTIONS

5 MILL POINT ROAD, SOUTH PERTH

SK05 - DEVELOPMENT APPLICATION

APPENDIX B Sight distance measurements



Frontage road speed (Note 4) km/h	Distance (Y) along frontage road m		
	Access driveways other than domestic (Note 5)		Domestic property access (Note 6)
	Desirable 5 s gap	Minimum SSD	
40	55	35	30
50	69	45	40
60	83	65	55
70	97	85	70
80	111	105	95
90	125	130	Use values from 2nd and 3rd columns
100	139	160	
110	153	190	

NOTES:

1 Centre-line or centre of road (undivided road), or right hand edge of right hand through lane (divided road).

2 A check to the left is not required at a divided road where the median is wide enough to shelter a vehicle leaving the driveway.

3 Parking on this side of the frontage road may need to be restricted on either side of the driveway so that the sight distance required by the above table to an approaching vehicle is not obstructed.

4 This is the posted or general speed limit unless the 85th percentile speed is more than 5 km/h above the limit in which case the tabulated speed nearest the 85th percentile shall be adopted.

5 The values in the table apply only to left turn and right turn manoeuvres into two-way roads up to four lanes wide and one-way streets regardless of width, either for a 5 s gap, desirable at lower frontage road speeds, or minimum stopping sight distance based on 2 s reaction time.

Crossing manoeuvres (e.g. from an access opposite the steam of a T-junction) over four lanes or more, and turning manoeuvres into a six lane two-way road would require longer gaps unless there was a median wide enough to store a vehicle and allow a two stage manoeuvre.

6 These distances are based on stopping sight distances with reaction time of 1.5 s for traffic approaching along the frontage road and are applicable to a frontage road speed of up to 80 km/h only. Wherever practicable sight distance provided at domestic property accesses should meet the values given in the second or third columns of the Table.

7 When checking sight distance the driver's eye height and the height of the object (approaching vehicle) are to be taken as 1.15 m above the road surface.

FIGURE 3.2 SIGHT DISTANCE REQUIREMENTS AT ACCESS DRIVEWAYS

Figure 8 – Sight Distance Requirements at Access Driveways (Source: Figure 3.2 of AS 2890.1 (4))

APPENDIX C WAPC Transport Impact Statement Checklist

Checklist for a transport impact statement for individual development

- Mark ☒ for items for which information is provided.
- Leave ☐ if the item is not appropriate and enter reason in comment column.
- Provide brief comments on any relevant issues.
- Provide brief description of any proposed transport improvements, for example, new bus routes or signalisation of an existing intersection.

ITEM	PROVIDED	COMMENTS
Proposed development	☒	**Section 2**, page 5.
regional context	☐	Not relevant.
existing land uses	☒	Page 5.
proposed land use	☒	Page 5 and Appendix A.
context with surrounds	☒	Aerial Photograph 1, page 5.
Vehicular access and parking	☒	**Section 3**, page 6.
access arrangements	☒	Figure 2, page 6.
public, private, disabled parking set down/pick up	☒	Page 6.
Service vehicles (non-residential)	☒	Section 4, pages 7 and 8.
access arrangements	☒	Figure 2, page 6 and Figure 3, page 8.
on/off-site loading facilities	☒	Figure 3, page 8.
Service vehicles (residential)	☐	**NA**
rubbish collection and emergency vehicle access	☐	NA
Hours of operation (non-residential only)	☒	Section 5, Page 8.
Hours of operation	☒	Restaurant & Bar Tue-Sun 11.30 AM to before midnight, Kiosk 5.30 AM – 7.00 PM.
Traffic volumes	☒	**Section 6**, page 9.
daily or peak traffic volumes	☒	Figure 4, page 9.
Type of vehicles (for example, cars, trucks)	☒	Page 9.
Traffic management on frontage streets	☒	**Section 7**, page 10.
Frontage streets details	☒	Page 10
Public transport access	☒	**Section 8**, page 11.
nearest bus/train routes	☒	Figure 5, page 11 & Figure 6 on page 13.
nearest bus stops/train stations	☒	Figure 5, page 11 & Figure 6 on page 13.
pedestrian/cycle links to bus stops/ train station	☒	Figure 5, page 11, Aerial Photograph 2 on page 12 & Figure 6 on page 13.
Pedestrian access/ facilities	☒	**Section 9**, page 12.
existing pedestrian facilities within the development (if any)	☐	NA
proposed pedestrian facilities within development	☐	NA
existing pedestrian facilities on surrounding roads	☒	Aerial Photograph 2 on page 12.
proposals to improve pedestrian access	☐	N A

ITEM	PROVIDED	COMMENTS
Cycle access/ facilities	☒	**Section 10**, page13.
existing cycle facilities within the development (if any)	☐	NA
proposed cycle facilities within development	☐	NA.
existing cycle facilities on surrounding roads	☒	Aerial Photograph 2 on page 12 & Figure 6 on page 13.
proposals to improve cycle access	☐	NA
Site specific issues	☐	**Section 11**, page 14.
Describe any site specific issues	☐	NA
Safety issues	☒	**Section 12**, page 15.
identify issues	☐	None.
remedial measures	☐	None warranted.

Proponent's name:			
Company:	Giorgi	**Date:**	

Transport assessor's name:	David Wilkins		
Company:	i3 consultants WA	**Date:**	19/09/2025

WASTE MANAGEMENT PLAN

Project Type:	**Restaurant and Kiosk**
Client:	**Giorgi Group**
Project Address:	**5 Mill Point Road, South Perth**
Date:	**September 2025**

Prepared by Gordon Houston
(in association with Dallywater Consulting)

DALLYWATER CONSULTING

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This Version 2 – 25 September 2025

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1 EXECUTIVE SUMMARY

Giorgi Group is applying to the City of South Perth (the "City") to develop a property known as 5 Mill Point Road, South Perth. The development consists of a restaurant, kiosk and associated al fresco area.

As part of the Development Approval process, the proponent is required to submit a Waste Management Plan (WMP) for the development to the City. Giorgi Group employed the services of waste specialists to investigate the City's requirements in this regard and to develop this WMP.

Based on the use of contemporary waste generation rates, it is proposed that the following initiatives will be implemented for the solid waste servicing at 5 Mill Point Road, South Perth:

- Use of 660 litre bins for the general waste and recycling material generated by the facility;
- Three collections per week of the general waste and twice-weekly collections of the recycling material.

This will result in the following requirements:

- General Waste – four 660 litres bin serviced three times per week; and
- Recycling – two 660 litre bins serviced two times per week.

An area has therefore been provided to accommodate six 660 litre bins within the bin store at the rear of the premises.

Review

It should be noted that the waste generation rates used here-in are considered to be reasonably conservative and the amount of material in the bins before servicing, the bin sizes and their servicing frequencies should be reassessed on a regular basis to ensure the most efficient arrangements are in place.

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DEFINITIONS

660/1100: A 660 or 1100 litre garbage or recycling receptacle used by domestic residences and commercial premises within a local government municipality to deposit materials to be removed by the local government or a collection contractor.

General Waste: Any recyclable and non-recyclable discarded solid, semi-solid, liquid or contained gaseous materials not accepted by a materials recovery facility or recycling or re-use opportunity.

Owner/Business Management: The selected or nominated legal entity responsible for managing the soft services of the built structure (i.e. waste management, cleaning, landscaping, security and other similar human-sourced services) on behalf of the owners and tenant of the facility.

Recycling: Any material accepted by a materials recovery facility or recycling or re-use opportunity.

Waste Minimisation: A process to minimise the amount of waste requiring disposal via hierarchical activities such as behaviour and product modification, waste avoidance, reduction, reuse and recycling.

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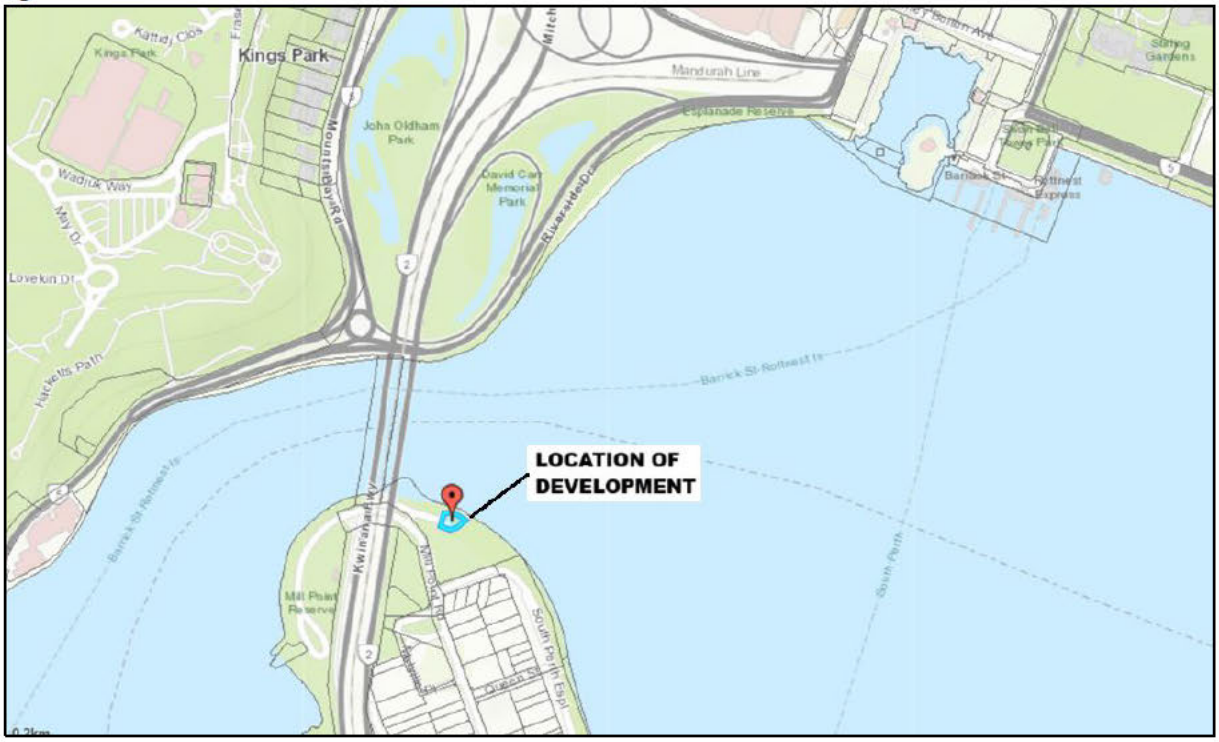
2 INTRODUCTION

2.1 The Development

Giorgi Group is applying to the City of South Perth (the "City") to develop a property known as 5 Mill Point Road, South Perth. The development consists of a restaurant, kiosk and associated al fresco area.

As part of the Development Approval process, the proponent is required to submit a Waste Management Plan (WMP) for the development to the City. Giorgi Group employed the services of waste specialists to investigate the City's requirements in this regard and to develop this WMP.

Figure 1: Location Plan



Source: PlanWA 2024

Table 1: Type and Size of Activities

Commercial Activity	Area (m²)
Restaurant Dining Areas	132.75
Al Fresco Dining Area	25.00
Total Public Spaces	**157.75**

A site plan of the development is included on the following page.

2.2 Onsite Waste Management

The following provisions have been made for waste and recycling on the site:

- **Restaurant and Al Fresco**
  - Patrons will have access to waste and recycling bins in the al fresco area of the facility.
  - Waste and recycling will be collected by table staff in the restaurant and al fresco area.
  - Waste and recycling material will be taken to Back of House (BOH) bins and then to larger bins stored at the rear of the facility.
- **Bin Storage**
  - A bin store for the storage of the larger bins has been provided at the rear of the facility, with direct access to a collection point in the adjacent carpark.

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- **Diversion**
  - Sufficient space exists within the BOH and bin store to separate cardboard and other recyclables (such as CDS containers) from the main comingled recycling.

- **Waste Collection**
  - The facility operators will use private collection contractors to service the bins.
  - Provision is available in the public carpark area for a rear-load collection vehicle to be able to reverse to the kerb in delivery bays immediately adjacent to the Deliveries/BOH recess of the facility to service the bins.

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Figure 2: Site Plan

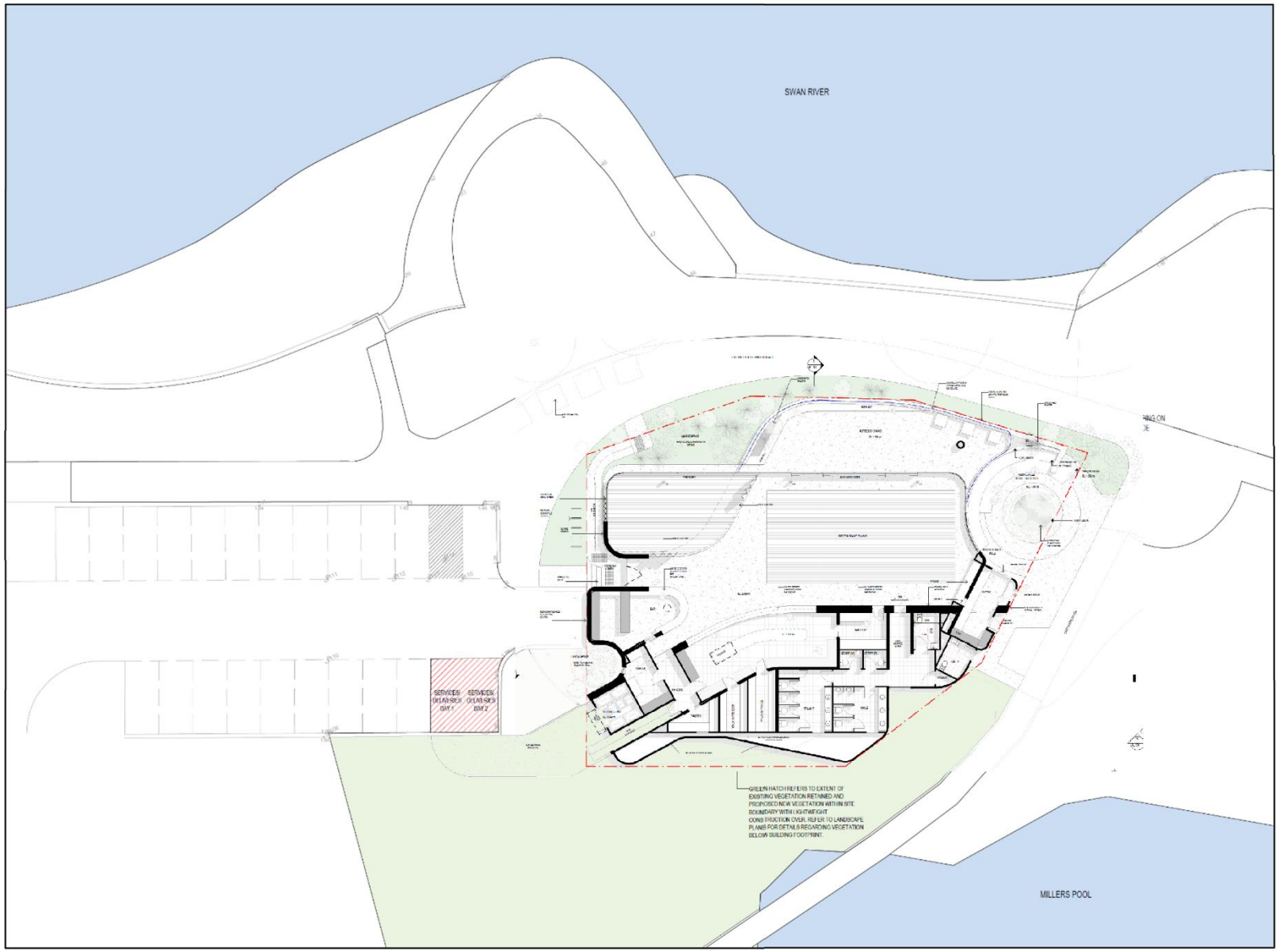

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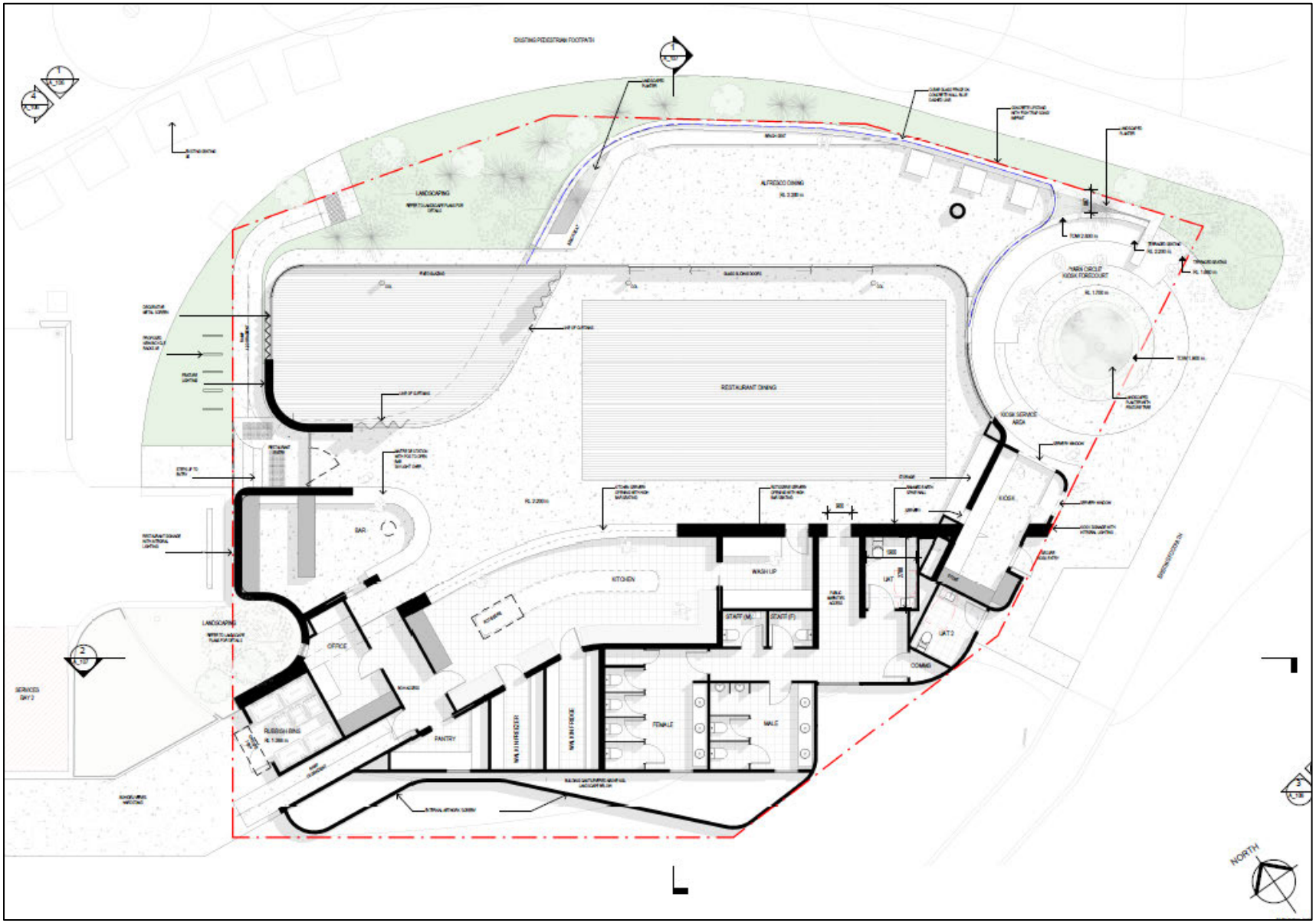
Figure 3: Floor Plan



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3 LOCAL GOVERNMENT WASTE MANAGEMENT REQUIREMENTS

3.1 Waste Management Guidelines

The waste generation rates for the development are to be as per the City's *Guidelines for Waste Management Plans- New Multi-residential Developments.*

3.2 Waste Generation

The requirements for the provision of waste storage for this development are as follows:

- Waste and recycling should be collected in 660 or 1100 litre bins.
- Waste and recycling bins are to be provided in sufficient numbers to cater for the waste generation requirements detailed in the following tables.

Based on the Guidelines, the waste generation rates for the activities are detailed below. For the al fresco areas, where the patronage is less concentrated than within the restaurant areas, the generation rates have been halved.

Table 2: Waste Generation Rates

Commercial Activity	Area (m^2)	Waste/100m^2/day	Recycling /100m^2/day
		m^3	m^3
Restaurant Dining Areas	132.75	0.66	0.20
Al Fresco Dining Area	25.00	0.33	0.10
TOTAL	**157.75**		

3.3 Bin Storage Requirements

The City's requirements for bin storage are as follows:

- Should be adequate to house all bins.
- Be provided with a permanent water supply and drainage to sewer with washdown facilities.
- Be out of sight and well screened from public areas.
- Designed to be consistent with the development.
- Be easily accessible to allow for the removal of the receptacles.

3.4 Bin Presentation

- All bins are to be serviced directly from the bin store;
- Bins are to be retrieved from and returned to the bin store by collection operators as soon as they have been serviced; and
- Bins are to be accessible such that there is unobstructed access for the collection vehicle and the vehicles' operators at the time of servicing.

3.5 Waste Capacity

Based on the above requirements, the weekly storage capacities required for waste and recycling from the proposed development are detailed in the following table. Note that the generation has been based on a 7-day operation.

Table 3: Estimated Weekly Material Volumes

Commercial Activity	Area	Waste	Recycling	Waste/week	Recycling/week
	(m^2)	m^3/100m^2/day	m^3/100m^2/day	m^3	m^3
Restaurant	132.75	0.66	0.20	6.13	1.86
Restaurant al fresco	25.00	0.33	0.10	0.58	0.18
TOTAL	**157.75**			**6.71**	**2.03**

3.6 Number of Bins

Based on the estimated volumes of materials, the number of waste and recycling receptacles required to cater for the weekly volumes for this development are detailed in the following table. Note that the bin figures have been rounded up.

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Table 4: Required Bin Capacity

	Waste	Recycling
Weekly Generation	**6.71 m^3/week**	**2.03 m^3/week**
Bins/Week		
No. of 660 litre receptacles/week	10.17 (11)	3.08 (4)
No. of 1100 litre receptacles/week	6.10 (7)	1.85 (2)

Based on the calculated generation rates, with weekly waste and recycling collections and using 660 litre bins, eleven waste bins and four recycling bins would be required. If 1100 litre bins are used, seven waste bins and two recycling bins would be required.

3.7 Increased Servicing

Using a private contractor for the bin servicing enables up to daily servicing of the bins. Increased servicing would result in the following requirements for bins:

- With three services per week of the waste bins and two services per week of the recycling, four waste 660s and two recycling 660s would be required.

3.8 Summary

Based on the above, it is proposed that the following initiatives will be implemented for the solid waste servicing at 5 Mill Point Road, South Perth:

- General Waste – four 660 litre bins serviced three times a week; and
- Recycling – two 660 litre bins serviced twice a week.

This will require room in the bin store to accommodate six 660 litre bins and that area is of sufficient size for the storage of those bins.

It should be noted that the waste generation rates used here-in are considered to be reasonably conservative and the amount of material in the bins before servicing, the bin sizes and their servicing frequencies should be reassessed on a regular basis to ensure the most efficient arrangements are in place.

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4 BIN STORAGE AND MANAGEMENT

4.1 Bin Storage

The bin store is located immediately behind the facility's back of house. The location of the bin store is depicted in Figure 5 on the following page.

4.2 Bin Storage Specifications

The bin store meets the City's specifications as follows;

- Is of sufficient size to be able accommodate the receptacles;
- The area is constructed of brick, concrete, corrugated compressed fibre cement sheet or other suitable impervious material;
- The store includes bin wash area including a tap connected to an adequate supply of water and a floor waste connected to the public sewer;
- The floor in the bin store is smooth and impervious and evenly graded to the floor waste; and
- The path of travel from the recess to the rear of the collection vehicles is of sufficient width, relatively level and without steps, allowing for easy and safe retrieval and return of the bins.

4.3 Amenity

The bin store is designed so that it;

- is well ventilated to prevent escape of smells;
- can be kept thoroughly clean and disinfected; and
- is consistent with the overall aesthetics of the development.

Staff will be required to ensure that the bin lids are closed when not being used to prevent the escape of odours and infestation by insects and rodents. Regular servicing of the general waste bin (which will contain the putrescible material) will also minimise opportunities for food to putrefy, especially during periods of hot weather.

4.4 Bin Presentation and Collection

Collection of bins will be as per the following arrangements:

- All servicing (emptying) of the bins will occur immediately adjacent to the facility, with bins being serviced directly from the bin store.
- Collection vehicle operators will reverse the rear load vehicle to the kerb in the Services/Deliveries Bays located in the immediate vicinity of the bin store, retrieve the bins from the store, transfer them to the collection vehicle, empty them and then return them to the store.

Facility staff will ensure that bins are accessible such that they can be emptied without obstruction by the commercial collection contractors.

4.5 Signage

Best practice facility bin management and material separation signage will be installed to the bin store area.

Figure 5 on the following page shows the location of the bin store and the adjacent servicing location.

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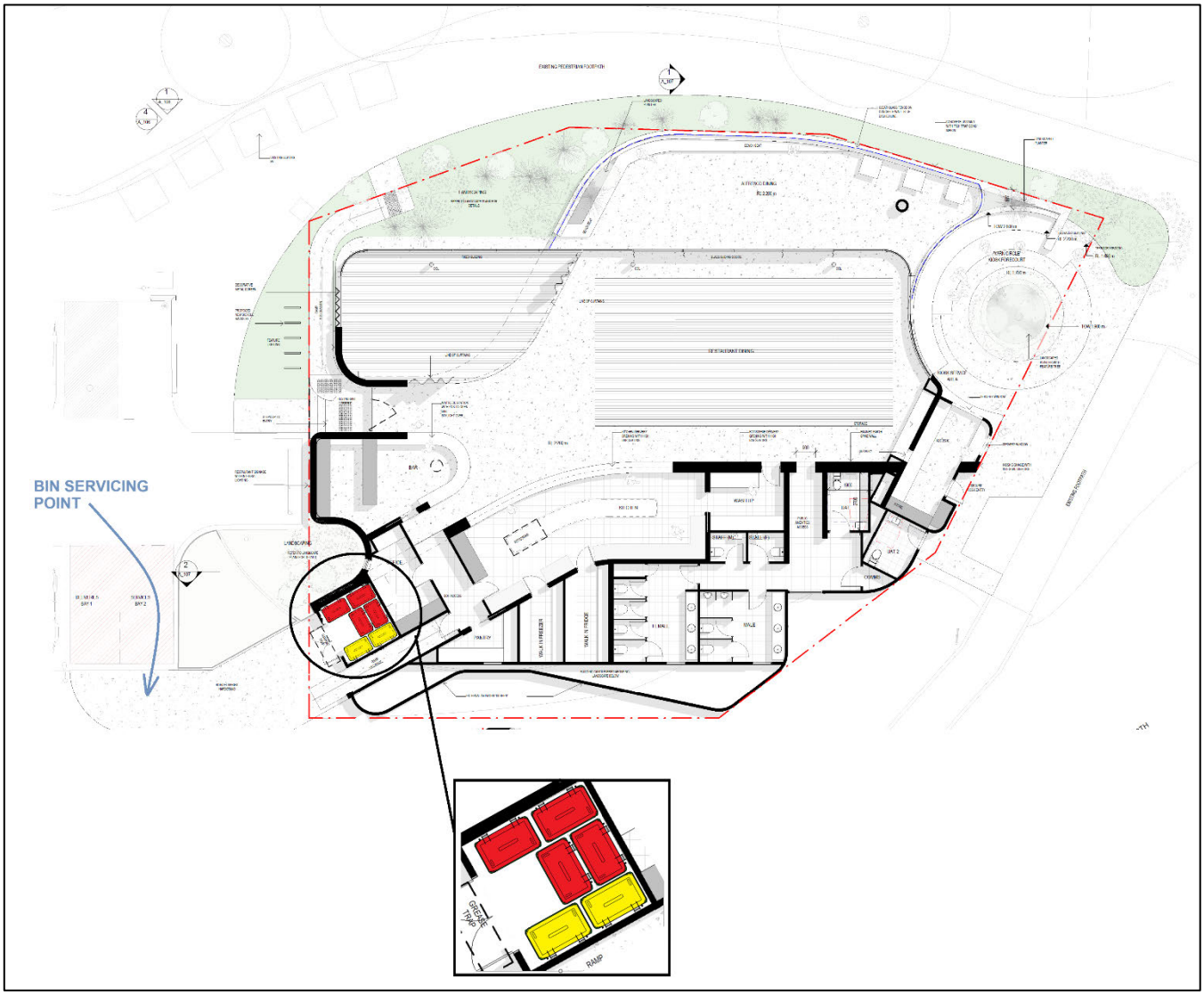
Figure 4: Bin Store, Washdown and Servicing Location



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5 WASTE MANAGEMENT RESPONSIBILITIES

5.1 Building Owners/Management

The building owner will have responsibility for ensuring that this WMP and the actions here-in are adopted and implemented by the facility's occupying entity via reference to this Plan (or an updated version of it) in a lease or other formal instrument, to ensure that the operators of the restaurant meet their waste management responsibilities.

The entity responsible for managing the facility should allocate responsibility for all waste management activities to a nominated person such as a grounds person, cleaner or, staff member. This position will be responsible for the management of waste throughout the complex (including the al fresco areas) and they should be trained in all facets of the role.

5.2 Waste Management Staff

At a minimum, the nominated waste personnel will undertake the following bin servicing and waste management functions;

- Regular inspection and servicing of all public place bins;
- Transfer of material in smaller bins to the larger 660 litre bins;
- Regular cleaning of the bins and the bin store;
- Ensuring access to the bins on collection days; and
- Ensuring timely return of the bins to the bin store after collection.

In addition, the education of incoming restaurant staff will be a priority for these staff.

In the future, with the initial assistance of waste management experts, training of management and staff to implement waste minimisation plans for the development may be explored. The plans could provide recommendations on, and include specific actions for, improving public place recycling and disposal behaviour and the segregation of specific recycling materials from the comingled stream (e.g. CDS containers).

5.3 Facility Saff

All management and staff would be instructed by the managing entity of the various waste requirements. This would include direction on the use of the bin facilities and expectations of the managing entity with regard to any recycling or waste diversion.

It is envisaged that the development of a Waste Minimisation Plan mentioned above would include the production of educational literature suitable for staff (including for inductions) and recommendations for signage relevant to the function of the bin area.

It is suggested that the management responsibilities of the facility include specific lessee and staff responsibilities for management and separation of the waste streams across the facility (e.g. in the lease agreement or other such instrument).

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6 REFERENCES

- City of South Perth – *Guidelines for Waste Management Plans- New Multi-residential Developments*
- WALGA - *Commercial and Industrial Waste Management Plan Guidelines; https://walga.asn.au/awcontent/Web/Documents/Planning/Waste_Management_Plan_Guidelines_Commercial_Industrial_2014-(1).pdf*

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GIORGI

PROPOSED RESTAURANT
MILLERS POOL
SOUTH PERTH

ACOUSTIC ASSESSMENT

AUGUST 2025

OUR REFERENCE: 35173-1-25300

Rochdale Holdings Pty Ltd A.B.N. 85 009 049 067 trading as:
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SOUTH PERTH

Job No: 25300

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APPENDICIES

A Development Plans

B Noise Contour Plot

EXECUTIVE SUMMARY

Herring Storer Acoustics have been commissioned to carry out a preliminary acoustical assessment of noise emissions associated with the proposed restaurant located at Millers Pool, South Perth.

Mechanical services have not been considered at this stage, as selections/design are not known as yet and would form part of the design development phase of the project. An assessment of these noise sources would be expected to be conditions of development approval. It is noted that mechanical services – especially kitchen exhaust fans – will require attention to ensure compliance with the Regulations is achieved, as there are noise sensitive premises that overlook the proposed restaurant.

Noise levels associated with alfresco areas at the proposed development have been calculated to comply with the relevant assigned noise levels under the following conditions:

- External area can be utilised by patrons at all times; however, music is to be at background/conversation levels only.

Noise emissions associated with the proposed restaurant, with the restrictions to operations in place, are such that music would not be a significantly contributing at identified noise sensitive premises, hence, the adjustment for music noise emissions is not applicable in accordance with the Environmental Protection (Noise) Regulations 1997.

1.0 INTRODUCTION

Herring Storer Acoustics have been commissioned, through Giorgi, to carry out an acoustical assessment of noise emissions associated with the proposed development of a restaurant at Millers Pool, South Perth.

The objectives of the study were to:

- Construct a predictive noise model for noise levels of associated with the proposed development.
- Assess the predicted noise levels received at the closest noise sensitive premises, for compliance with the *Environmental Protection (Noise) Regulations 1997*.
- If exceedances are predicted, investigate possible noise control options that will reduce noise emissions to achieve compliance with the regulations.

The work was commissioned to accompany the development application.

2.0 CRITERIA

The *Environmental Protection (Noise) Regulations 1997* stipulate the allowable noise levels at any noise sensitive premises from other premises. The allowable noise level is determined by the calculation of an influencing factor, which is added to the baseline criteria set out in Table 1 of the Regulations. The baseline assigned noise levels are listed in Table 2.1.

TABLE 2.1 – ASSIGNED NOISE LEVELS

Premises Receiving Noise	Time of Day	Assigned Level (dB)		
		$L_{A\,10}$	$L_{A\,1}$	$L_{A\,max}$
Noise sensitive premises within 15 metres of a dwelling	0700 - 1900 hours Monday to Saturday	45 + IF	55 + IF	65 + IF
	0900 - 1900 hours Sunday and Public Holidays	40 + IF	50 + IF	65 + IF
	1900 - 2200 hours all days	40 + IF	50 + IF	55 + IF
	2200 hours on any day to 0700 hours Monday to Saturday and 0900 hours Sunday and Public Holidays	35 + IF	45 + IF	55 + IF

Note: The L_{A10} noise level is the noise that is exceeded for 10% of the time.
The L_{A1} noise level is the noise that is exceeded for 1% of the time.
The L_{Amax} noise level is the maximum noise level recorded.

It is a requirement that noise from the site be free of annoying characteristics (tonality, modulation and impulsiveness) at other premises, defined below as per Regulation 9.

"impulsiveness" means a variation in the emission of a noise where the difference between L_{Apeak} and $L_{Amax\,Slow}$ is more than 15dB when determined for a single representative event.

"modulation" means a variation in the emission of noise that –

(a) is more than 3dB $L_{A\,Fast}$ or is more than 3dB $L_{A\,Fast}$ in any one-third octave band;
(b) is present for more at least 10% of the representative assessment period; and
(c) is regular, cyclic and audible;

"tonality" means 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.

Where the above characteristics are present and cannot be practicably removed, the following adjustments are made to the measured or predicted level at other premises.

TABLE 2.2 – ADJUSTMENTS FOR ANNOYING CHARACTERISTICS

Where tonality is present	Where modulation is present	Where impulsiveness is present
+ 5 dB	+ 5 dB	+ 10 dB

Where the noise emission is music, then any measured level is adjusted according to Table 2.3 below.

TABLE 2.3 – ADJUSTMENTS TO MEASURED MUSIC NOISE LEVELS

Where **impulsiveness** is not present	Where **impulsiveness** is present
+10 dB(A)	+15 dB(A)

The nearest noise sensitive premises considered in our assessment are as shown in Figure 1 below.

FIGURE 2 – DEVELOPMENT LOCATION AND SURROUNDS

The influencing factors at the identified noise sensitive premises has been determined, with the calculation based on the following.

Major Road within Outer Circle
Kwinana Freeway + 2 dB

Commercial Premises within Inner Outer Circle
20% + 1 dB

Commercial Premises within Inner Outer Circle
10% + 0.5 dB

Hence, the influencing factor at the residential premises considered in our assessment has been calculated at 3 dB (rounded down).

Therefore, Table 2.4 below summarises the Assigned Noise Levels at the nearest residential premises.

TABLE 2.4 - ASSIGNED OUTDOOR NOISE LEVELS: R1 TO R6

Premises Receiving Noise	Time of Day	Assigned Level (dB)		
		L_{A10}	L_{A1}	L_{Amax}
Noise sensitive premises within 15 metres of a dwelling	0700 - 1900 hours Monday to Saturday	48	58	68
	0900 - 1900 hours Sunday and Public Holidays	43	53	68
	1900 - 2200 hours all days	43	53	58
	2200 hours on any day to 0700 hours Monday to Saturday and 0900 hours Sunday and Public Holidays	38	48	58

Note: L_{A10} is the noise level exceeded for 10% of the time.
L_{A1} is the noise level exceeded for 1% of the time.
L_{Amax} is the maximum noise level.

3.0 METHODOLOGY

Noise modelling of the noise propagation from the proposed development was carried out using the environmental noise modelling computer program, "SoundPlan".
Input data for computer modelling included:

- Design of development as per drawings in Appendix A.
- EPA standard weather condition for the day and night periods (see Table 3.1).
- Sound power levels, as summarised in Table 3.2.

TABLE 3.1 - WEATHER CONDITIONS

Condition	Day Period	Night Period
Temperature	20 °C	15 °C
Relative humidity	50%	50%
Pasquil Stability Class	E	F
Wind speed	4 m/s*	3 m/s*

* From source to receiver

TABLE 3.2 – SOUND POWER LEVELS OF NOISE SOURCES

DESCRIPTION	dB(A)
Patrons in Restaurant Alfresco Area	66/m²
Patrons in Coffee "Yarning Circle"	60/m²

The patron noise level is akin to a beer garden noise level, which given it is a proposed restaurant with seating, this is considered very conservative.

Noise levels within the "Yarning Circle" have been set at 60 dB(A) per square metre, which is reflective of seated café style conversation – which would appear to be the purpose of this space.

Background music only should be played in these external areas, with music noise levels set such that it is not audible outside of the premises above patron noise levels. The noise level of music has been set at 75 dB(A) throughout the alfresco area so that the music level can be considered to be conversation level.

Music within the "Yarning Circle" is recommended to be set lower, and from a speaker on the northern side of the building within the circle. Set at a level of approximately 70 dB(A) at 1m would ensure that music is not a significant noise source to surrounding premises – however – it is noted that this is conservative, and likely could be somewhat louder.

Internal noise levels are assumed to be able to be attenuated by the construction of the building, which will be determined during the design development phase of the project following development approval.

For the above sound power levels, single point calculations were undertaken for the following scenarios:

Scenario 1: Patrons in external areas of restaurant and yarning circle (conversation level music) – doors to internal areas open.

Note: Mechanical plant has not been assessed at this early stage of the development process. It is noted that due to the overlooking nature of nearby noise sensitive premises, any plant located on the roof will need specific acoustic consideration – especially kitchen exhaust fans. It is considered appropriate that a noise impact assessment associated with such items would be the subject of a development approval condition.

4.0 RESULTS

Noise levels at the identified noise sensitive premise associated with the proposed restaurant are as listed below in Table 4.1. The nearest identified noise sensitive premises are multiple floors, however, to assist in simplifying reporting, only the highest noise level calculated has been presented. Noise contours associated with patrons in the alfresco areas has been included in Appendix B.

The adjustment for music characteristics is not applicable to the patron noise emissions as any music noise source would not significantly contribute to noise emissions at the identified noise sensitive premises, therefore, would not be characterised as music.

TABLE 4.1 – CALCULATED NOISE LEVELS AT NOISE SENSITIVE PREMISES

Location	Scenario 1 - Patrons Only Externally (conversation level music) Doors to internal areas open
R1	24
R2	29
R3	31
R4	32
R6	33

5.0 ASSESSMENT

Noise levels associated with the various scenarios considered have been examined for the potential to contain annoying characteristics in accordance with the *Environmental Protection (Noise) Regulations 1997*.

With the restrictions to music in place for the external areas, there are no adjustments applicable to the calculated noise levels, as patron noise from the external areas would be the most significant noise source – hence any adjustment for music noise emissions would not be applicable.

Therefore, Tables 5.1 to 5.3 summarises the assessment of the calculated noise levels against the pertinent Assigned Noise Levels for each scenario considered.

TABLE 5.1 – ASSESSMENT – SCENARIO 1 – PATRONS IN EXTERNAL AREAS – DOORS TO INTERNAL AREAS OPEN

Location	Assessable Noise Level, dB(A)	Applicable Times of Day	Applicable L_{A10} Assigned Level (dB)	Exceedance to Assigned Noise Level (dB)
R1	24	Day	48	Complies
		Sunday / Public Holiday Day Period	43	Complies
		Evening	43	Complies
		Night	38	Complies
R2	29	Day	48	Complies
		Sunday / Public Holiday Day Period	43	Complies
		Evening	43	Complies
		Night	38	Complies
R3	31	Day	48	Complies
		Sunday / Public Holiday Day Period	43	Complies
		Evening	43	Complies
		Night	38	Complies
R4	32	Day	48	Complies
		Sunday / Public Holiday Day Period	43	Complies
		Evening	43	Complies
		Night	38	Complies
R6	33	Day	48	Complies
		Sunday / Public Holiday Day Period	43	Complies
		Evening	43	Complies
		Night	38	Complies

6.0 CONDITIONS FOR COMPLIANCE TO BE ACHIEVED

As can be seen from the assessment in Section 5, noise level emissions associated with the proposed development are capable of complying with the relevant stipulated assigned noise levels, under the following conditions:

Patrons Externally

Noise emissions associated with patrons externally within the development, have been calculated to comply with the relevant assigned noise levels at all times – noting that music in the alfresco areas of the restaurant is to be at background noise level only. The music level has been assumed at 75 dB(A) throughout the external areas.

Music within the "Yarning Circle" area – if any – is recommended to be lower, with any speakers on the northern side of the proposed building.

Assumed Mechanical Plant

Noise emissions associated with mechanical plant have not been assessed at this early stage of the development. Due to the overlooking nature of surrounding premises, careful acoustic design will be required for the mechanical plant – especially kitchen exhaust fans.

7.0 CONCLUSION

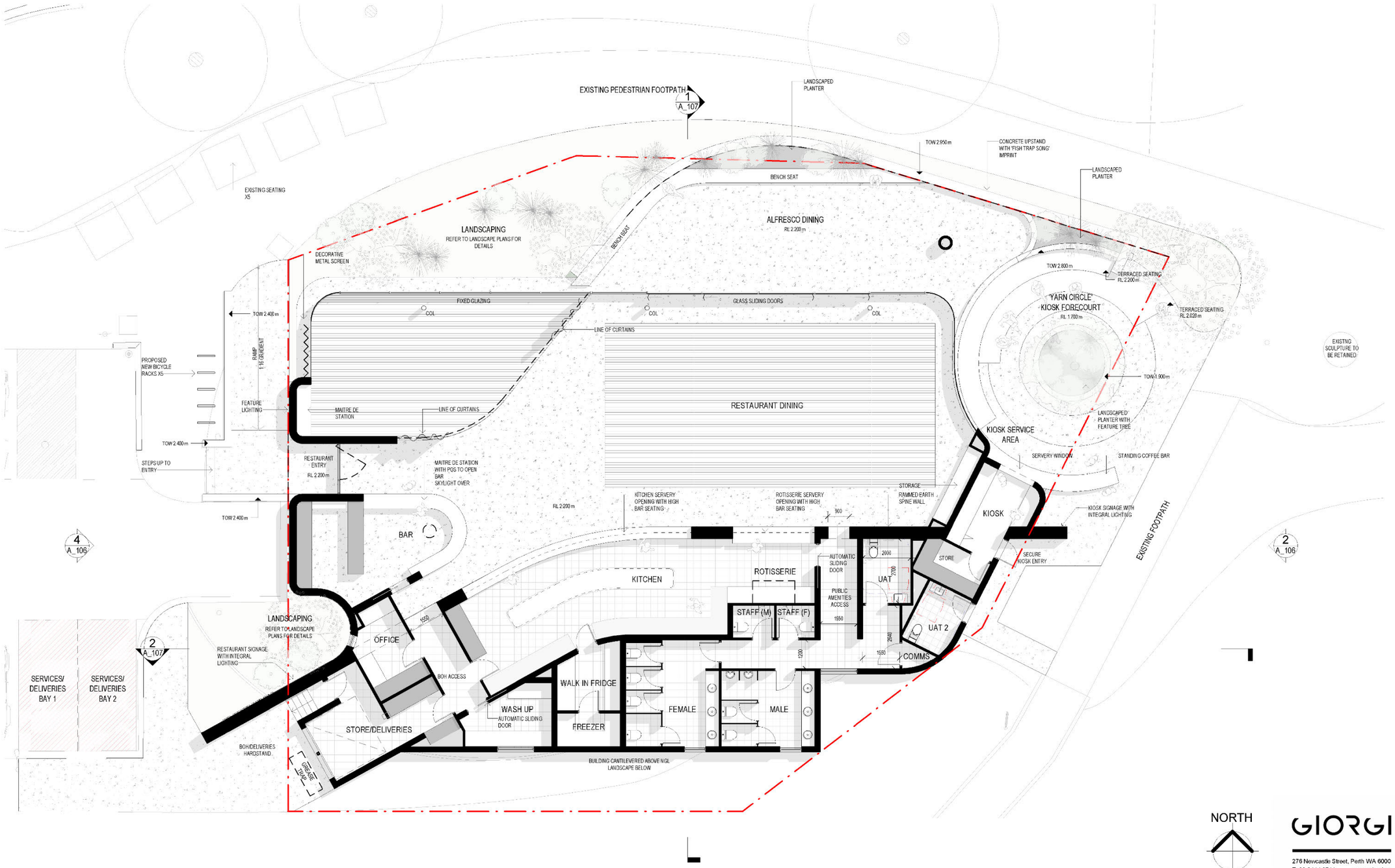
Based on the above assessment, noise level emissions associated with the proposed development are able to comply with the relevant assigned noise levels stipulated by the *Environmental Protection (Noise) Regulations 1997.*

It is noted that for the above finding to hold true, the operational restrictions measures listed above must be followed.

Noise level emissions associated with mechanical plant have not been addressed at this stage of the project, as they have not been selected, and would need to be addressed during the detailed design phase of the development and are considered likely development approval conditions.

APPENDIX A

Development Plans



NORTH

GIORGI

276 Newcastle Street, Perth WA 6000
T: 08 9444 8711 www.giorgi.co
A.C.N. 065 191 586 BC Number 9467

All dimensions, levels are approximate only and are subject to change.

Sheet Size A2 10 20 40mm

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South Perth Restaurant

5 Mill Point Road, South Perth

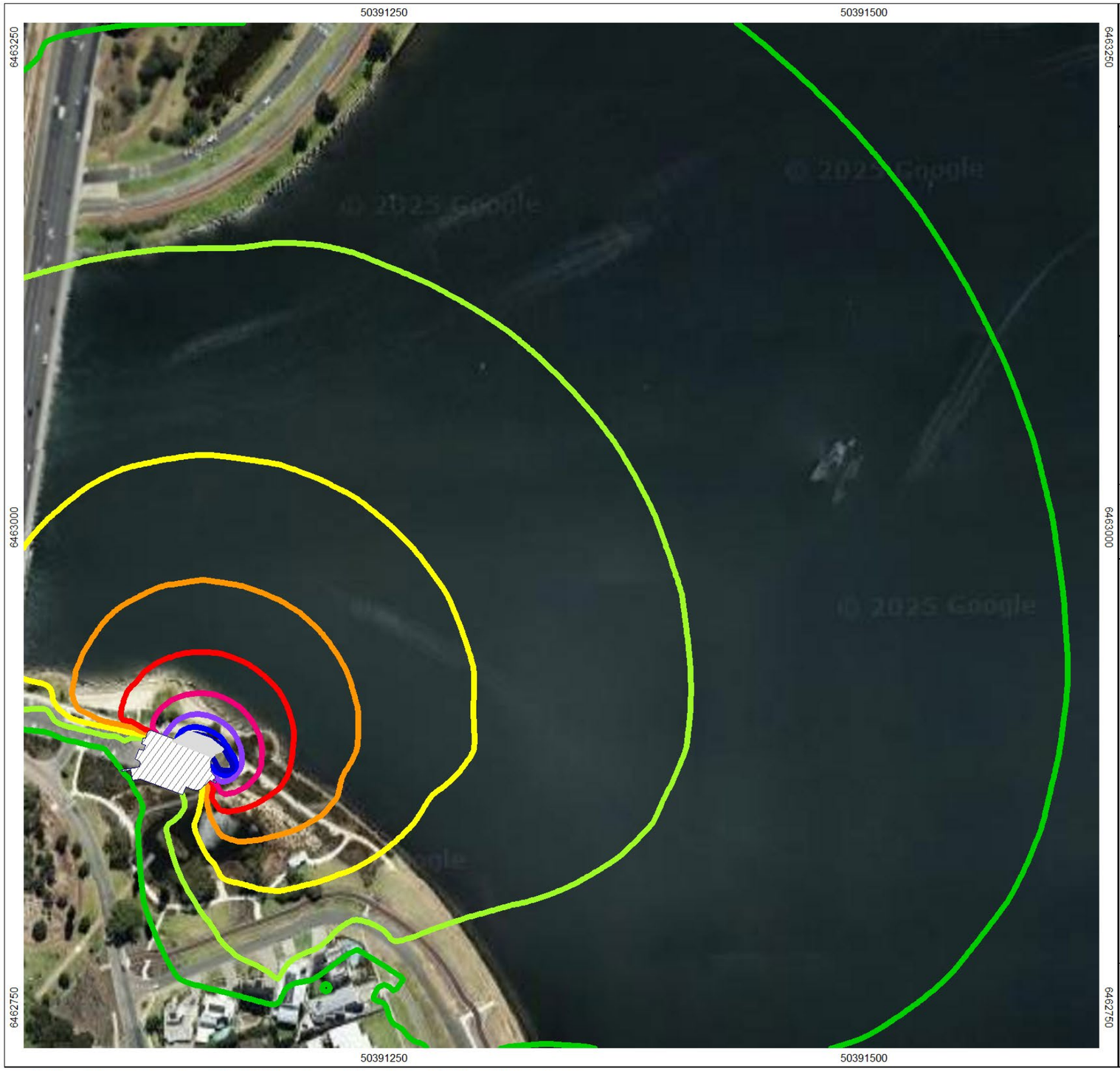
GROUND FLOOR PLAN

SK04

JOB NUMBER		SCALE	1 : 100
DRAWING NO.	A_102	DATE	

APPENDIX B

Noise Contour Plot



Customer:
Giorgi
Project: Millers Pool
Project-No. 25300

GIORGI

Map
1

Restaurant & Yarn Circle Alfresco Patron Noise
Result number 5
Calculation in 1.5 m above ground

Project engineer: George Watts
Created:
Processed with SoundPLAN 9.1, Update 20/08/2025

Levels LA10
in dB(A)

- = 25
- = 30
- = 35
- = 40
- = 45
- = 50
- = 55
- = 60
- = 65

N

Length scale 1:2000
0 15 30 60 90 120 m

HERRING STORER ACOUSTICS

SoundPLANnoise 9.1 C:\DATA\ActiveProjectsGW\25300 - Millers Pool South Perth Restaurant\Millers Pool Restuarant\Sheet1.sgs

LIGHTING LEGEND

TYPE A1 — DECORATIVE EXTERNAL WALL LIGHT, SIMILAR TO THAT SHOWN< FULLY SHIELDED, DOWNWARD-FACING WARM LED (<3000 K) WITH CONCEALED LAMP SOURCE TO MINIMISE GLARE, SPILL, AND SKYGLOW.

TYPE B1 — EXTERNAL SURFACE MOUNTED DOWNLIGHT, SIMILAR TO THAT SHOWN, FULLY SHIELDED, WITH WARM LED (<3000 K) AND CONCEALED LAMP SOURCE TO MINIMISE GLARE, SPILL, AND SKYGLOW.

TYPE C1 — BACK OF HOUSE (BOH) RECESSED DOWNLIGHT WITH A PC DIFFUSER FOR UNIFORM LIGHT DISTRIBUTION.

TYPE C2 — FRONT OF HOUSE (FOH) RECESSED DOWNLIGHT, SIMILAR TO THAT SHOWN, WITH CONCEALED LIGHT SOURCE AND OPTIC FOR HIGH VISUAL COMFORT AND LOW UNIFIED GLARE RATING (URG). COLOUR TO BE SELECTED.

TYPE C3 — SURFACE MOUNTED CYLINDRICAL DOWNLIGHT, SIMILAR TO THAT SHOWN, WITH HIGH COLOUR RENDERING AND MINIMAL GLARE FOR HIGH VISUAL COMFORT AND LOW UNIFIED GLARE RATING (URG).

TYPE C4 — KITCHEN AREA IP54 RATED RECESSED DOWNLIGHT, SIMILAR TO THAT SHOWN, WITH METHACRYLATE TYRANSPARENT DIFFUSER TO UNIFORMLY ILLUMINATE THE KITCHEN AREA.

TYPE C5 — RECESSED DOWNLIGHT WITH LOW WATTAGE, SIMILAR TO THAT SHOWN, FOR USE IN TOILET AREAS.

TYPE D1 — LOW PROFILE SURFACE MOUNTED DECORATIVE LUMINAIRE, SIMILAR TO THAT SHOWN.

TYPE E1 — RECESSED AS/NZS 2293.3 COMPLIANT LED EMERGENCY LIGHT.

TYPE E2 — LOW PROFILE SURFACE MOUNTED AS/NZS 2293.3 COMPLIANT LED EMERGENCY LIGHT.

TYPE EX — RECESSED OR SURFACE MOUNTED AS/NZS 2293.3 COMPLIANT LED EXIT SIGN.

TYPE F1 — SURFACE MOUNTED WEATHERPROOF IMPACT RESISTANT (IP66/IK08) LED LUMINAIRE, SIMILAR TO THAT SHOWN.

TYPE G1 — RECESSED 1200 X 300 (NOM) FLAT LED PANEL.

TYPE MA — SURFACE MOUNTED MOTION SENSOR.

TYPE MB — RECESSED 360 DEGREE MOUNTED MOTION SENSOR.

LIGHTING LEGEND - SWITCHING AND CONTROL

REFER GENERAL NOTES FOR MOUNTING HEIGHTS.
REFER GENERAL NOTES FOR SWITCHES ON FIRE RATED AND ACOUSTIC RATED WALLS.
'V' DENOTES VARIANT AS SCHEDULED

'V' — SWITCH AND SWITCHGROUP

(DIM) — WHERE SHOWN DENOTES DIMMER FITTED TO SWITCHGROUP - CONTRACTOR TO SELECT DIMMER TO SUIT LUMINAIRE TYPE.

xxxx — DENOTES MULTIGANG SWITCHPLATE

LS — DENOTES TO LIGHT SWITCH NEAR DOOR

LS — = SWITCHED FROM ONE POSITION
LS-2 = TWO WAY SWITCHED
LS-INT = INTERMEDIATE SWITCHED

LSP-N — DENOTES LIGHT SWITCH PANEL NEAR DOOR

'N' DENOTES PANEL NUMBER

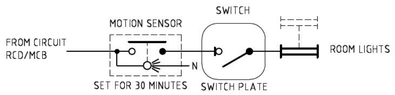
LIGHTING LEGEND VARIANTS

SWITCH AND SWITCHGROUP

2	TWO-WAY
INT	INTERMEDIATE
F	CONTROLS EXHAUST FAN. FIT "FAN" ENGRAVED SWITCH MECHANISM
N	NEON INDICATOR FITTED TO SWITCH. WHEN LIGHT IS 'ON' NEON IS TO GLOW
TD	TIME DELAY SWITCH SET DELAY PERIOD FOR 4 HOURS UNLESS DETAILED OTHERWISE
TD/OR	TIME DELAY SWITCH OVERRIDE FOR INTERIOR LIGHTING CONTROL
WP	IP56 SERIES RATED FLUSH MOUNTED SWITCH

TYPE 'H1' AND 'H2' LUMINAIRE SUSPENSION DETAILS

ALL SUSPENSION RODS AND FIXING BRACKETS TO BE PAINTED BLACK TO MATCH THE LUMINAIRE.
SUBMIT SHOP DRAWINGS FOR APPROVAL PRIOR TO MANUFACTURE.



GENERAL 1 WAY AND SENSOR ROOM SWITCHING

GENERAL NOTES

1. THE FOLLOWING ELECTRICAL SERVICES SHALL BE INSTALLED TO MEET THE "DEEMED-TO-SATISFY" REQUIREMENTS OF THE 2022 VERSION OF THE NATIONAL CONSTRUCTION CODE (NCC) AMENDMENT NO 1 AND OTHER RELEVANT AUSTRALIAN STANDARDS REFERRED TO IN THE NCC:
-VISIBILITY IN AN EMERGENCY, EXIT SIGNS AND WARNING SYSTEMS – PART E4.
-ARTIFICIAL LIGHTING – CLAUSE F6D5.
-ARTIFICIAL LIGHTING AND POWER – PART J7.
-LIGHTING AND POWER CONTROL DEVICES – SPECIFICATION 40.
FOR EACH SPACE, THE AGGREGATE DESIGN ILLUMINATION POWER LOAD SHALL/WILL NOT EXCEED THE MAXIMUM ILLUMINATION POWER DENSITY (IPD) GIVEN IN TABLE J7D3A.
EXTERNAL DINING LIGHTING SHALL/WILL COMPLY WITH NCC J7. LIGHTING TO BE INDEPENDENTLY SWITCHED FROM INDOOR AREAS, FITTED WITH DAYLIGHT CONTROL (PHOTOCELL/SENSOR), AND TIME-SWITCH OR OCCUPANCY CONTROL TO SWITCH OFF WHEN NOT IN USE.
ALL INTERNAL LIGHTING SHALL BE INTERFACED WITH THE SECURITY SYSTEM CARD READER (OCCUPANT SENSING DEVICE) IN ACCORDANCE WITH NCC CLAUSE J7D4, TO ENSURE A MINIMUM OF 95% OF INTERNAL LIGHTING IS AUTOMATICALLY SWITCHED OFF WHEN THE BUILDING IS UNOCCUPIED.

2. ALL EXTERNAL LIGHTING SHALL MEET THE REQUIREMENTS OF THE NATIONAL LIGHT POLLUTION GUIDELINES FOR WILDLIFE (DEPARTMENT OF CLIMATE CHANGE, ENERGY, THE ENVIRONMENT AND WATER, 2023) AND AS4282 CONTROL OF THE OBTRUSIVE EFFECTS OF OUTDOOR LIGHTING. ALL LUMINAIRES SHALL BE/HAVE:
-SHIELDED LIGHTING (NO UPWARD LIGHT).
-WARM COLOUR TEMPERATURE (<3000K CCT) (MINIMISE BLUE/UV LIGHT).
LOW INTENSITY.
TIME SWITCH CONTROLLED(SWITCH OFF OR DIM AFTER BUSINESS HOURS).
EXTERNAL SIGNAGE TO HAVE INTERNAL ILLUMINATION PREFERRED (BACKLIT LETTERS OR CABINET SIGNS, INSTEAD OF EXTERNAL FLOODLIGHTS).

REV	DATE	DESCRIPTION
A	23.09.2025	DEVELOPEMENT APPROVAL

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TEL +61 8 9328 3711
SUITE 13/99-101 FRANCIS STREET
NORTHBRIDGE WA 6003

SITE: **SOUTH PERTH RESTAURANT**
5 MILL POINT ROAD, SOUTH PERTH

DRAWING: **LEGEND SHEET**

SCALE:	DATE:	DRAWN:	CHECKED:
1:100 ON A1	AUG 2025	JRLD	MSA

PROJECT N°:	DRAWING N°:	REV:
PN401	DA-E.01	A

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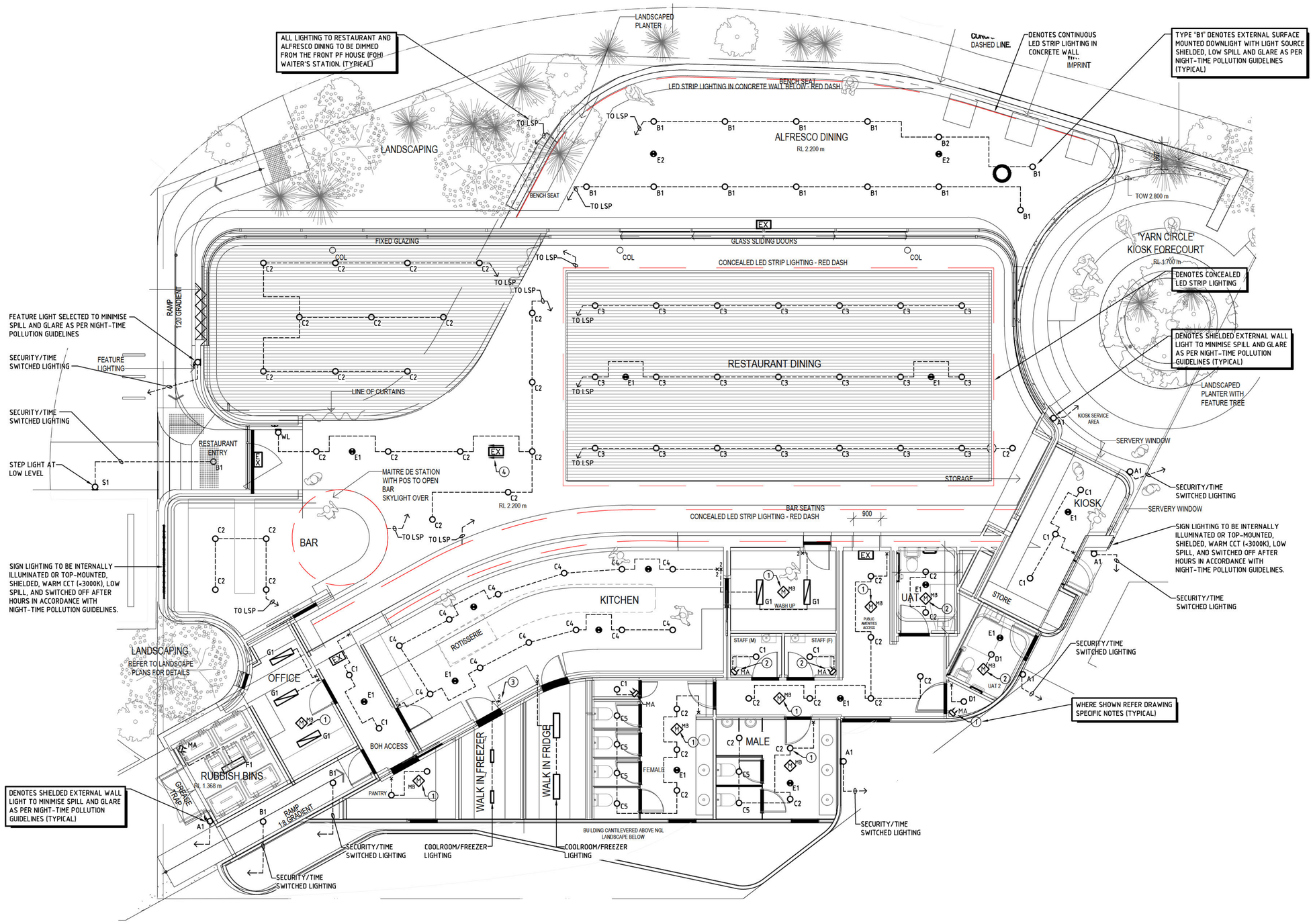

GENERAL NOTES

1. THE FOLLOWING ELECTRICAL SERVICES SHALL BE INSTALLED TO MEET THE "DEEMED-TO-SATISFY" REQUIREMENTS OF THE 2022 VERSION OF THE NATION CONSTRUCTION CODE (NCC) AMENDMENT NO 1 AND OTHER RELEVANT AUSTRALIAN STANDARDS REFERRED TO IN THE NCC:
   - VISIBILITY IN AN EMERGENCY, EXIT SIGNS AND WARNING SYSTEMS – PART E
   - ARTIFICIAL LIGHTING – CLAUSE F6D5.
   - ARTIFICIAL LIGHTING AND POWER – PART J7.
   - LIGHTING AND POWER CONTROL DEVICES – SPECIFICATION 40.

   FOR EACH SPACE, THE AGGREGATE DESIGN ILLUMINATION POWER LOAD SHALL/WILL NOT EXCEED THE MAXIMUM ILLUMINATION POWER DENSITY (IPD) GIVEN IN TABLE J7D3A.
   EXTERNAL DINING LIGHTING SHALL/WILL COMPLY WITH NCC J7. LIGHTING TO E INDEPENDENTLY SWITCHED FROM INDOOR AREAS, FITTED WITH DAYLIGHT CONTROL (PHOTOCELL/SENSOR), AND TIME-SWITCH OR OCCUPANCY CONTROL TO SWITCH OFF WHEN NOT IN USE.
   ALL INTERNAL LIGHTING SHALL BE INTERFACED WITH THE SECURITY SYSTEM CARD READER (OCCUPANT SENSING DEVICE) IN ACCORDANCE WITH NCC CLAUS J7D4, TO ENSURE A MINIMUM OF 95% OF INTERNAL LIGHTING IS AUTOMATICAL SWITCHED OFF WHEN THE BUILDING IS UNOCCUPIED.

2. ALL EXTERNAL LIGHTING SHALL MEET THE REQUIREMENTS OF THE NATIONAL LIGHT POLLUTION GUIDELINES FOR WILDLIFE (DEPARTMENT OF CLIMATE CHANG ENERGY, THE ENVIRONMENT AND WATER, 2023) AND AS4282 CONTROL OF TH OBTRUSIVE EFFECTS OF OUTDOOR LIGHTING. ALL LUMINAIRES SHALL BE/HAV
   - SHIELDED LIGHTING (NO UPWARD LIGHT).
   - WARM COLOUR TEMPERATURE (<3000K CCT) (MINIMISE BLUE/UV LIGHT).
   - LOW INTENSITY.
   - TIME SWITCH CONTROLLED(SWITCH OFF OR DIM AFTER BUSINESS HOURS).
   - EXTERNAL SIGNAGE TO HAVE INTERNAL ILLUMINATION PREFERRED (BACKLIT LETTERS OR CABINET SIGNS, INSTEAD OF EXTERNAL FLOODLIGHTS).

DRAWING SPECIFIC NOTES

1. WHERE SHOWN ROOM LIGHTS SHALL BE CONTROLLED BY LOCAL LIGHT SWITCHES WITH MOTION SENSOR OVERRIDE. IF THE SWITCH IS IN THE "ON" POSITION AND THE ROOM IS UNOCCUPIED FOR A SET PERIOD, LIGHTS SHALL AUTOMATICALLY SWITCH "OFF" AND AUTOMATICALLY SWITCH BACK "ON" UPON RE-ENTRY, WHEN THE SWITCH REMAINS IN THE "ON" POSITION. IF THE SWITCH IS IN THE "OFF" POSITION, LIGHTS REMAIN "OFF."
2. LIGHTING INSTALLED WITHIN THIS ROOM TO BE CONTROLLED SOLELY BY A MOTION SENSOR.
3. CLIPSAL CAT No WS226 INSTALLED INTERNALLY CLEAR OF SHELVING WITH A NEON INDICATOR (ALL BY ELECT'L CONT'R). NEON IS TO OPERATE WHEN LIGHTING IS "ON".
4. DENOTES DOUBLE-SIDED EXIT SIGN POSITIONED FOR CLEAR VISIBILITY THROUGHOUT RESTAURANT DINING AREA.

DRAWING TO BE PRINTED IN COLOUR

REV	DATE	DESCRIPTION
A	22.09.2025	ISSUED FOR DEVELOPMENT APPROVAL

MKA ELECTRICAL DESIGN CONSULTANTS
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Web Site: www.mkadesign.com.au

SITE: **SOUTH PERTH RESTAURANT 5 MILL POINT ROAD, SOUTH PERTH**

DRAWING: **GROUND FLOOR PLAN**

SCALE:	DATE:	DRAWN:	CHECKED:
1:400 ON A1	JUL 2025	JRLD	MSA

PROJECT N°:	DRAWING N°:	REV:
PN401	DA-E.02	A

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A	30.09.2025	ISSUED FOR DEVELOPMENT APPROVAL

MKA Electrical Design Consultants Pty Ltd
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SITE:
SOUTH PERTH RESTAURANT
5 MILL POINT ROAD, SOUTH PERTH

DRAWING:
ISOLUX DRAWING SHEET 1

SCALE:	DATE:	DRAWN:	CHECKED:
1:400 ON A1	JUL 2025	JRLD	MSA

PROJECT N°:	DRAWING N°:	REV:
PN401	ISOL-E.01	A

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Luminaire Schedule					
Symbol	Qty	Label	Description	LLF	Luminaire Lumens
	4	G1–	LIN–T300–LO–600–19W–4K	0.800	2566
	4	D1	15–6197–14–M1V1_3000K CAPRICE 330MM	0.800	1260
	17	B1	15–9790–Z5–CL COSMOS 17W 3K	0.800	1215
	13	C5	AG13–P7W9F1BB14V1 – PLAY 7W 3K 50D	0.800	644
	21	C3	AG32–13W9F10UWH – PLAY SURFACE 13W 3K 50D	0.800	1256
	29	C2	AG13–13W9F1BB60V1 – PLAY 13W 3K 50D	0.800	1215
	19	C1	90–A033–H2–00 – VEO 10W 3K	0.800	1460

Calculation Summary					
Label	Avg	Max	Min	Min/Avg	Min/Max
EXTERIOR_Workplane	138.23	524	6	0.04	0.01
HALLWAY_Workplane	163.78	280	56	0.34	0.20
MAIN ROOM_Workplane	176.44	641	7	0.04	0.01
ROOM 1_Workplane	254.53	367	44	0.17	0.12
ROOM 2_Workplane	191.97	276	84	0.44	0.30
ROOM 3_Workplane	321.44	437	149	0.46	0.34
ROOM 4_Workplane	153.83	182	120	0.78	0.66
ROOM 5_Workplane	248.38	327	146	0.59	0.45
TOILETS_Workplane	173.75	417	14	0.08	0.03

LIGHTING CALCULATION NOTES

1. LIGHTING CALCULATIONS BASED ON INITIAL LUMENS WITH LLF MAINTENANCE FACTOR AS SHOWN.
2. WORKING PLANE 0.7 AFL. 0.8 LLF
3. NO OBSTRUCTIONS HAVE BEEN INCLUDED IN THE LIGHTING CALCULATIONS.
4. THIS LIGHTING CALCULATION HAS BEEN DONE USING THE IES FILES PROVIDED BY THE LUMINAIRE MANUFACTURER VIA THEIR WEBSITE. MKA TAKES NO RESPONSIBILITY TO THE ACCURACY OF THE IES FILES.
5. LIGHTING CALCULATIONS ARE SUBJECT TO THE ACCURACY AND TOLERANCES IN ACCORDANCE WITH AS/NZS 3827.1.1998 & AS/NZS 3828.1.1998. THESE ACCURACIES AND TOLERANCES INCLUDE VARIANCES IN THE BUILDING OR AREA DIMENSIONS, SURFACE FINISHES AND REFLECTION, LUMINAIRE POSITIONING AND ELECTRICAL SUPPLY.

STATEMENT OF COMPLIANCE WITH THE NATIONAL LIGHT POLLUTION GUIDELINES FOR WILDLIFE

THE PROPOSED EXTERNAL LIGHTING DESIGN FOR THE RESTAURANT/CAFÉ HAS BEEN DEVELOPED IN ACCORDANCE WITH THE NATIONAL LIGHT POLLUTION GUIDELINES FOR WILDLIFE (DCCEEW, 2023) AND AS 4282: CONTROL OF THE OBTRUSIVE EFFECTS OF OUTDOOR LIGHTING, ENSURING BOTH ECOLOGICAL PROTECTION AND COMMUNITY AMENITY.

KEY COMPLIANCE MEASURES INCLUDE:

1. SHIELDED, DOWNWARD LIGHTING
   - ALL LUMINAIRES ARE FULLY SHIELDED AND DIRECTED DOWNWARD, PREVENTING UPLIGHT, SKYGLOW, AND SPILL TOWARD THE SWAN RIVER.
2. WARM COLOUR TEMPERATURE (≤3000K CCT)
   - ALL EXTERNAL LIGHT FITTINGS OPERATE BELOW 3000K CCT, REDUCING DISRUPTIVE BLUE AND UV EMISSIONS.
3. LOW INTENSITY & CONTROLLED OPERATION
   - EXTERNAL LIGHTING IS DESIGNED TO OPERATE AT THE LOWEST PRACTICABLE INTENSITY, WITH TIME-SWITCHING AND DIMMING AFTER BUSINESS HOURS.
   - LIGHT SPILL TO THE RIVER AND WITHIN HABITAT AREAS WILL BE KEPT, WHERE POSSIBLE, BELOW 0.01–0.03 LUX (EQUIVALENT TO MOONLIGHT LEVELS) TO ENSURE NO ADVERSE ECOLOGICAL CONSEQUENCES.
4. SIGNAGE LIGHTING
   - EXTERNAL SIGNAGE WILL USE INTERNALLY ILLUMINATED SYSTEMS (E.G. BACKLIT LETTERS, CABINET SIGNS) IN PREFERENCE TO FLOODLIGHTING, FURTHER REDUCING OBTRUSIVE LIGHT.
5. DESIGN PRINCIPLES APPLIED
   - START WITH NATURAL DARKNESS AND ONLY INTRODUCE ARTIFICIAL LIGHT FOR DEFINED SAFETY OR FUNCTIONAL PURPOSES.
   - USE ADAPTIVE CONTROLS SUCH AS DIMMERS, TIMERS, AND MOTION SENSORS TO MINIMISE OPERATING HOURS.
   - LIGHT ONLY THE INTENDED SURFACES, KEEPING FITTINGS CLOSE TO THE GROUND, SHIELDED, AND DIRECTIONAL.
   - USE NON-REFLECTIVE EXTERNAL SURFACES TO REDUCE GLARE AND REFLECTION.
   - MAINTAIN LONGER-WAVELENGTH LIGHTING (WARM WHITE/AMBER) TO REDUCE IMPACTS ON FAUNA, INSECTS, AND AQUATIC SPECIES.

WITH THESE MEASURES IN PLACE, THE LIGHTING DESIGN WILL MINIMISE SPILL, GLARE, AND SKYGLOW, PROTECTING BOTH WILDLIFE HABITATS ALONG THE SWAN RIVER AND THE COMMUNITY'S VISUAL AMENITY. IT THEREFORE DEMONSTRATES COMPLIANCE WITH THE NATIONAL LIGHT POLLUTION GUIDELINES FOR WILDLIFE (2023) AND AS 4282, ENSURING THAT ECOLOGICAL AND COMMUNITY VALUES ARE SAFEGUARDED.

REV	DATE	DESCRIPTION
A	01.10.2025	ISSUED FOR DEVELOPMENT APPROVAL

MKA ELECTRICAL DESIGN CONSULTANTS
MKA Electrical Design Consultants Pty Ltd
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DRAWING:
ISOLUX SHEET 2

SCALE:	DATE:	DRAWN:	CHECKED:
1:400 ON A1	JUL 2025	JRLD	MSA

PROJECT N°:	DRAWING N°:	REV:
PN401	ISOL-E.02	A

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