Metro Outer Development Assessment Panel Agenda

Meeting Date and Time: Thursday, 7 August 2025; 9:30am
Meeting Number: MODAP/93
Meeting Venue: 140 William Street, Perth

A live stream will be available at the time of the meeting, via the following link:
MODAP/93 – 7 August 2025 – Shire of Murray

PART A – INTRODUCTION

1. Opening of Meeting, Welcome and Acknowledgement
2. Apologies
3. Members on Leave of Absence
4. Noting of Minutes

PART B – SHIRE OF MURRAY

1. Declarations of Due Consideration
2. Disclosure of Interests
3. Form 1 DAP Applications
   - 3.1 Lot 89 (No.11) Moores Road, Pinjarra – Proposed Veterinary Centre – DAP/25/02911
4. Form 2 DAP Applications
5. Section 31 SAT Reconsiderations

PART C – OTHER BUSINESS

1. State Administrative Tribunal Applications and Supreme Court Appeals
2. Meeting Closure

Please note, presentations for each item will be invited prior to the items noted on the agenda and the presentation details will be contained within the related information documentation

ATTENDANCE	
Specialist DAP Members	*DAP Secretariat*
Karen Hyde (Presiding Member) Dale Page (Deputy Presiding Member) Eugene Koltasz	Claire Ortlepp Ashlee Kelly
Part B – Shire of Murray	
Cr Douglas McLarty (Local Government DAP Member, Shire of Murray) Cr Ange Rogers (Local Government DAP Member, Shire of Murray)	

PART A – INTRODUCTION

1. **Opening of Meeting, Welcome and Acknowledgement**
2. **Apologies**
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PART B – SHIRE OF MURRAY

1. Declarations of Due Consideration

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3. Form 1 DAP Applications

3.1 Lot 89 (No.11) Moores Road, Pinjarra – Proposed Veterinary Centre – DAP/25/02911

4. Form 2 DAP Applications

Nil.

5. Section 31 SAT Reconsiderations

Nil.

Part B – Item 3.1 – LOT NO. 89 (NO. 11) MOORES ROAD, PINJARRA – PROPOSED VETERINARY CENTRE

Form 1 – Responsible Authority Report
(Regulation 12)

DAP Name:	Metro Outer
Local Government Area:	Shire of Murray
Applicant:	Method Planning
Owner:	Binclar Pty Ltd AFT Saaat Borrowing Trust
Value of Development:	$2 million
Responsible Authority:	Shire of Murray
Authorising Officer:	Rod Peake – Director Planning and Sustainability
LG Reference:	P115/2025
DAP File No:	DAP/25/02911
Application Received Date:	13 May 2025
Report Due Date:	29 July 2025
Application Statutory Process Timeframe:	90 Days
Attachment(s):	1. Planning Report and Appendices Appendix A – Proposed Development Plans. Appendix B – Certificate of Title. Appendix C – Site Feature Survey. Appendix D – Flora and Vegetation Assessment. Appendix E – Traffic Impact Statement. Appendix F – Geotechnical Report. Appendix G – Site and Soil Evaluation. Appendix H – Bushfire Management Plan. 2. Summary of Public Submissions 3. Government Agency Submissions 4. Extracts of Pinjarra District Structure Plan

Responsible Authority Recommendation

That the Metro Outer Development Assessment Panel resolves to:

1. **Refuse** DAP Application reference DAP/25/02911 and accompanying plans included in **Appendix A** in accordance with Clause 68 of Schedule 2 (Deemed Provisions) of the *Planning and Development (Local Planning Schemes) Regulations 2015*, and the provisions of *Peel Region Scheme* and the Shire of Murray *Local Planning Scheme No.* 4, for the following reasons:

   Approval of this development would be contrary to the principles of orderly and proper planning for the following reasons:

i) The proposal is inconsistent with the objectives outcomes and measures of State Planning Policy 4.2, specifically the development represents out of centre development which undermines the role of the Pinjarra Activity Centre.
ii) The development will obstruct the delivery of a future Primary School identified under the draft Pinjarra District Structure Plan. This will further compromise the distribution of Primary Schools across the Pinjarra District Structure Plan area.
iii) The development is an ad-hoc proposal which will make the future delivery of future urban land more costly and difficult.
iv) The proposed Veterinary Centre is not compatible with the intended higher density residential uses abutting the land.
v) The proposed stormwater drainage basin conflicts with the proposed four metre road widening area for Moores Road identified in the Draft Pinjarra District Structure Plan.

Details: outline of development application

Region Scheme	Peel Region Scheme
Region Scheme - Zone/Reserve	Urban Deferred
Local Planning Scheme	Shire of Murray Local Planning Scheme No. 4
Local Planning Scheme - Zone/Reserve	Rural
Structure Plan/Precinct Plan	Draft Pinjarra District Structure Plan
Structure Plan/Precinct Plan - Land Use Designation	Primary School
Use Class and permissibility:	Veterinary Centre – "AA"
Lot Size:	1.8ha
Existing Land Use:	Single Dwelling
State Heritage Register	No
Local Heritage	☒ N/A ☐ Heritage List ☐ Heritage Area
Design Review	☒ N/A ☐ Local Design Review Panel ☐ State Design Review Panel ☐ Other
Bushfire Prone Area	Yes
Swan River Trust Area	No

Proposal:

The proposed development is for a Veterinary Centre with a built footprint of 580m^2 and includes the following:

Veterinary Centre

- Public area and reception.
- Separate dog and cat waiting areas.

- 7 consulting rooms.
- Grieving courtyard.
- Large and small dog wards.
- X-Ray room.
- 2 surgeries, treatment room and surgery prep area.
- Dental surgery, ICU and recovery room.
- Laboratory and pharmacy room and workroom.
- Staff quarters (with outdoor area) and doctors' offices as well as administration areas.
- Utility room, staff entry and small accommodation room.
- Lactation/ quite room.

Access, Parking, Amenities and Signage

- New 6.5m crossover to Moores Road.
- 21 car bays, including one universal access bay.
- Delivery and pick up area.
- Reversing area for emergency fire vehicles.
- Internal pathways matching up with public footpath extension.
- Maintenance shed with cold room and bin store.
- Drying court with rainwater tanks.
- Stormwater management area.
- On-site sewerage management (OSSM) zone.
- Patient exercise area.
- Off leash dog park.
- Fencing and landscaping.
- One 6m high pylon sign with 8m^2 face and one 2.5m high entry sign with a 2.3m^2 face.

Hours of Operation

The proponent is proposing the following operating hours:
- 8am – 6pm Monday to Friday;
- 8am – 1pm Saturdays; and
- Closed on Sundays.

Staffing

The maximum number of staff at one time will be 5 veterinarians, 10 support and 3 administration staff.

Background:

On 5 November 2020 the Shire in response to an enquiry for a proposed 'Veterinary Centre' on the subject site, offered the following advice:

"Under the Peel Region Scheme and the South Metropolitan and Peel Subregional Planning Framework Lot 89 (11) Moores Road is zoned Urban Deferred. This means Lot 89 (11) Moores Road may in the future have potential for residential or commercial development.

The lot is also part of a future residential precinct which will require substantial pre-planning prior to development. The Shire's draft Activity Centre Plan highlights this precinct as being relatively high density in view of the increasingly important role of

Pinjarra Road as a public transport corridor and the Activity Centres State Planning Policy discourages out of centre commercial development.

Given the above planning matters, should you wish to pursue the proposal to locate the veterinary centre on Lot 89 (11) Moores Road we recommend that you submit a request for approval in principle from the Council and we can review the proposal more thoroughly including consultation with relevant State agencies and ultimately provide some clear direction".

No such request was submitted to Council.

On 11 September 2024 the Shire received an enquiry regarding the specific setbacks and development requirements for a 'Veterinary Centre' on the subject site. In response to that enquiry the Shire offered the following advice:

"Being an 'AA' discretionary use, the following will be key considerations:

- *Proximity to the Pinjarra Town Centre*
- *The Urban Deferred zoning applied to the site under the Peel Region Scheme and the South Metropolitan and Peel Subregional Planning Framework.*
- *Pinjarra Road is identified as a high frequency public transit route under the State Planning Framework.*
- *Requirements for the widening and upgrade of Moores Road to an Integrator A Town Centre Road with a 38m reserve and likely intersection control treatment requirements at the intersection of Pinjarra Road.*
- *The Shire's Draft Activity Centre Plan (Note: The Shire is currently preparing a District Structure Plan for Pinjarra which is expected to be presented to Council prior to the end of 2024)".*

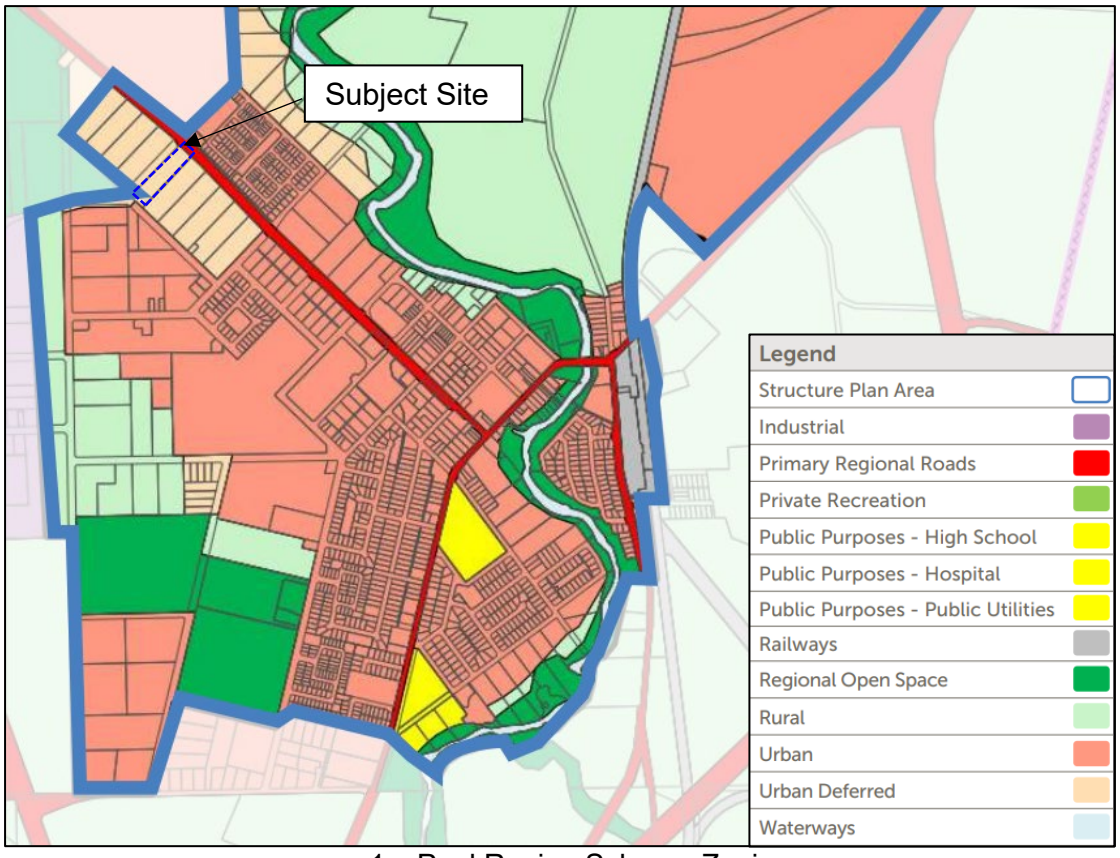
Site Context

The subject site totals 1.8042 hectares, with approximately 8,000m² of the subject site subject to this Development Application. The site has a 276m frontage to Moores Road, 59m frontage to Pinjarra Road and a 64.78m frontage to Tuckey Street (unsealed).

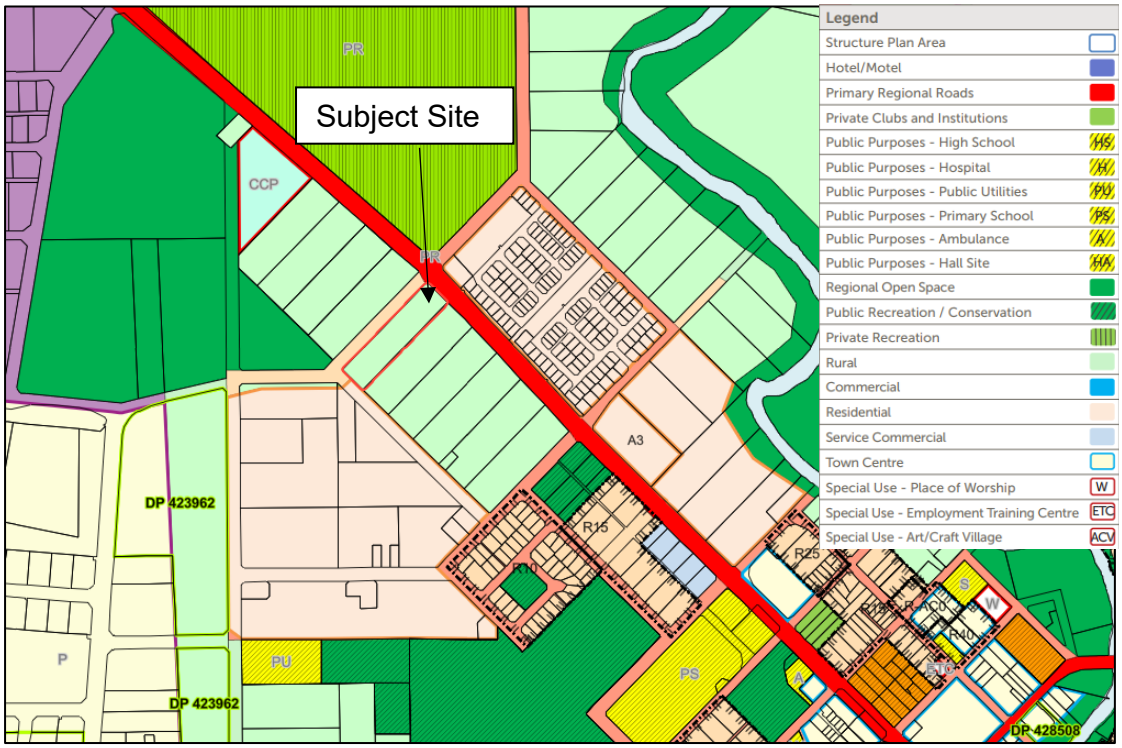
The site contains a single dwelling which was constructed circa 1996. There are no previous development approvals on the site.

The site is significantly vegetated with a remnant swamp paperbarks (*Melaleuca Rhaphiophylla*) and a small number of Western Australia Christmas trees (*Nuytsia floribunda*). The site does not contain any known threatened ecological communities (TEC). The site is mapped as a multiple use wetland.

The site is zoned 'Urban Deferred' under the Peel Region Scheme (PRS) and 'Rural' under the Shire's Local Planning Scheme No.4 (LPS4). On the opposite side of Pinjarra Road (north) the land is zoned 'Residential' and 'Residential Development'. The land to the south is zoned 'Residential Development'.



1. Peel Region Scheme Zoning



2. Local Planning Scheme No.4 Zoning

Legislation and Policy:

Legislation

- Planning and Development (Local Planning Schemes) Regulations 2015 (Regulations).
- Peel Region Scheme (PRS).
- Shire of Murray Local Planning Scheme No.4 (LPS4).

State Government Policies

- State Planning Policy 2.1 Peel-Harvey Coastal Plain Catchment (SPP2.1).
- Draft State Planning Policy 2.9 Planning for Water (SPP 2.9).
- State Planning Policy 3.7 Planning in Bushfire Prone Areas (SPP3.7).
- Perth and Peel @ 3.5 million.
- South Metropolitan Peel Sub-regional Planning Framework.
- Government Sewerage Policy (Government of Western Australia, 2019).
- State Planning Policy 4.2 – Activity Centres.
- Lifting of Urban or Industrial Deferment Guidelines (2025)

Structure Plans/Activity Centre Plans

- Draft Pinjarra District Structure Plan.
- Draft Precinct Structure Plan

Local Policies

- Biodiversity Protection.
- General Development Provisions Building Setbacks, Car Parking Standards.
- Vegetation Management.
- Water Sensitive Urban Design
- Signs Local Planning Policy.

Consultation:

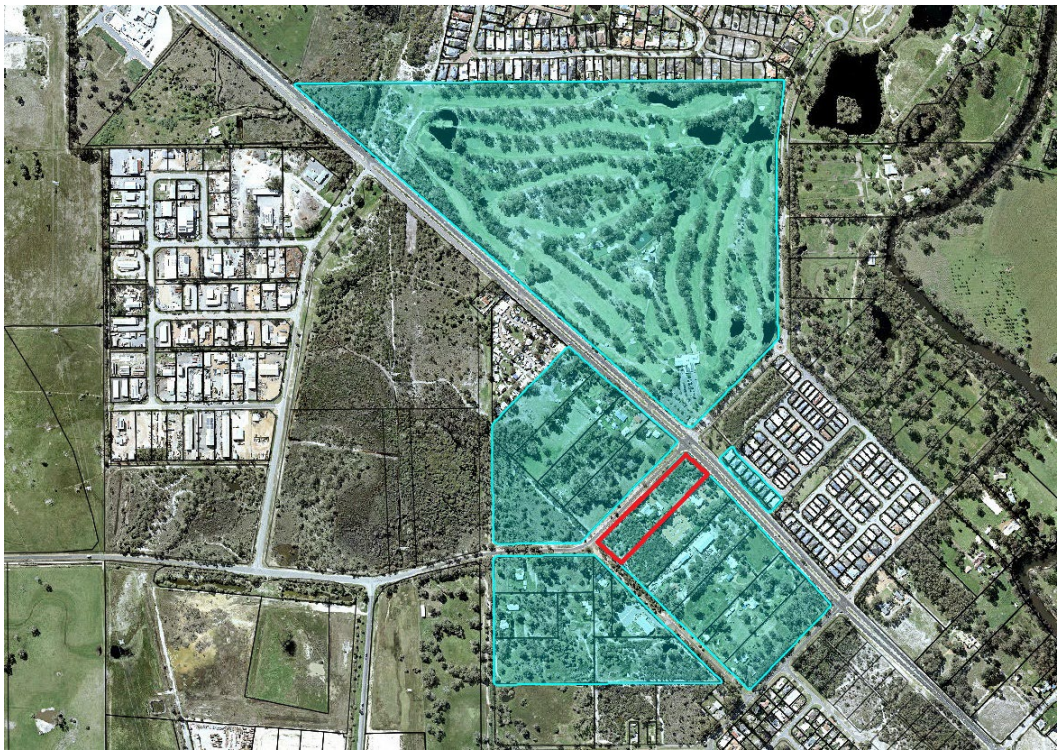
Public Consultation

In accordance with Regulation 64(4) of the Deemed Provisions under the *Planning and Development (Local Planning Schemes) Regulations 2015*. Public consultation was undertaken as follows:

- Letters sent to the landowner/s of the properties shown in **Figure 3** below;
- Notice published on the Shire's website with a FAQ and in the local newspaper; and
- A sign erected on-site.

The advertising period was 14 days from 4 June 2025 to 18 June 2025. Hard copies of the application and supporting documents were available for inspection online and at the Shire's Administration Office for the duration of the advertising period.

One (1) submission was received in support of the application. The submission supported the proposed dog park component of the development.



3. Scope of written consultation.

Referrals/consultation with Government/Service Agencies

The proposal was referred to the following government agencies:

- Department of Planning Lands and Heritage (DPLH);
- Main Roads Western Australia; and
- Department of Education.

All agency responses are provided in **Attachment 3.** MRWA and DPLH did not object to the proposal. Department of Education's comments are considered below.

Department of Education (DoE) First Submission (Summarised)
Indicated that the proposed location of the primary school in the Pinjarra District Structure Plan (PDSP) would not be suitable for primary school site due to the road hierarchy and safety concerns. DoE stated that they may or may not have concerns with the proposed veterinary centre depending on the future Primary School location in this vicinity.
Shire Comment Following the above advice, the Shire recommended two (2) other alternative locations for the school site as part of the PDSP. Both alternative locations were not supported by DoE as they were too close and did not provide appropriate distribution across the broader PDSP area. Additionally, both alternative locations have valid structure plan approvals which do not contain a primary school. There was some confusion by the DoE as to the location of the proposed veterinary centre in relation to the proposed school. The Department was of the understanding that it was proposed on the opposite side of Moores Road. This was clarified before the DoE's updated advice (below).
DoE Second Submission (Summarised)
Given that the subject site appears to conflict with the earmarked primary school site and strategic planning intent for future educational infrastructure delivery in the area, the Department does not support the proposal at this stage.
Shire Comment The Shire shares the concern with the loss of the potential Primary School site likely to significantly impact the implementation of the Pinjarra District Structure Plan.

Design Review Panel Advice

Not applicable.

Other Advice

Not applicable.

Planning Assessment:

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

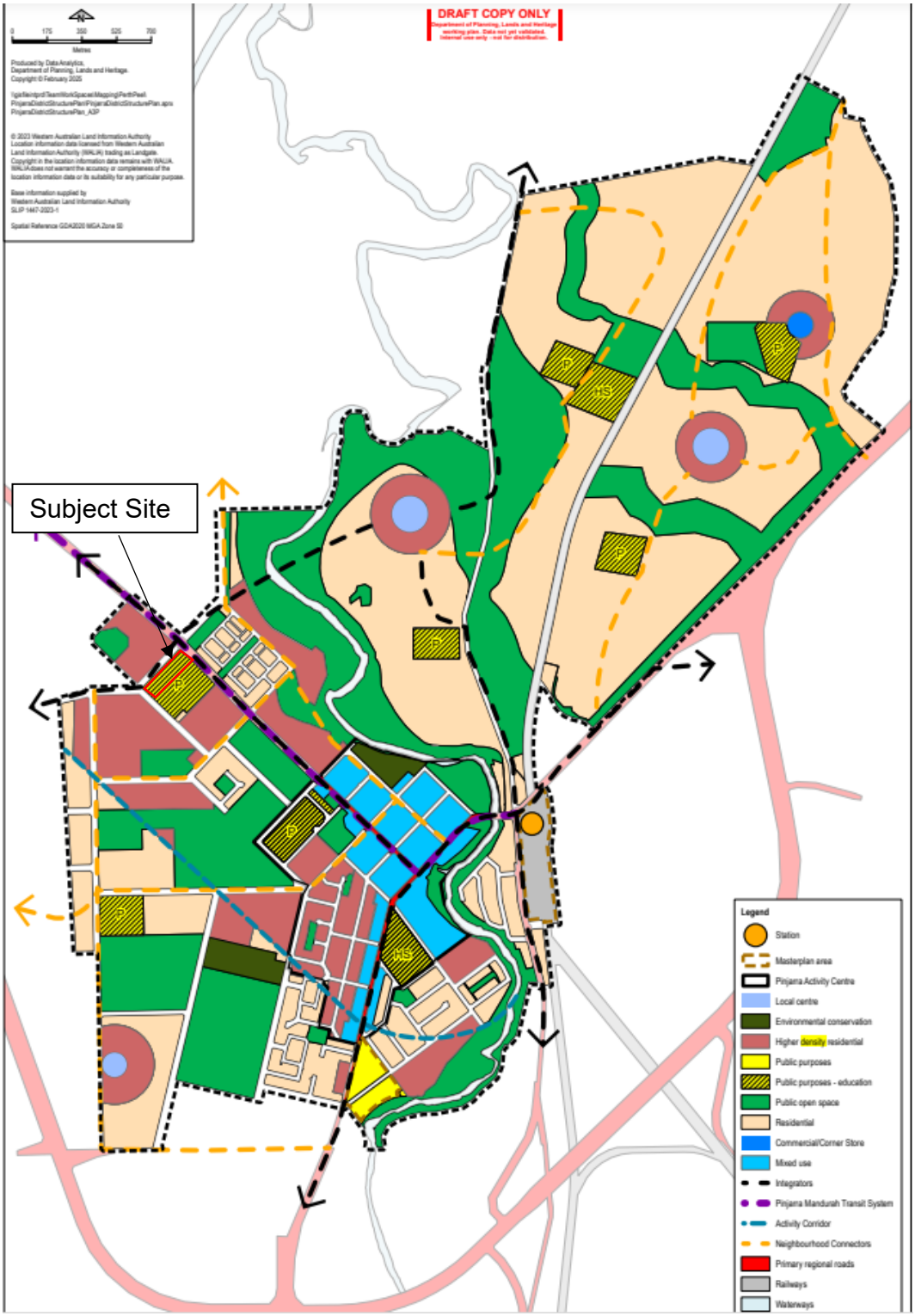
- Future Primary School
- Out of Centre Development
- Ad Hoc Nature of the Proposal
- Weight Given to Emerging Planning Framework
- Road Widening
- Noise

Future Proposed Primary School

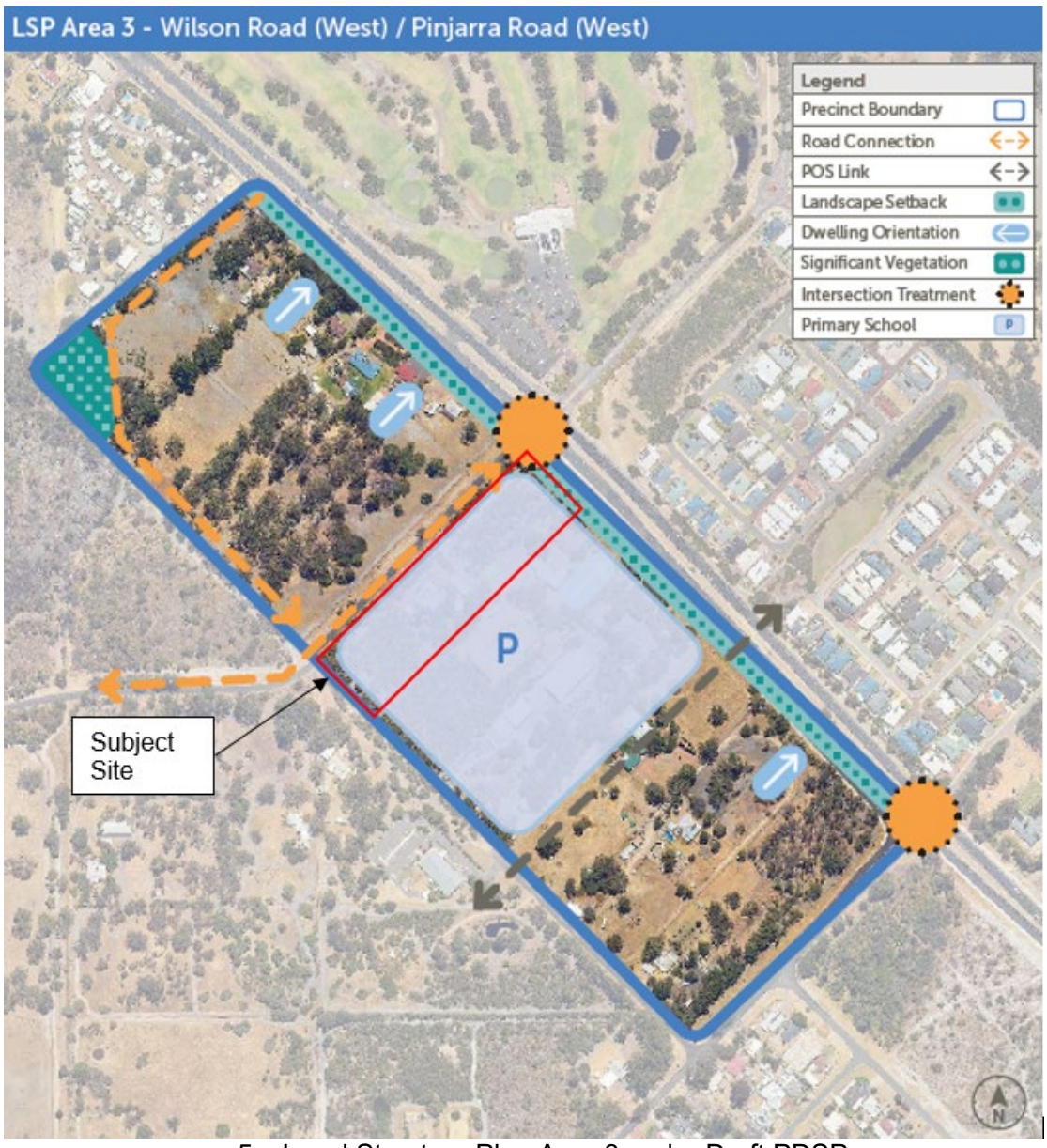
The subject site has been identified within the draft PDSP as a future Primary School site (**Figures 4, 5** & **6**). The Department of Education (DoE) originally raised concerns with the proposed location as Pinjarra Road is a Primary Regional Road and *operational Policy 2.4 Planning for School Sites* and *Liveable Neighbourhoods* do not recommend schools in such locations due to traffic safety. After receiving the advice, the Shire undertook further investigations which concluded that:

- There is not enough unconstrained land within draft PDSP Precincts LPS1 and LPS2 (**Figure 7**) to accommodate a Primary School.
- LPS precincts 4 and 5 under the draft PDSP both have valid Structure Plans that currently do not contain a primary school and can currently be implemented. It is therefore impractical and unreasonable to retroactively designate a new primary school within these precincts.
- If the proposed school in LPS3 was moved to LPS4 (despite not being provided in the approved structure plan) it would cause the school in urban expansion area 2 to move to LPS5 (also no approved school) which is on the urban periphery.
- If the proposed school is removed there will be an undersupply of Primary Schools.

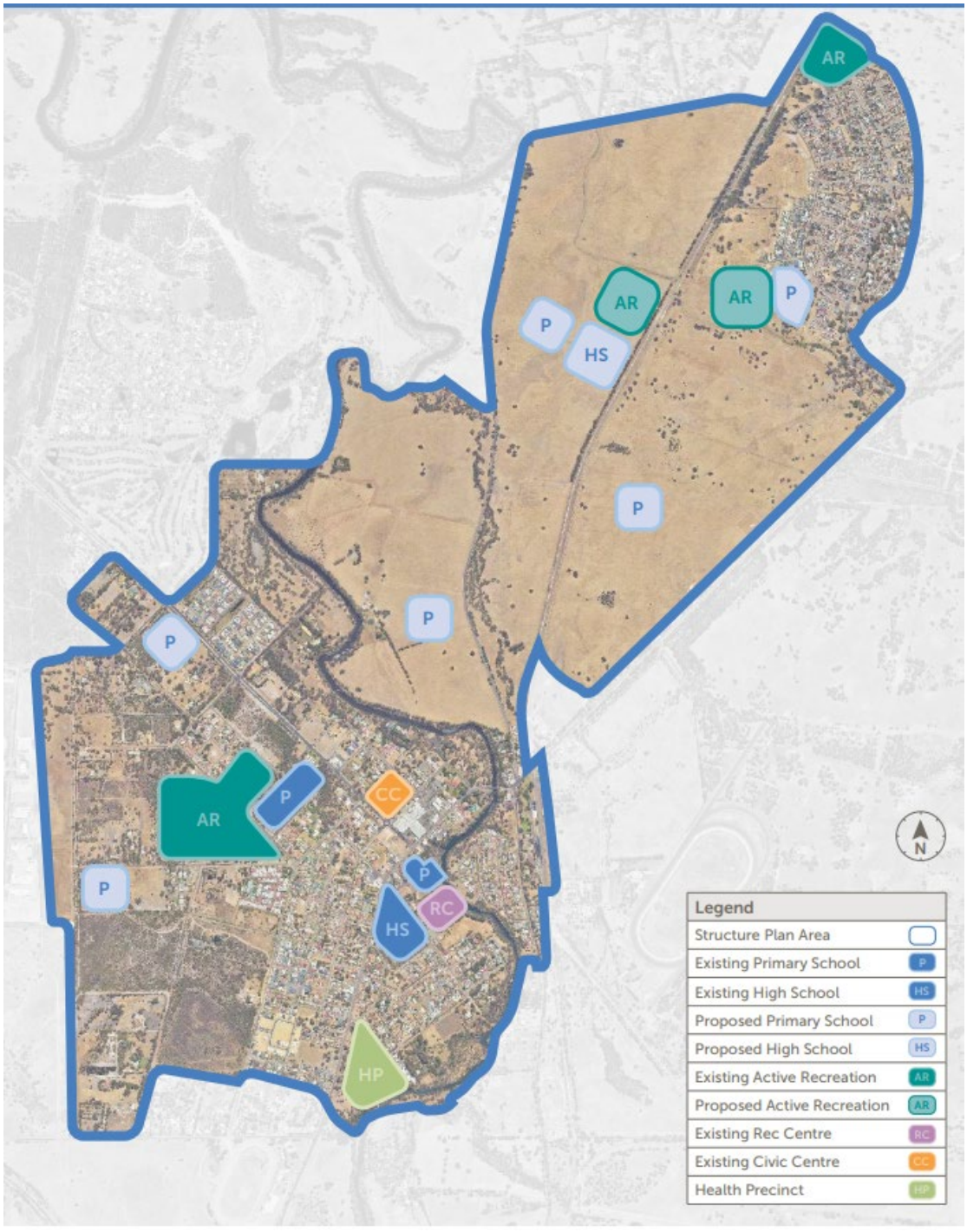
The above matters were put to DoE which ultimately agreed and acknowledged that the subject site in LPS3 is a preferred site within the PDSP for a Primary School.



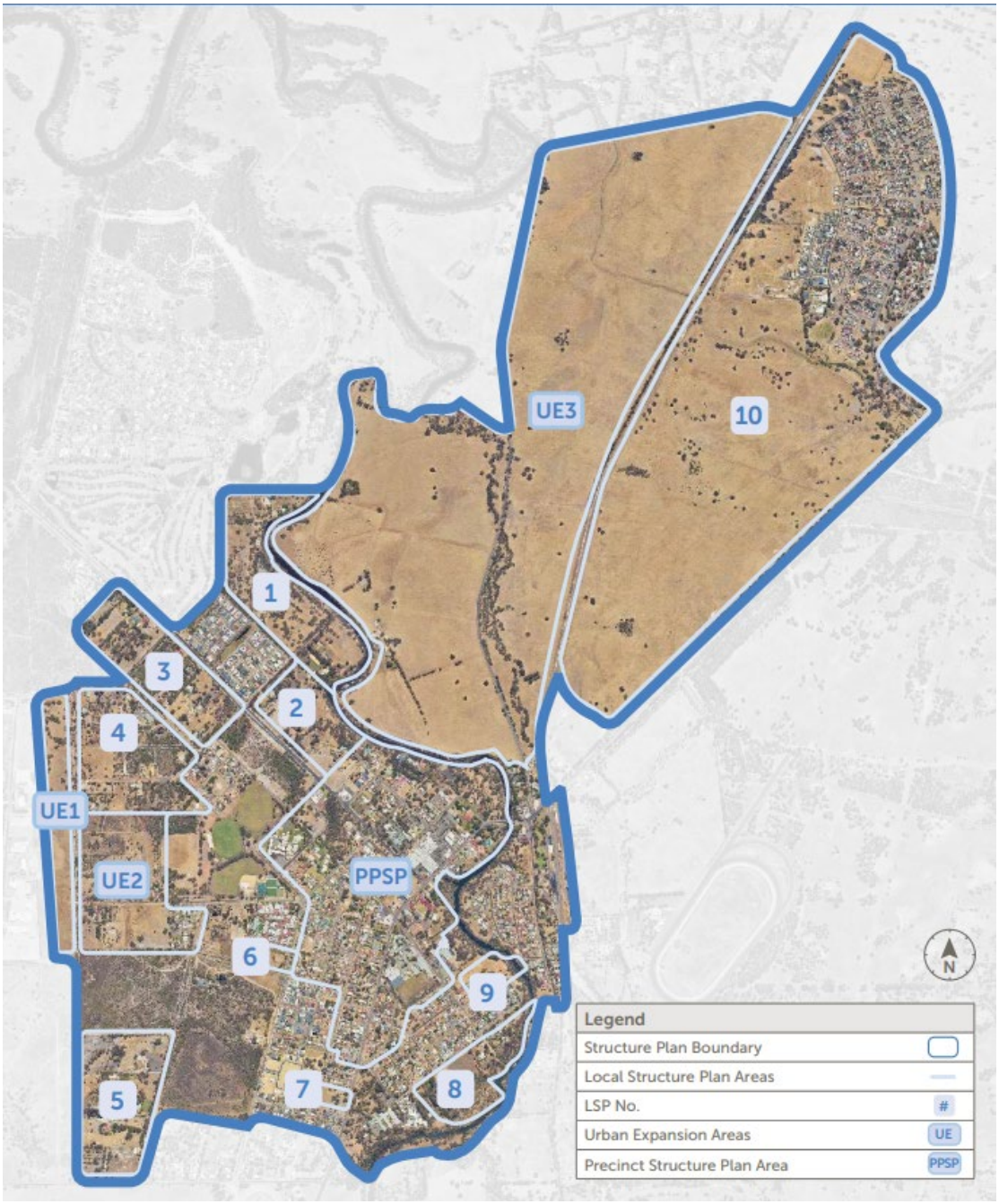
4. Draft District Structure Plan Map under Draft PDSP.



5. Local Structure Plan Area 3 under Draft PDSP.



6. Community Facilities Plan under Draft PDSP



7. Structure Plans Areas under Draft PDSP

Out of Centre Development

Pinjarra is identified as a Secondary Centre within State Planning Policy 4.2 (SPP 4.2). The objectives of SPP 4.2 are:

- *Locate people and the employment, goods and services they need close to each other within activity centres.*
- *Promote activity centres as the focus of integrated and well-designed medium and high-density residential and mixed use development.*
- *Plan for the sustainable growth and development of activity centres ensuring development intensity is appropriate to a centre's position in the activity centre hierarchy.*

- *Manage the hierarchy of activity centres to ensure efficient and equitable access by the community to employment opportunities, housing choice and a broad range of goods and services.*
- *Ensure activity centres are accessible and well served by a range of transport options with a priority on walking, cycling and public transport use.*
- *Ensure the urban form of activity centres enables the primary focus of activity to be on the street, in the public realm and connected to public open spaces.*

Although not listed specifically in SPP4.2, a Veterinary Centre land use is reasonably considered to be a Category B PLUC: 7-Off Use i.e. the same category as a Medical Centre or an Office. It is acknowledged that SPP4.2 states that a Category B use should not be considered against the requirements of the Policy where it is a discretionary use under the Scheme, which it is, however, the strategic intent for the land, established by the PRS zoning of Urban Deferred and the PDSP designation as a primary school, site cannot be ignored. It is therefore reasonable for the decision maker to give due regard to SPP4.2 in considering the application.

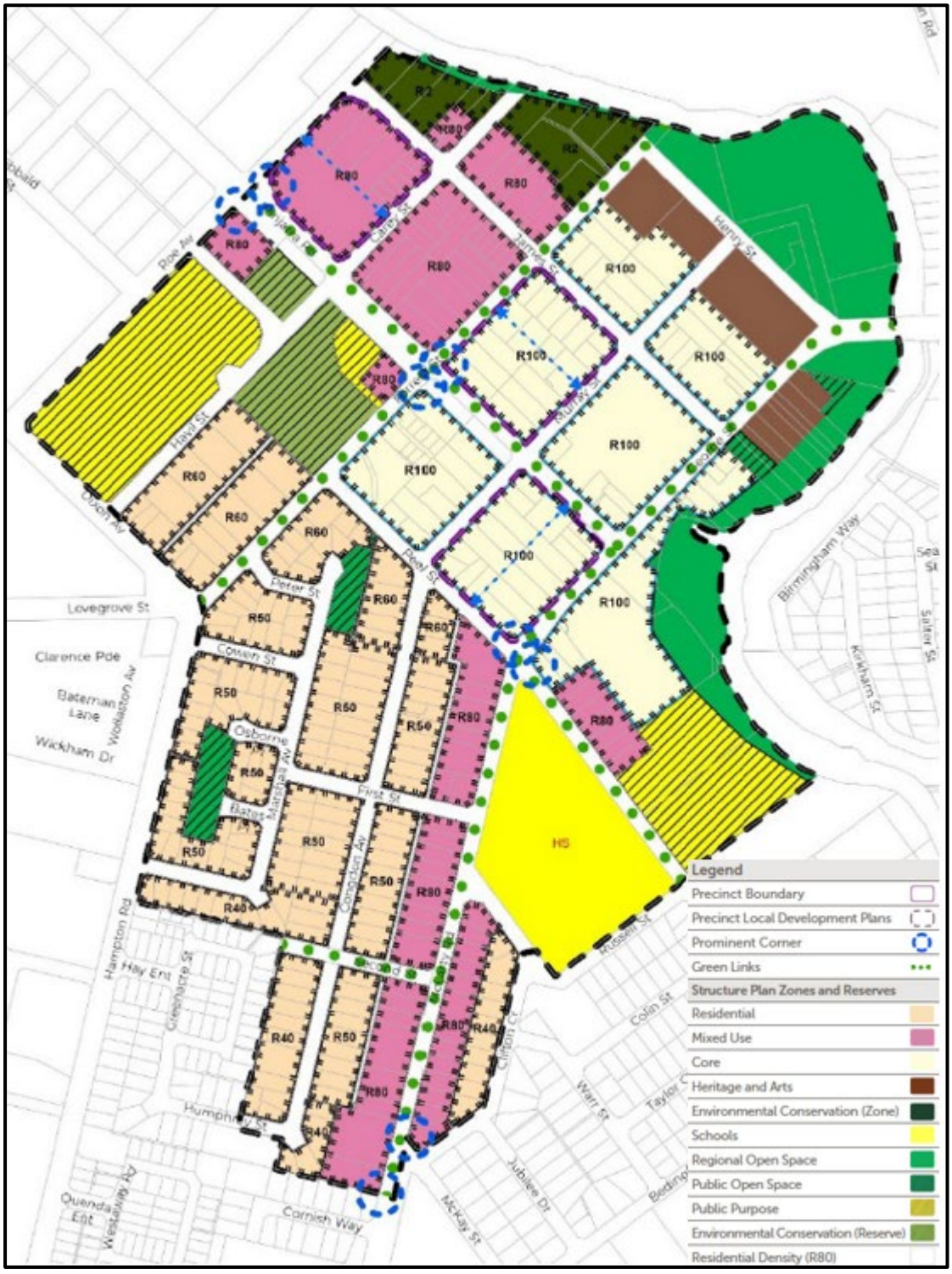
The intent of SPP 4.2 to promote highly accessible, compact and vibrant mixed-use centres that provide a high quality of life is clear. Consequently, it reinforces a clear presumption against approving out-of-centre development, as such approvals will serve to fragment activity, perpetuate car dependency and undermine the activity centre hierarchy.

In response to State Planning Policy 4.2 (SPP 4.2), the Shire has prepared the draft *Pinjarra Precinct Structure Plan* (PPSP), shown in **Figure 8**. The boundary of the PPSP, identified in consultation with the Department of Planning Lands and Heritage officers, defines the intended area for the consolidation and future growth of the Pinjarra Activity Centre. Notably, the subject land lies outside this defined boundary and therefore outside the planned extent of commercial activity intended to support a vibrant, compact and walkable town centre.

To implement the vision of the PPSP, the Shire has also prepared and advertised *Amendment No. 322* to Local Planning Scheme No. 4 (LPS4), which was supported by Council in July 2025. This amendment introduces two new zones, *Centre* and *Mixed Use,* specifically applying to land within the PPSP area, and designates both 'Veterinary Centre' and 'Veterinary Hospital' as discretionary uses within those zones. This proposed zoning framework reinforces the strategic objective to concentrate commercial and activity generating uses within the town centre, enabling critical mass, co-location of services and a high amenity urban environment.

While it is acknowledged that 'Veterinary Centre' and 'Veterinary Hospital' uses will remain discretionary in the Rural Zone, this is primarily to allow for facilities that require more extensive land areas for the treatment of large animals, uses that are fundamentally different in character and function from typical town centre businesses. The current proposal, however, is for a Veterinary Centre serving domestic pets only, with no identified need for a rural or out-of-centre location.

Locating the proposed use outside the PPSP boundary would undermine the strategic intent of the PPSP and the objectives of SPP 4.2 by dispersing commercial activity, weakening the role of the town centre, and potentially setting an undesirable precedent for further unplanned commercial expansion. Supporting such a proposal would be inconsistent with the clear planning direction to consolidate and intensify commercial development within the Pinjarra Activity Centre.



8. Draft Pinjarra Precinct Structure Plan

Ad Hoc Nature of the Proposal

The subject site is zoned 'Urban Deferred' under the PRS. This highlights that the site has an ultimate urban purpose but still needs to go through an orderly planning process including rezoning under the local planning scheme and the preparation of a local structure plan. This process will ensure the provision of public infrastructure, movement network, public open space and density are considered in a coordinated manner and that land use conflicts are appropriately planned for.

The WAPC's *Lifting of Urban and Industrial Deferment Guidelines (Guidelines)* states:

"There is a presumption against subdivision or development which will make the assembly of land and efficient provision of services and facilities for urban or industrial development more costly and difficult".

The Shire has undertaken the strategic planning for this site. This has followed an orderly and proper planning process. Approval of development prior to the above work being completed represents ad-hoc development which is inconsistent with the principles orderly and proper planning. It will significantly compromise the strategic planning undertaken for Pinjarra and compromise the ability to deliver urban land and community infrastructure.

The Shire notes that Section 6.10 of the applicant's planning report highlights the future intent to subdivide the proposed veterinary centre portion from the residential portion of the site. This intent to fragment land is also inconsistent with these guidelines.

Weight Given to Emerging Planning Framework

The draft Pinjarra Planning Framework comprises the draft PDSP, PPSP and Amendment No.322 to Local Planning Scheme No. 4. These draft documents have now been publicly advertised and at the July 2025 Council meeting were endorsed by Council. They are now considered to be seriously entertained planning proposals. When considering the weight that should be given to a seriously entertained planning proposal, the State Administrative Tribunal (SAT) in Nicholls and WAPC [2005] WASAT40 has identified the four principal criteria which should be applied:

1. The degree to which the draft addresses the specific application.
2. The degree to which the draft is based on sound town planning principles.
3. The degree to which its ultimate approval could be regarded as "certain".
4. The degree to which its ultimate approval could be regarded as "imminent".

In considering the above principles, the following comments are offered:

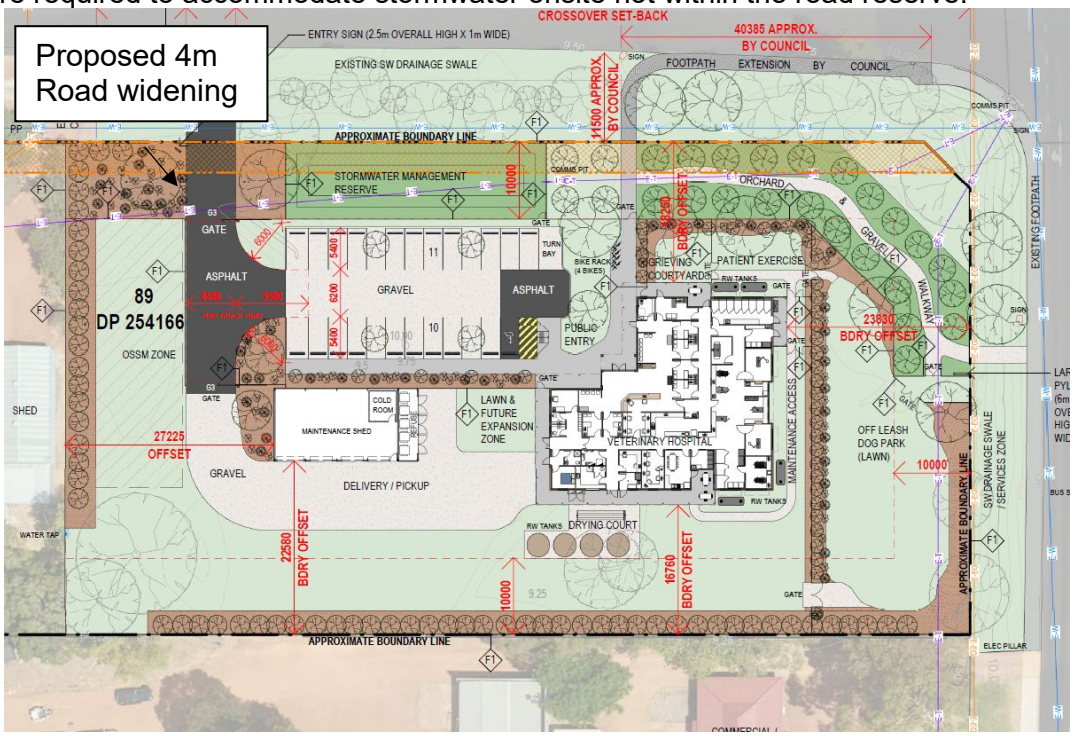
1. The draft PDSP specifically relates to the subject application as it identified as a key location for a primary school. This has been workshopped with the Department of Education who has supported this site as the most suitable location for a primary school.
2. The PDSP has been the result of over a decade of planning starting with a Revitalisation Strategy and draft Activity Centre Plan, evolving into the PDSP, the PPSP and Amendment No.322. The WAPC has required its preparation, it is consistent with the State Planning Framework and promotes sound planning principles.

3. The preparation of the PDSP was the result of explicit direction from the WAPC as such approval could be considered certain, albeit there is a possibility that some changes may be requested by the WAPC as part of its consideration and approval.
4. It is anticipated that it the PDSP will be approved by the WAPC over the next few months. Consequently, its approval should be considered imminent.

Supporting this draft planning framework is the PRS zoning of Urban Deferred, this identified the future urban zoning of the land. When considering this is totality, it is clear that significant weight must be afforded to the PDSP by the decision maker.

Road Widening

The draft PDSP identifies Moores Road as being widened from 30m to 38m. This would require an additional 4m on each side to be ceded for road widening. Additional widening is likely to be needed close to the intersection with Pinjarra Road to accommodate a necessary intersection control (such as roundabout or traffic signals). The applicant's plans do not show the intersection widening and the extent of the intersection land requirement would need to be determined following detailed design of the intersection in consultation with Main Roads WA. The plans provided in support of the application show the proposed drainage basin for the veterinary centre being within the road widening area (**Figure 9**). This is not supported by the Shire as sites are required to accommodate stormwater onsite not within the road reserve.



9. Proposed road widening and stormwater basin.

Noise

The acoustic report provided in support of the application concluded that there would be minor exceedances (1dB) during the day if dogs are barking in external areas, equally affecting Receptors R1 and R3. The proponent has recommended the following measures to achieve compliance with the *Environmental Protection (Noise) Regulations 1997:*

- Dogs that begin barking for a sustained period should be brought inside the centre for as long as practically possible until they have ceased barking. If the dog in question needs to be outside, the dog shall be kept under conditions that are least likely to make the dog bark (i.e. separation from other dogs).
- Maintain communication with occupants of nearby sensitive receivers. A particular dog with significant tonal characteristics may be of particular disturbance and should be brought inside the centre if brought to the attention of the site operator.
- Reduce and/or remove unnecessary stimulus that may trigger dogs barking.

The Shire, however, notes that the acoustic report fails to consider the sites location within a future higher density residential precinct under the PDSP (**Figure 4**). If the adjoining site at Lot 88 (1774) Pinjarra Road, Pinjarra was to be developed to a R40 standard this would introduce additional dwellings directly adjacent to the site. This represents the potential for significant future land use conflicts that may fetter the ability to deliver urban land and will impact the amenity of future residents.

Conclusion:

The subject proposal undermines the significant strategic planning efforts that have been undertaken for Pinjarra over the last decade. It will conflict with the need to provide necessary school infrastructure, complicate the delivery of urban land, undermine the role of the Pinjarra activity centre and negatively impact the amenity of proximate future residential development. Consequently, approval of this development would be inconsistent with the principles of orderly and proper planning.

Alternatives

The Metro Outer DAP may decide to approve the application with or without conditions.

MethodPlanning

Development Application

Proposed Veterinary Centre

11 Moores Road, Pinjarra

Prepared for Pinjarra Vets

Urban Planning & Project Management

methodplanning.com.au

Contents

1 Executive Summary

Method Planning presents for approval an application for a 'Veterinary Centre' at 11 Moores Road, Pinjarra (the 'subject land'). Method Planning represents Pinjarra Vets in regard to this application.

The proposed change of use has been designed having regard to the specific provisions of the City of Murray Local Planning Scheme No. 2 (LPS2) and associated Local Planning Policies.

Pinjarra Vets has been part of the Pinjarra community for 3 decades and is aiming to significant upgrade its facility, and provide a much larger and more comprehensive service to the local Pinjarra community.

This report will address the major land use planning issues pertinent to the subject land. Specifically, the report provides information on the following:

- Detail description of the project, the vision and background to the proponents.
- Location and a detailed description of the site context.
- Town planning considerations and description of the planning framework.
- Assessment of the proposed development application against the relevant planning instruments.
- Justification for the development including detail regarding the operation of the proposed land use.

Based on the detailed planning assessment presented in this report, it has been demonstrated that the proposal is consistent with or exceeds the intent of the relevant planning framework and is closely aligned with the Shire of Murray's vision for the area.

In light of the above, favourable consideration by the Development Assessment Panel is respectfully requested.

2 Introduction

Method Planning presents for approval an application for a 'Veterinary Centre' at 11 Moores Road, Pinjarra (the 'subject land'). Method Planning represents Pinjarra Veterinary Hospital in regard to this application.

The proposed change of use has been designed having regard to the specific provisions of the City of Murray Local Planning Scheme No. 2 (LPS2) and associated Local Planning Policies.

Various pre-lodgement discussions and email communications were held with the Shire of Murray Planning Team from November 2023 - December 2024. The intent of these were to discuss the proposal and to seek clarification for the requirements of the application. Feedback received from these meetings has assisted with the refinement of this application.

This report will address the major land use planning issues pertinent to the subject land. Specifically, the report provides information on the following:

- Detail description of the project, the vision and background to the proponents.
- Location and a detailed description of the site context.
- Town planning considerations and description of the planning framework.
- Assessment of the proposed development application against the relevant planning instruments.
- Justification for the development including detail regarding the operation of the proposed land use.

A team of leading technical experts has been involved in preparing this application, refer to **Table 1** below.

Table 1 – Consultant Team

Consultant	Field of Expertise
Method Planning	Urban Planning
Therian	Architecture & Design
RM Surveys	Site Feature Survey
Coterra	Environmental / Spring Flora Survey
Move Consultants	Traffic & Access
Ecoform	Bushfire Management Plan
Local Geotechnics	Site Soil Evaluation
Local Geotechnics	Geotech

3 The Project

3.1 Project Summary

The development application proposed to utilise an existing property for 'Veterinary Centre' land use that includes the following:

Veterinary Centre

- Public area and reception.
- Separate dog and cat waiting areas.
- 7 consulting rooms.
- Grieving courtyard.
- Large and small dog wards.
- X-Ray room.
- 2 surgeries, treatment room and surgery prep area.
- Dental surgery, ICU and recovery room.
- Laboratory and pharmacy room and workroom.
- Staff quarters (with outdoor area) and doctors' offices as well as administration areas.'
- Utility room, staff entry and small accommodation room.
- Lactation/ quite room.
- The total area of this facility is approximately 580m²

Access and Car Parking

- New 6.5m crossover and access from Moores Road, setback 95.7m from Pinjarra Road intersection
- 21 car bays, including one UA bay.
- Delivery and pick up area at the southern end of the property behind the maintenance shed.
- Reversing area for emergency fire vehicles as required for Bushfire Management.
- Internal pathways matching up with council footpath extension

Ancillary Buildings & Amenities

- Maintenance shed with cold room and bin store.
- Drying court with rainwater tanks.
- Stormwater management reserve
- OSSM zone.

Landscaping & Outdoor Areas

- Entry statement orchard and gravel walkway on the corner of Pinjarra Road and Moores Road.
- Patient exercise area.
- Off leash dos park.
- Grassed landscaped areas.
- Planting and mulched landscaped areas.
- Various fences and gates across the property.

Signage

- 6m x 21m Pylon sign along Pinjarra Road
- 2.5m x 1m sing along Moores road at crossover entry

Please see plans of proposed development at **Appendix A**,

3.2 Detailed Description

Please also refer to the ancillary information below regard operating hours, numbers of staff, as well as plant and equipment details:

- Operating hours – 6 days a week 8am – 6pm Monday to Friday, 8am – 1pm Saturdays, closed on Sundays.
- Maximum employees at any one time will be 5 Veterinarians, 10 support and 3 administration staff
- Plant and equipment – Plant and equipment is expansive and as per details on the floor plan.

3.3 About Pinjarra Vets

Pinjarra Vets has been part of the Pinjarra community for 3 decades and is aiming to significant upgrade its facility, and provide a much larger and more comprehensive service to the local Pinjarra community.

It is Pinjarra Vets mission to provide the highest quality of veterinary care to pets by delivering excellence in not only veterinary skills and knowledge, but also genuine and passionate care for their patients, in the short and long term; so the bond between owners and their pets can live on strong, healthy and happy. For more information please see https://www.pinjarravets.com.au/

Some of the services they provide include the following

- Medication Renewal
- Cat Vaccination
- Dog Vaccination
- Desexing
- Dental
- Ophthalmic
- Orthopaedic
- Radiography
- Soft Tissue Surgery
- Pet Euthanasia
- Ultrasonography
- Mites
- Emergency Procedures
- Specialist Referrals

4 Site Description & Local Context

4.1 Site Description

The subject land is located within the Shire of Murray on the corner of the Moores and Pinjarra Roads. The southwest portion contained an existing single dwelling, with the northeast half (approximately 8,000m²) of the subject site subject to this Development Application

The subject land legally described as Lot 89 on Deposited Plan 254166 Volume 1229, Folio 693 (11 Moores Road). The site has a total area of total area of 1.8042 hectares with 276m frontage to Moores Road, 59m to Pinjarra Road and 64.78m to Tuckey Street (unsealed track).

The site is currently accessed via a single crossover to Moores Road, the Shire of Murray has advised that it is subject to 3.89m road widening along Moores Road, this land has not been set aside as road reserve or for future road widening and will be subject to acquisition by the relevant authority at the time it is ceded.

The subject land contains existing vegetation, a portion to be cleared to facilitate development. A spring flora survey was undertaken in support of the proposal.

Please refer to **Appendix B – Certificate of Title and Appendix C – Site Feature Survey**, as well as **Figure 1** below showing cadastral boundaries and **Figure 2 –Aerial Photo.** See also photos for the site and surrounds in **Plates 1-6.**

Figure 1 – Cadastral Boundaries

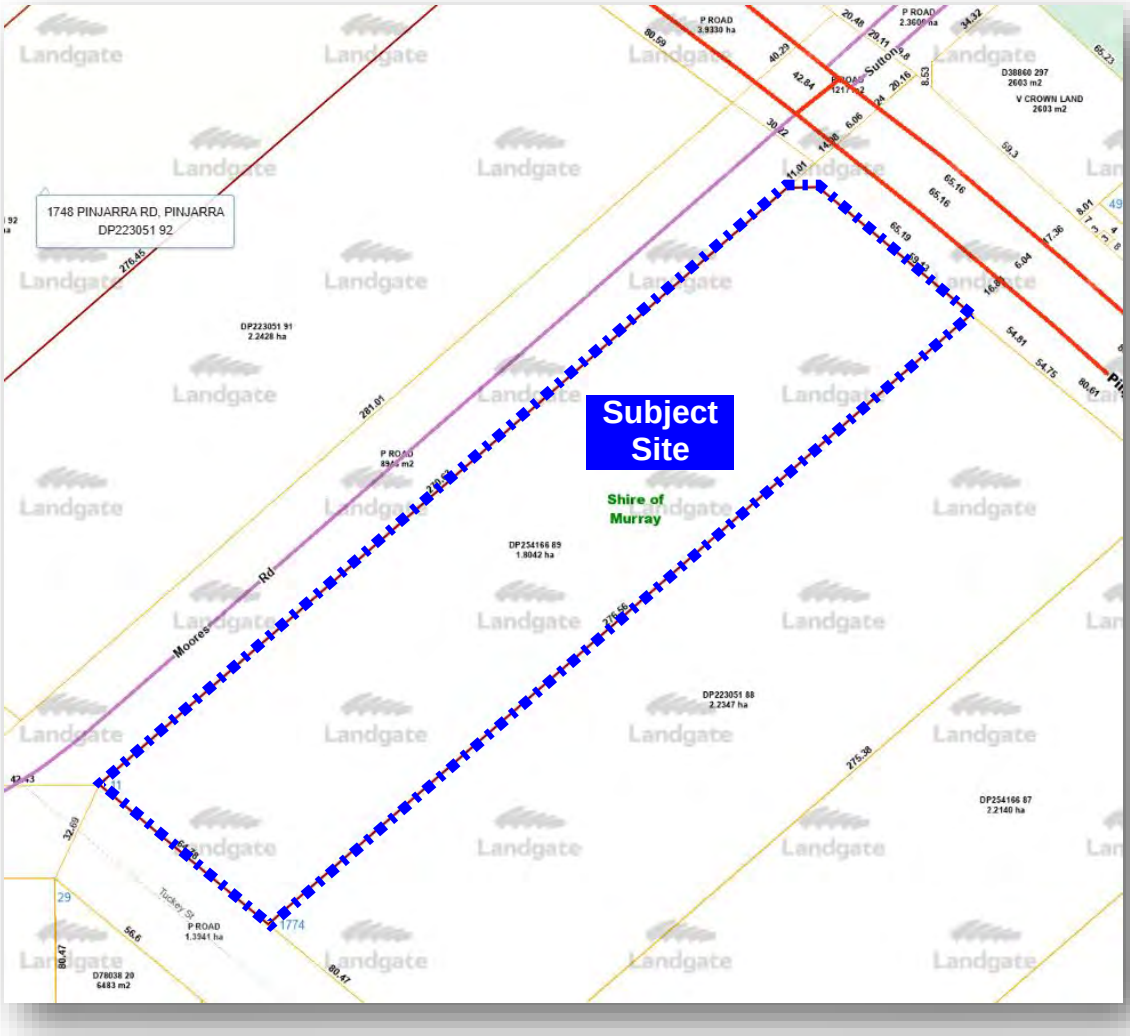


Figure 2 – Aerial Photo

Plate 1 – Moores Road Frontage

Plate 2 – Existing Crossover Moores Road

Plate 3 – Corner Pinjarra Road & Moores Road

Plate 4 – East Side Pinjarra Road

Plate 5 – Internal Firebreak with South Neighbour

Plate 6 – Internal view into site from Moores Road

4.2 Local Context

The site is located within the rural area, but at the urban front of the Pinjarra Town Centre, notably the area is zoned “Urban Deferred” under the Peel Regional Scheme, with future structure planning and Local Scheme amendments to follow, as well as lifting of the urban deferment. Please see **Figure 3 – Local Context Map** to understand the site and its surrounds, as well as the description below.

The site is currently surrounded by a range of rural and recreation land uses, to the north and north-west plus some special residential land to the south and urban land to the north-east. Directing adjoining the site is a commercial use to the south and the house to be retained in the west.

The site is currently described as a Special Residential block, in line with some surrounding land uses, noting the WA Planning Commission is actively discouraging such land uses. as Special residential development is considered an inefficient use of residential land. It places pressure on State and local governments for services and infrastructure which are difficult to provide because of the dispersed pattern of subdivision. It can also limit opportunities for urban development by fragmenting land and making land assembly and the provision of services more difficult and costly.

The site is perfectly located in its immediate surrounds for a veterinary centre as there are buffers and transition to all boundaries of the development. The site has excellent access to the regional road network and public transport along Pinjarra Road and is demonstrably meeting the needs of its catchment by replacing the current veterinary centre at 1754 Pinjarra Rd.

Regarding various other matters relating to planning and associated legislation the following detail is provided:

- The subject site is located within a bushfire prone area and a Bushfire Assessment is included in this application.
- The site does not contain any Threatened Ecological Communities (TEC), and a spring flora survey was undertaken to confirm this.
- Pinjarra Road to the north-east of the site has been designated as a Primary Distributor Road under the *Main Roads WA Functional Road Hierarchy*. Moores Road, which is located along the north-western boundary of the site, is a local road providing direct access to the local industrial precinct to the west of the site as well as access to existing special residential properties.
- The site is part of Aboriginal Cultural Heritage (ACH) Register Place 3786.
- A search of the contaminated sites database does not identify the site as a contaminated site.

With frontage and access along Pinjarra Road, the proposed veterinary centre provides ease of access and a vital service to Pinjarra locals, as well residents and workforce within the wider district catchment.

Figure 3 - Local Context Map

11 Moores Road, Pinjarra

Date:	TD
Designed By:	10/3/2025
Drafted by:	TD
Drawing No.:	Fig 3

Not to Scale

N

Method Planning
20/663 Newcastle St, Leederville WA 6007
Ph 0421 567 180
admin@methodplanning.com.au
methodplanning.com.au

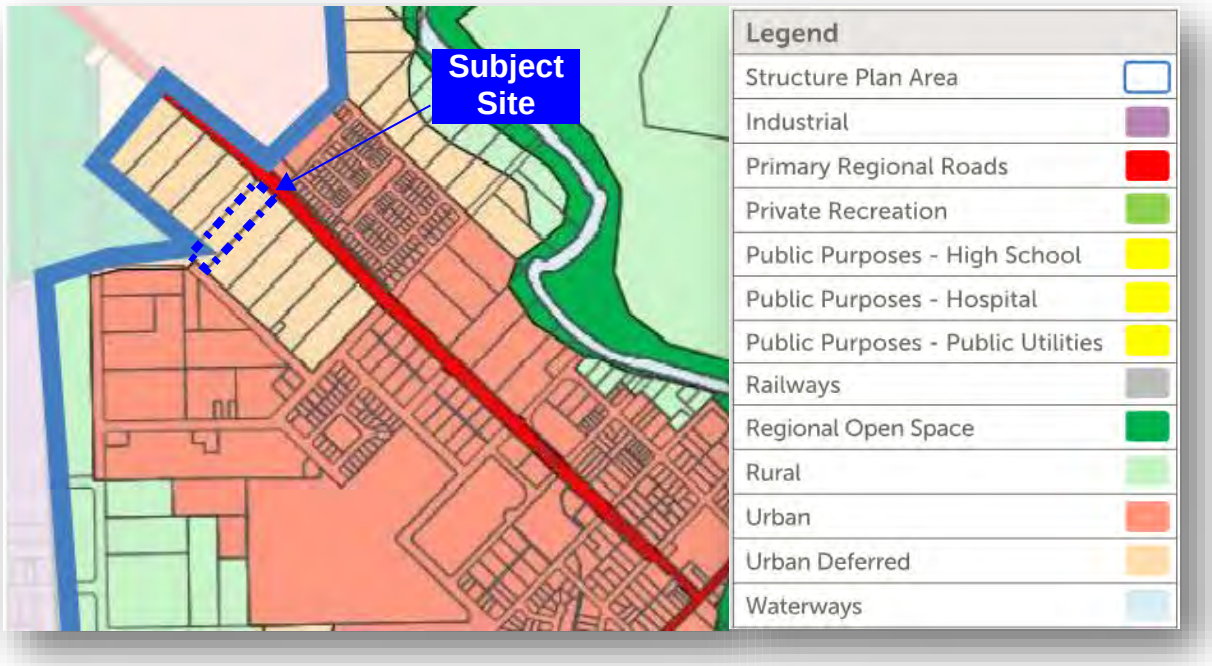
Method Planning

5 Town Planning Framework

5.1 Peel Region Scheme

The subject site is subject to the provisions set out under the WAPC Peel Region Scheme (PRS). Under PRS, the subject site is zoned "Urban Deferred"' Urban deferred means *land identified for future urban uses following the extension of urban services, the progressive development of adjacent urban areas, and resolution of any environmental and planning requirements relating to development*. The WAPC must be satisfied that these issues have been addressed before lifting the urban deferment.

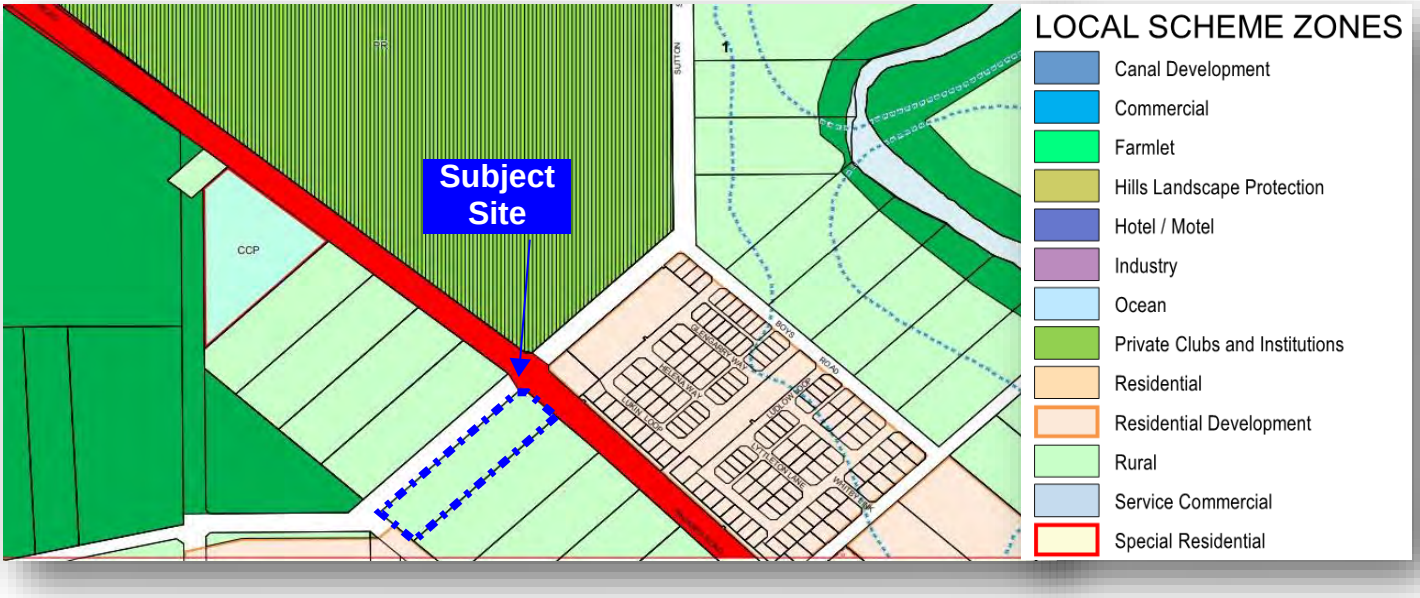
Figure 4 – Peel Region Scheme



5.2 Town Planning Scheme No. 4

The subject site is subject to the provisions set out under the Shire of Murray Town Planning Scheme No. 4 (TPS4). Under TPS4, the subject site is zoned "Rural' and adjoins a Primary Regional Road Reserve as shown in **Figure 5** below.

Figure 5 – Shire of Murray TPS Zoning



5.2.1 Land Use

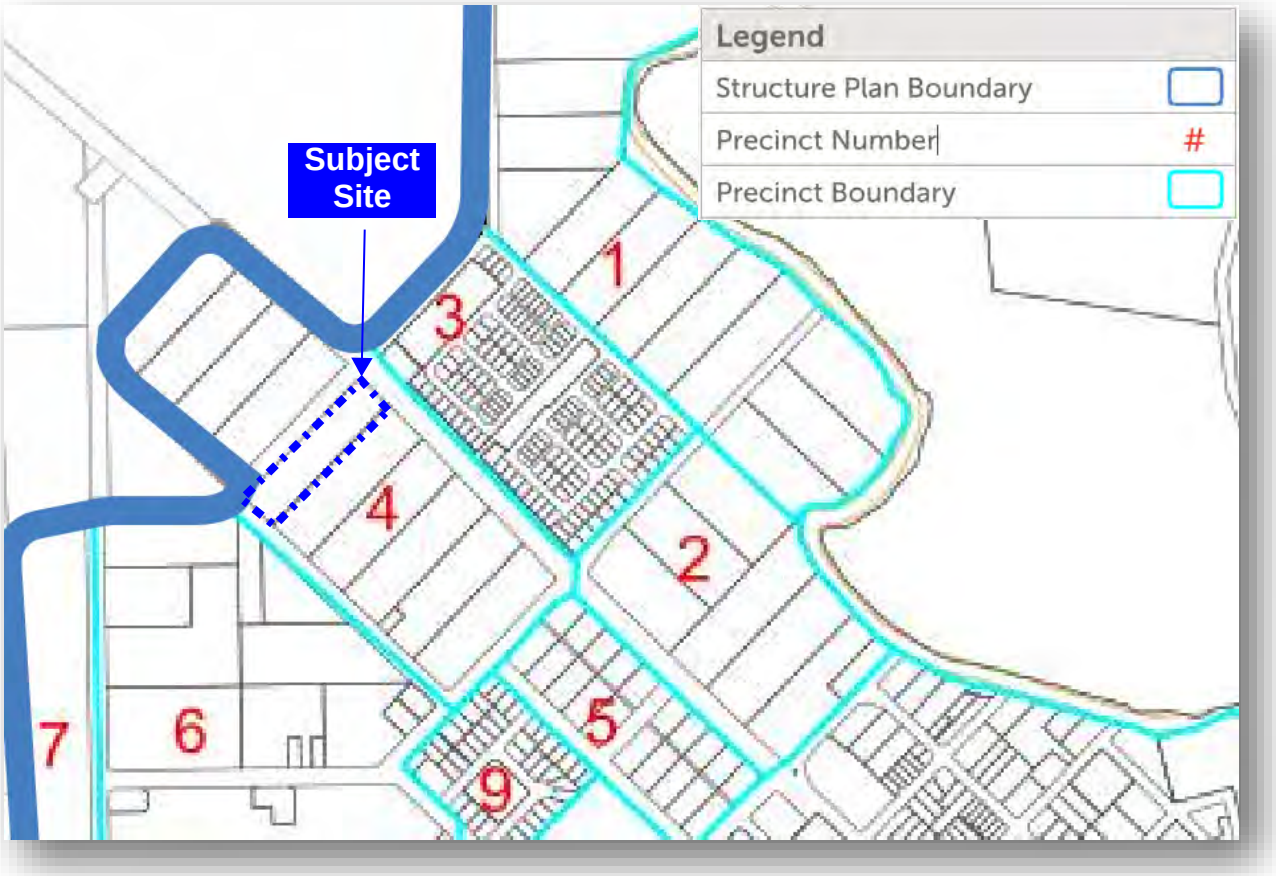
The proposed land use under TPS4, as per the land use table and schedule of definitions is categorised as a veterinary centre. A Veterinary centre *means premises used to diagnose animal diseases or disorders, to surgically or medically treat animals, or for the prevention of animal diseases or disorders.*

A veterinary centre in the Rural zone is an 'AA' use, which the Council may at its discretion permit provided it is satisfied that such use would not be contrary to the orderly and proper planning of the area. This report sets out to justify that it is not contrary to the orderly and proper planning of the area.

5.3 Draft Pinjarra District Structure Plan.

The Draft Pinjarra District Structure Plan (DPDSP) was endorsed for advertising in December 2024. It currently shows the subject land within Precinct 4 of the DPDSP, see **Figure 6 & 7**, including draft planning intent from the DPDSP .

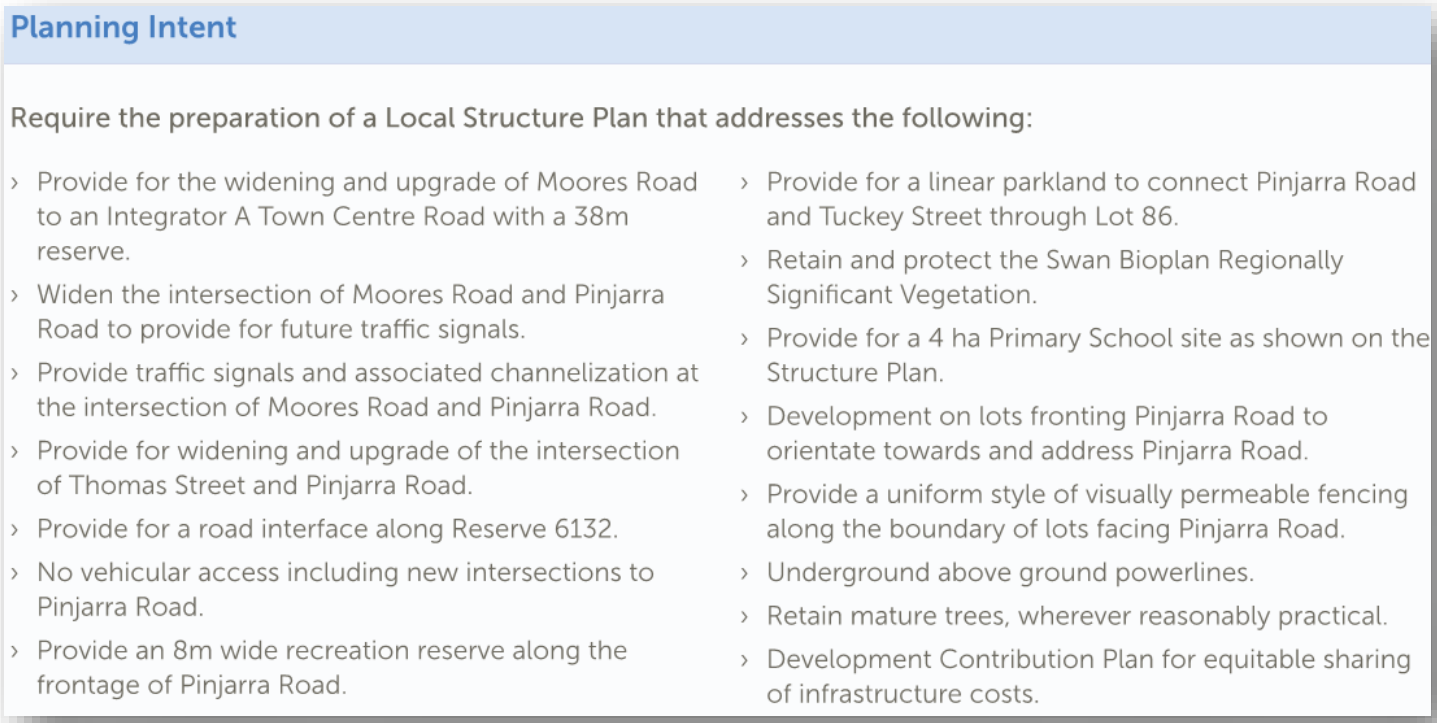
Figure 6 - Pinjarra District Structure Plan Precinct 04 - LSP3 - Moores Road / Tuckey Street / Wilson Road / Pinjarra Road



The precinct is Urban Deferred under the South Metropolitan and Peel Sub-regional Planning Framework, Urban Deferred under the PRS and Rural under the LPS. Current land uses are generally rural residential in nature with rural pursuits; however Lot 88 accommodates an electrical service industry. Noting it fails to mention the existing Veterinary Centre at 1754 Pinjarra Road).

The area contains Multiple Use Wetland, with Lot 84 containing resource enhancement area and an environmental sensitive area that extends from the resource enhancement wetland on Lot 84 and conservation category wetland southeast of Wilson Road within Precinct 05.

Figure 7 - Pinjarra District Structure Plan Precinct 4 Planning Intent



5.4 State Planning Policies

The following State Planning policies (SPP) may apply to development on the subject land:

- 3.7 - Bushfire
- 2.1 - Peel-Harvey Coastal Plain Catchment Policy
- 2.4 - Basic Raw Materials Policy
- 5.4 - Road and Rail Noise

5.5 Local Planning Policies

The following Local Planning Policies may apply to development on the subject land:

- Biodiversity Protection
- General Development Provisions – Building Setbacks, Car Parking Standards
- Signs
- Water Sensitive Urban Design

6 Development Assessment

6.1 Orderly and Proper Planning

In addition to the assessment and relevant justification provided for the land use, the principles of orderly and proper planning require that the land use and development is consistent with the planning vision for the area. The 'Veterinary Centre' land use is compatible with the 'Rural' zone and meets the objectives of the Scheme, Draft Pinjarra District Structure Plan and future urbanisation of the area as follows:

- It helps to protect and foster the agricultural industry within the Scheme Area by supporting the medical needs of animals;
- It preserves and consolidates the individual identity of urban settlements (villages) by being located within the periphery of the Pinjarra District Structure Plan area, in close proximity to both the settlements and rural land holdings;
- It facilities the consolidation of the central business district of the Pinjarra townsite and thus improves accessibility to and car parking within it;
- The location of the veterinary centre does not prejudice the recreational potential of the Scheme Area, nor the encouragement of industrial uses to establish within the area set aside for that purpose; and
- Ensures the preservation of the special environment associated with the lakes and waterways within the Scheme Area.

6.2 TPS4 General Development Standards

The proposed development meets Part 7 of TPS4 as follows:

- Car bays can be used independently.
- Manoeuvring of cars meets the widths shown in TPS4 Figure 1.
- Service vehicles can enter the street in forward gear and loading and unloading is provided clear of the street.
- Landscaped areas are proposed to be located in such positions so as to enhance the appearance of Pinjarra Road and Moores Road and screens from view and softens the impact of parking areas, storage areas and the rear shed to ensure development does not detract from the visual amenity of the townscape.

6.2.1 Building Envelopes

Building envelopes are dealt with under clause 7.6.1 of TPS4. The objectives of building envelopes are to:

a) *position and cluster buildings on a lot so as to minimise adverse visual impacts on the landscape character, streetscape and amenity of an area;*
b) *ensure buildings and effluent disposal facilities are adequately separated from water courses, wetlands, ground water, flood prone areas, areas of inundation, sources of transport noise and other environmental or site features;*
c) *minimise the need to clear significant vegetation or areas of revegetation for the construction of buildings and effluent disposal facilities;*
d) *avoid constructing buildings and effluent disposal facilities where ground or soil conditions may be unsuitable; and*
e) *assist in the effective management of bush fire risk.*

Specific provision around sizing of and location of building envelopes are a result of the underlying rural zoning, without consideration of future urban development, as envisaged by the "Urban Deferred" zone under the PRS.

It is therefore prudent to plan for the future and ensure the building envelope meets the above objectives and not the prescribed provisions that are superseded by LPP or will become outdated once the land is urbanised. The proposal meets the objectives as follows:

a) The development is screened by landscaping, setbacks and the new orchard walkway on the corner, ensuring minimisation of visual impact.
b) The site soil evaluation and technical reporting ensures that buildings and effluent disposal facilities are adequately separated from water courses, wetlands, ground water, flood prone areas, areas of inundation, sources of transport noise and other environmental or site features.
c) Clearing has been minimised, and significant revegetation is proposed, refer to section 6.3 below.
d) The site soil evaluation and technical reporting ensures the avoidance of buildings and effluent disposal facilities where ground or soil conditions may be unsuitable, refer to section 6.6 below.
e) Effective bushfire risk is managed through the Bushfire Management Plan detailed in section 6.8 below.

6.3 LPP - Biodiversity Protection

All proposals for clearing of local natural areas require planning approval prior to the commencement of works. Where approval is required, applicants need to clearly demonstrate that the proposal meets the objectives and requirements of the LPP.

In undertaking some clearing of natural vegetation, Coterra Environment and Del Botanics Environmental Consulting undertook a spring flora survey in September 2024, with the full results detailed in **Appendix D**.

The Flora and Vegetation Assessment undertaken in the area described above identified 48 flora species, with 45.8% represented by weed species. The vegetation condition is “Good” to “Completely Degraded.”

One vegetation community was recorded at a local level during the survey. No species of Threatened (T), or Priority Flora or Threatened Ecological Communities (TEC’s) pursuant to the Biodiversity Conservation (BC) Act, 2016 and the Environment Protection and Biodiversity Conservation (EPBC) Act, 1999 were located during the time of the survey.

Therefore, the proposal meets the Biodiversity Protection LPP to protect, maintain and enhance the viability of habitats, ecological communities, flora and fauna, and biodiversity.

6.4 LPP - Built Form

The proposed single storey pitched roof building fits with the existing urban fabric and rural character of the area, and setbacks are 18.25m to Moores Road (front) and 23.83m to Pinjarra Road (side) and 16.76m rear setbacks, exceeding all commercial, office and rural industry minimum setback requirements in the General Development Requirements LPP.

6.5 LPP - Car Parking and Access

6.5.1 Transport Impact Assessment

Move Consultants has been commissioned to prepare a Transport Impact and Parking Assessment The assessment has been prepared in accordance with the Shire of Murray’s local planning framework and the WAPC *Transport Impact Assessment Guidelines – Vol. 4: Individual Developments* as well as in the context of documented traffic generation and car parking demand surveys for similar developments and industry design standards and guidelines. A full copy of this report is contained at **Appendix E.**

The report concludes as follows:

The increases in daily and weekday. peak hour volumes will have a minimal impact on existing traffic operations in the area and can be comfortably accommodated within the practical capacities of the respective links on the boundary road network

In conclusion, based upon the results of this transport analysis, traffic engineering review and car parking assessment, there are not anticipated to be any safety, or operational concerns associated with the proposal and the proposed on-site car parking is appropriate and are therefore supported from a traffic perspective. (Move 2025)

6.5.2 Car and Bicycle Parking

The proposed car parking supply on the site is 21 bays inclusive of one (1) ACROD bay. This proposed on-site supply is compliant with the requirements outlined in the Shires TPS4 and Local Planning Policy: General Development Provisions – Building Setbacks, Car Parking Standards to cater to the maximum demands during operating hours.

End-of-trip facilities (including secure bicycle parking) can be provided for staff internal to the building and visitor bays can be provided external to the building along the eastern frontage in the form of a minimum of two (2) bays via secured U-rail installation. This is consistent with Council's TPS, long-term bicycle strategy and industry best-practice.

6.5.3 Road Widening

The DPDSP provides for road widening of Moores Road to an Integrator A Town Centre Road (38m), meaning widening of by 3.89m along the boundary to the subject site. This land has been accommodated in landscaping elements and will be subject to acquisition by the relevant State Authority, at the appropriate time.

6.6 Stormwater and Effluent Disposal

In undertaking development planning and ensuring the land can accommodate development, a Geotechnical Site Classification report and Site Soil Evaluation was undertaken by Local Geotechnics, these are contained in **Appendix F and G**. The reporting is summarised below and ensures the land can accommodate the development, stormwater management measures as well as the proposed onsite effluent disposal, with the measures recommend in the report.

6.6.1 Geotechnical Site Classification

Based on the site soil profile, laboratory test results and surrounding condition, the site can be classified as "CLASS S" in accordance with definitions provided in the Australian Standard AS2870 -2011. The characteristics surface movement Ys is considered to be 10 mm. An assumption of soil suction change of 2.5 m is made in this case.

We recommend discharging of surface and roof runoff onsite via soakwell. The drainage system must be designed by a qualified engineer as per requirements of the local government authority. (Local Geotechnics 2024). Stormwater will be retained on-site as per council Policy and best practise principles.

6.6.2 Site Soil Evaluation

Site soil evaluation was conducted as per AS 1547. Permeably data can be further assessed for ATU or leach drain by using Table L1 in Australian Standard AS1547. The soil category was determined using soil logs and permeability results to the soil classification table of the AS/NZS 1547:2012. (Local Geotechnics 2024)

Table 2 – Summary of Soil Evaluations

Soils Property	Result
Colour	Pale grey to pale brown
Texture	Silty SAND / SAND
Structure	Weakly Structured
Coarse Fragments	fine to medium grained sand
Permeability	6.2 m/day
Soil Category	2 (weakly structured)
Resultant Design Loading Rate (DLR) For conventional trenches (mm/day)	Primary Treated effluent 20 (Ref. Note 1, presented below from AS1547, Table L1) Secondary Treated effluent 50 (Ref. Note 1, presented below from AS1547, Table L1) Evapotranspiration Absorption (ETA)/ Evapotranspiration Seepage (ETS) systems are not normally used on soil Categories 1 to 3 (Ref. Note 4, presented below from AS1547, Table L1)

The effluent system must be designed in accordance with Australian Standard AS1547 and as per the requirements of the local council or shire. It is recommended that sustainable onsite sewage management systems can be installed to meet the needs of the proposed development. (Local Geotechnics 2024)

6.7 Entry Statement / Community Good

The proposal includes a landscape element on the corner of Pinjarra and Moores Road, please fere to **Figures 8 & 9** below. Despite no community benefit or incentives being imposed by the Shire's Scheme or LPP, Pinjarra Vets proposes to provide for an extension of the corner into a community walkway and landscaped area as an entry statement to Pinjarra, for both community members and clients.

This is a significant addition to the community good at no cost to the Shire or community.

Figure 8 – Site Plan of Entry Statement

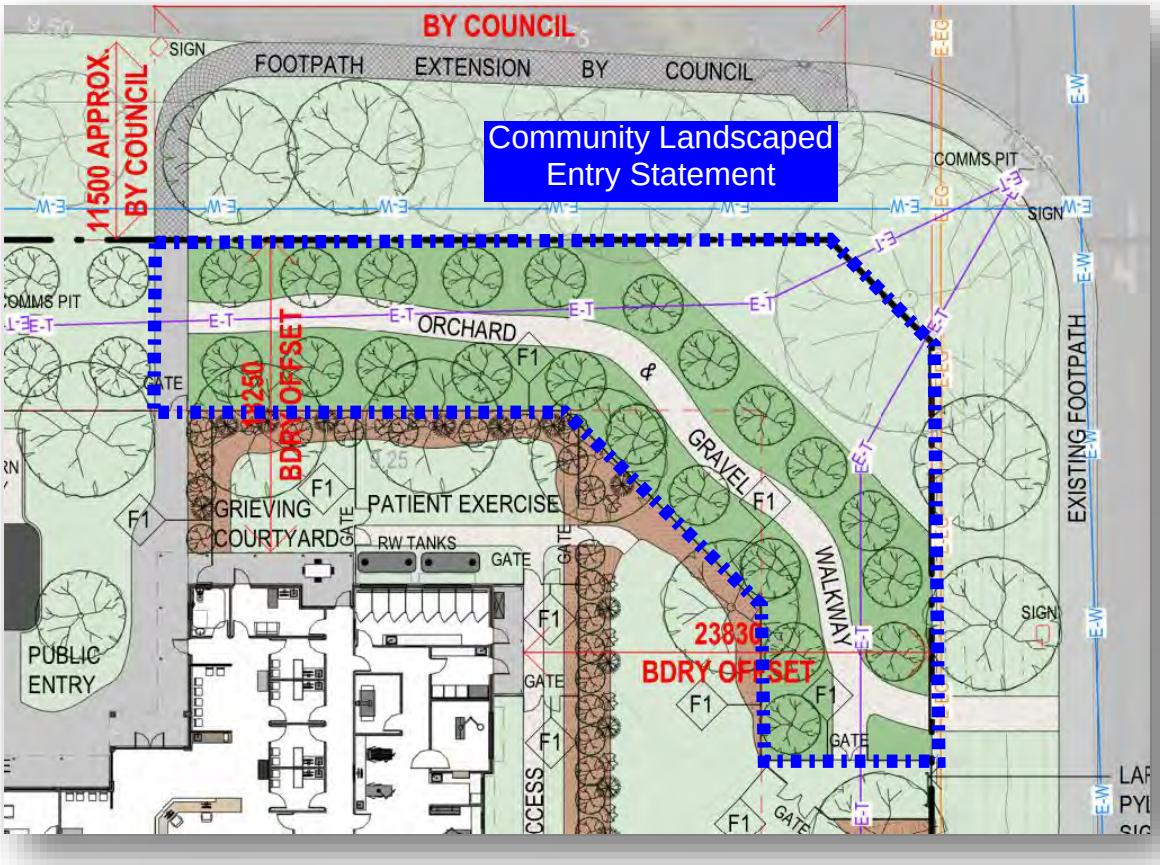


Figure 9 – Render of Entry Statement

6.8 SPP 3.7 Planning for Bushfire Guidelines

The proposal is in an area that has been designated as bushfire prone and must therefore comply with State Planning Policy 3.7 – Bushfire. The new SPP 3.7 and the Guidelines prioritise bushfire requirements early in the planning process and seeks to ensure that future development appropriately balances bushfire risk mitigation and environmental conservation measures.

The new policy seeks to implement effective, risk-based land use planning and development which in the first instance avoids the bushfire risk, but where unavoidable, manages and/or mitigates the risk to people, property and infrastructure to an acceptable level. The preservation of life and the management of bushfire impact are paramount.

Planning for Bushfire Guidelines Version: September 2024 has been used to determine the proposals compliance with SPP 3.7. An assessment against the Bushfire Protection Criteria 6 is required to be undertaken. The following table, a full copy of the report is contained at Appendix H and summarised below:

Table 3 - Summary of assessment against Bushfire Protection Criteria 6

Element	Acceptable Solution	Compliance Method	Compliance notes.
1: Location	-	N/A	
2: Siting of development	A2.1a Siting and design	Acceptable Solution	The building can achieve BAL 29 as demonstrated within the potential bushfire impacts section of this report and A2.2 below.
	A2.1b Siting in an area with a radiant heat impact exceeding 29 kW/m² (BAL-40 or BAL-FZ).	N/A	
	A2.2 Asset Protection Zone (APZ)	Acceptable Solution	An APZ can be achieved and contained within the lot boundaries. APZ dimensions to be: 13m in all directions.
	A2.3 Clearing of native vegetation	Acceptable Solution	The development does not require the clearing of native vegetation
	A2.4 Storage of hazardous, flammable and/or combustible materials	Acceptable Solution	The storage of hazardous, flammable and/or combustible materials (if any) to be within a BAL 29 area with suitable structure to shield the material and prevent the ignition of bushfire prone vegetation.
3: Vehicular Access	A3.1 Private driveways	Acceptable Solution	Private driveways can meet the requirements of the guidelines.
4: Water	A4.1 Water supply for residential habitable buildings	Acceptable Solution	Hydrants provided to comply with Water Corporation's No. 63 Water Reticulation Standard.

6.9 LPP - Signs

Signage is proposed to each street frontage with a pylon sign along Pinjarra Road, this sign is 6m high with a 4m² metal clad sign panel fixed to steel frame, See **Figure 10** below.

Figure 10 – Pylon Sign on Pinjarra Road

The sign meets the objectives of the LPP – Signs as follows:

- The sign is adequate and effective for business identification needs and is similar or smaller than other pylon signs along Pinjarra Road.
- It minimises visual clutter and rationalises the overall number of signs to one per street frontage.
- The design is of a high standard and presentation and is integrated with and does not dominate built form.
- Ensures that the character and amenity of the Shire is not eroded by excessive or poorly designed or located signs.
- The sign is sympathetic and harmonious with the site and surrounding environment.
- The location and size is not hazardous to cyclists, pedestrians or motorists.

6.10 Future Subdivision

The next stage of development will be to excise the veterinary centre from the residential site. This subdivision is possible under the rural zone and subject to approval of the WA Planning Commission. Future subdivision will not prejudice the implementation of the draft Pinjarra District Structure Plan.

7 Conclusion

This report has been prepared by Method Planning on behalf of Pinjarra Vets in support of an application Veterinary Centre' at 11 Moores Road, Pinjarra.

Based on the detailed planning assessment presented in this report, it has been demonstrated that the proposal is consistent with or exceeds the intent of the relevant planning framework and is closely aligned with the Shire of Murray's vision for the area.

In light of the above, favourable consideration by the Development Assessment Panel is respectfully requested.

Appendix A - Proposed Development Plans

PINJARRA VETERINARY HOSPITAL

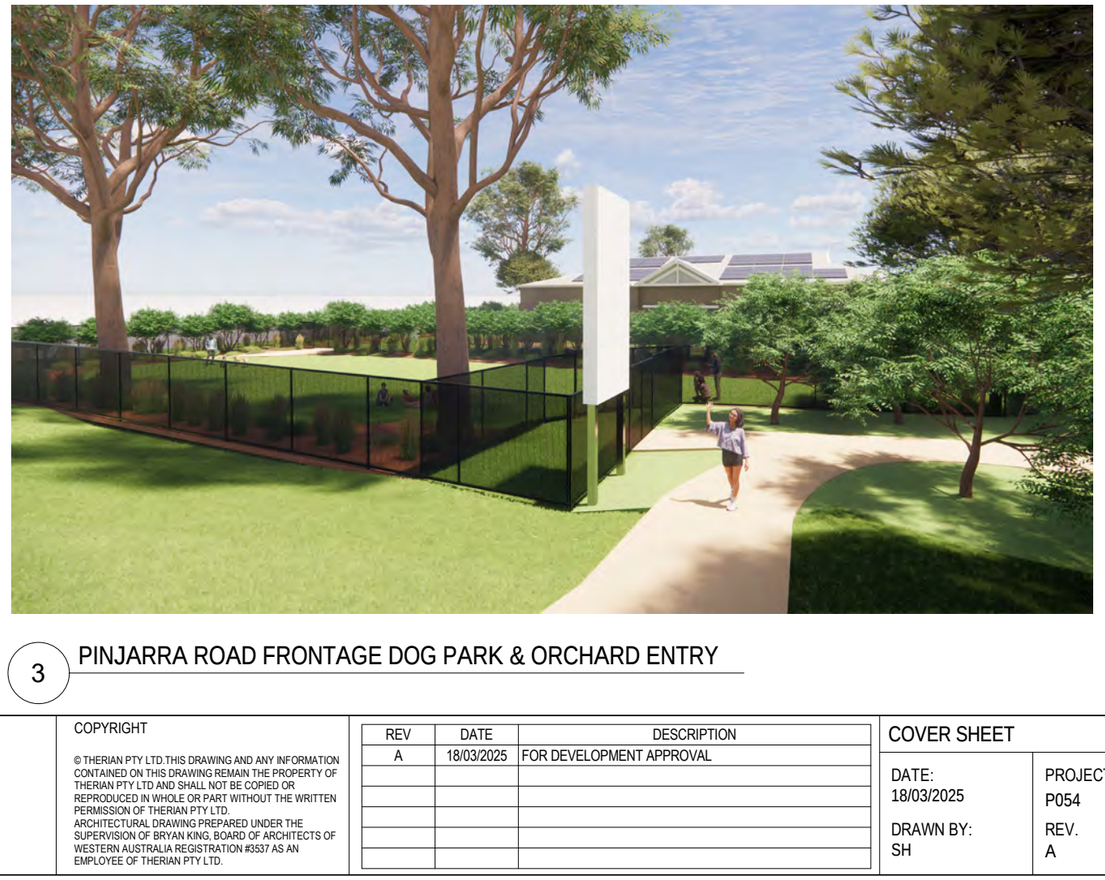
@

11 MOORES ROAD, PINJARRA

1 WESTERN PERSPECTIVE OF DEVELOPMENT AREA

DRAWING LIST	
SHEET NUMBER	SHEET NAME
DA-0.01	COVER SHEET
DA-0.02	SITE PLAN - EXISTING & CLEARING
DA-0.03	SITE PLAN - PROPOSED
DA-0.04	SITE PLAN - EXISTING DEVELOPMENT AREA
DA-0.05	SITE PLAN - PROPOSED DEVELOPMENT AREA
DA-0.06	SIGNAGE DETAILS
DA-0.07	GROUND FLOOR PLAN
DA-0.08	ELEVATIONS
DA-0.09	MAINTENANCE SHED
DA-0.10	MAINTENANCE SHED
DA-0.11	PERSPECTIVES
DA-0.12	PERSPECTIVES

2 PUBLIC ENTRY



3 PINJARRA ROAD FRONTAGE DOG PARK & ORCHARD ENTRY

FOR DEVELOPMENT APPROVAL

Therian Pty Ltd
Unit 4, 26 Commercial Drive,
Ashmore QLD, Australia 4214
TEL: (07) 5657-6777
FAX: (07) 5657-6788
EMAIL: info@therian.com.au
WEB: www.therian.com.au

CLIENT:
PINJARRA VETERINARY HOSPITAL

PROJECT:
PINJARRA VETERINARY HOSPITAL

ADDRESS:
11 MOORES ROAD, PINJARRA, WA. 6208

REV	DATE	DESCRIPTION
A	18/03/2025	FOR DEVELOPMENT APPROVAL

COVER SHEET

DATE: 18/03/2025
DRAWN BY: SH
PROJECT No. P054
REV. A
DRAWING No. DA-0.01
A3

LEGEND:

1. EXISTING RESIDENCE
2. EXISTING SHED 1
3. EXISTING SHED 2
4. EXISTING DRIVEWAY CROSSOVER
5. EXISTING PUBLIC FOOTPATH
6. EXISTING BUS STOP

DENOTES AREA THAT BE SUBJECT TO ROAD WIDENING, SUBJECT TO COUNCIL / MRWA REQUIREMENTS AND PAYMENT OF COMPENSATION TO LAND OWNER.

VEGETATION CLEARING PROPOSAL:

IN ACCORDANCE WITH THE REQUIREMENTS OUTLINED BY THE SHIRE OF MURRAY'S TOWN PLANNING SCHEME NO. 4 PLANNING APPLICATION CHECKLIST THE FOLLOWING DESCRIPTION OF VEGETATION PROPOSED TO BE REMOVED IS PROVIDED:

A. ALL DEAD VEGETATION & EXISTING VEGETATION TO PLOT 1 CLASS D SHRUB AREA OUTLINED IN THE BUSHFIRE MANAGEMENT PLAN PREPARED BY BUSHFIRE SMART IS TO BE COMPLETELY CLEARED & REMOVED FROM THE DEVELOPMENT AREA OF THE SUBJECT SITE.

B. ALL DEAD VEGETATION & EXISTING VEGETATION TO PLOT 1 CLASS D SHRUB AREA OUTLINED IN THE BUSHFIRE MANAGEMENT PLAN PREPARED BY BUSHFIRE SMART IS TO BE COMPLETELY CLEARED & REMOVED FROM THE PUBLIC ROAD RESERVE TO THE NORTH-WESTERN PERIMETER OF DEVELOPMENT AREA OF THE SUBJECT SITE.

C. ALL DEAD VEGETATION & EXISTING VEGETATION TO PLOT 3 CLASS A FOREST AREA OUTLINED IN THE BUSHFIRE MANAGEMENT PLAN PREPARED BY BUSHFIRE SMART IS TO BE COMPLETELY CLEARED & REMOVED FROM THE DEVELOPMENT AREA OF THE SUBJECT SITE.

FOR DEVELOPMENT APPROVAL

1 SITE PLAN - EXISTING OVERALL & VEGETATION CLEARING PROPOSAL

SCALE 1 : 1250

Therian Pty Ltd
Unit 4, 26 Commercial Drive,
Ashmore QLD, Australia 4214
TEL: (07) 5657-6777
FAX: (07) 5657-6788
EMAIL: info@therian.com.au
WEB: www.therian.com.au

CLIENT: PINJARRA VETERINARY HOSPITAL

PROJECT: PINJARRA VETERINARY HOSPITAL

ADDRESS: 11 MOORES ROAD, PINJARRA, WA. 6208

REV	DATE	DESCRIPTION
A	18/03/2025	FOR DEVELOPMENT APPROVAL

SITE PLAN - EXISTING & CLEARING

DATE: 18/03/2025
DRAWN BY: SH
PROJECT No. P054
REV. A
DRAWING No. DA-0.02
A3

18/03/2025 9:29:11 AM Autodesk Docs://P054 - Pinjarra Vet/P054_SITE.rvt

1 SITE PLAN - PROPOSED OVERALL
SCALE 1 : 1250

DEVELOPMENT PROPOSAL SUMMARY

EXISTING CONDITIONS

SUBJECT SITE ADDRESS:
11 MOORES ROAD, PINJARRA , WA . 6208

LOT:	SITE AREA:
89 ON DP254166	18,042.16m2

LOCAL AUTHORITY:
SHIRE OF MURRAY

LPS ZONE:
RURAL / URBAN DEFERRED

PROPOSED

DEVELOPMENT AREA:
APPROXIMATELY 7,546m2

DESCRIPTION:
NEW VETERINARY HOSPITAL & MAINTENANCE SHED

PROPOSED DEVELOPMENT AREA SITE COVERAGE:

VETERINARY HOSPITAL:	595m2
MAINTENANCE SHED:	147m2

LEGEND:

1. EXISTING RESIDENCE
2. EXISTING SHED 1
3. EXISTING SHED 2
4. EXISTING DRIVEWAY CROSSOVER
5. EXISTING PUBLIC FOOTPATH
6. EXISTING BUS STOP
7. VETERINARY HOSPITAL
8. MAINTENANCE SHED
9. NEW DEVELOPMENT CROSSOVER
10. CARPARK
11. STAFF & SERVICES ACCESS
12. ON-SITE SEWER MANAGEMENT ZONE (OSSM)
13. STORMWATER MANAGEMENT RESERVE
14. PUBLIC FOOTPATH EXTENSION (BY COUNCIL)
15. PUBLIC ORCHARD
16. PUBLIC OFF LEASH DOG LAWN

DENOTES AREA THAT BE SUBJECT TO ROAD WIDENING, SUBJECT TO COUNCIL / MRWA REQUIREMENTS AND PAYMENT OF COMPENSATION TO LAND OWNER.

FOR DEVELOPMENT APPROVAL

Therian Pty Ltd
Unit 4, 26 Commercial Drive,
Ashmore QLD, Australia 4214
TEL: (07) 5657-6777
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EMAIL: info@therian.com.au
WEB: www.therian.com.au

CLIENT:
PINJARRA VETERINARY HOSPITAL

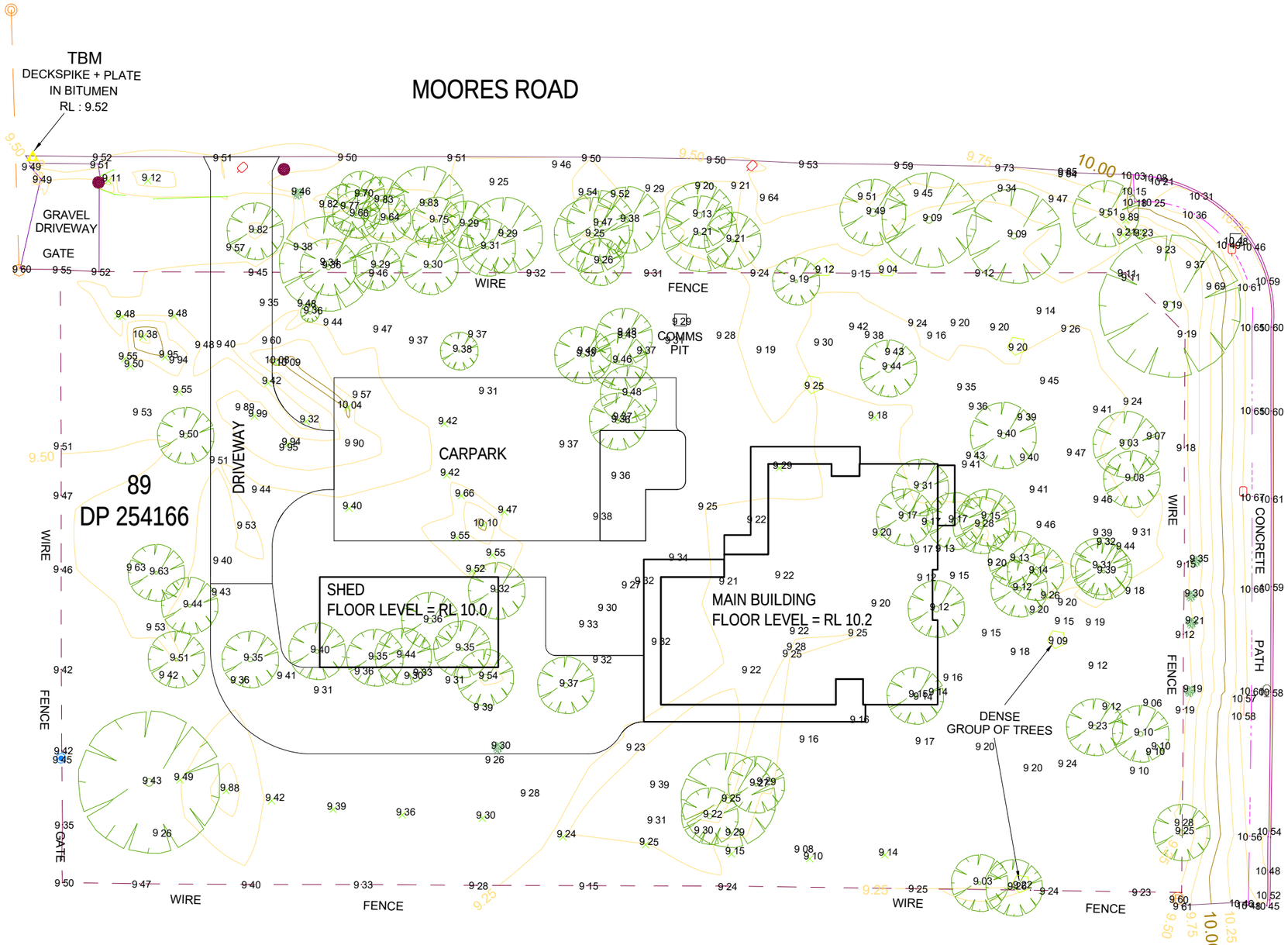
PROJECT:
PINJARRA VETERINARY HOSPITAL

ADDRESS:
11 MOORES ROAD, PINJARRA, WA. 6208

REV	DATE	DESCRIPTION
A	18/03/2025	FOR DEVELOPMENT APPROVAL

SITE PLAN - PROPOSED

DATE: 18/03/2025
DRAWN BY: SH
PROJECT No. P054
REV. A
DRAWING No. DA-0.03
A3



1 SITE PLAN - EXISTING SURVEY & DEVELOPMENT OVERLAY

SCALE 1 : 500

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PROJECT:

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ADDRESS:

11 MOORES ROAD, PINJARRA, WA. 6208

REV	DATE	DESCRIPTION
A	18/03/2025	FOR DEVELOPMENT APPROVAL

SITE PLAN - EXISTING DEVELOPMENT AREA

DATE: 18/03/2025

DRAWN BY: SH

PROJECT No. P054

REV. A

DRAWING No. DA-0.04

A3

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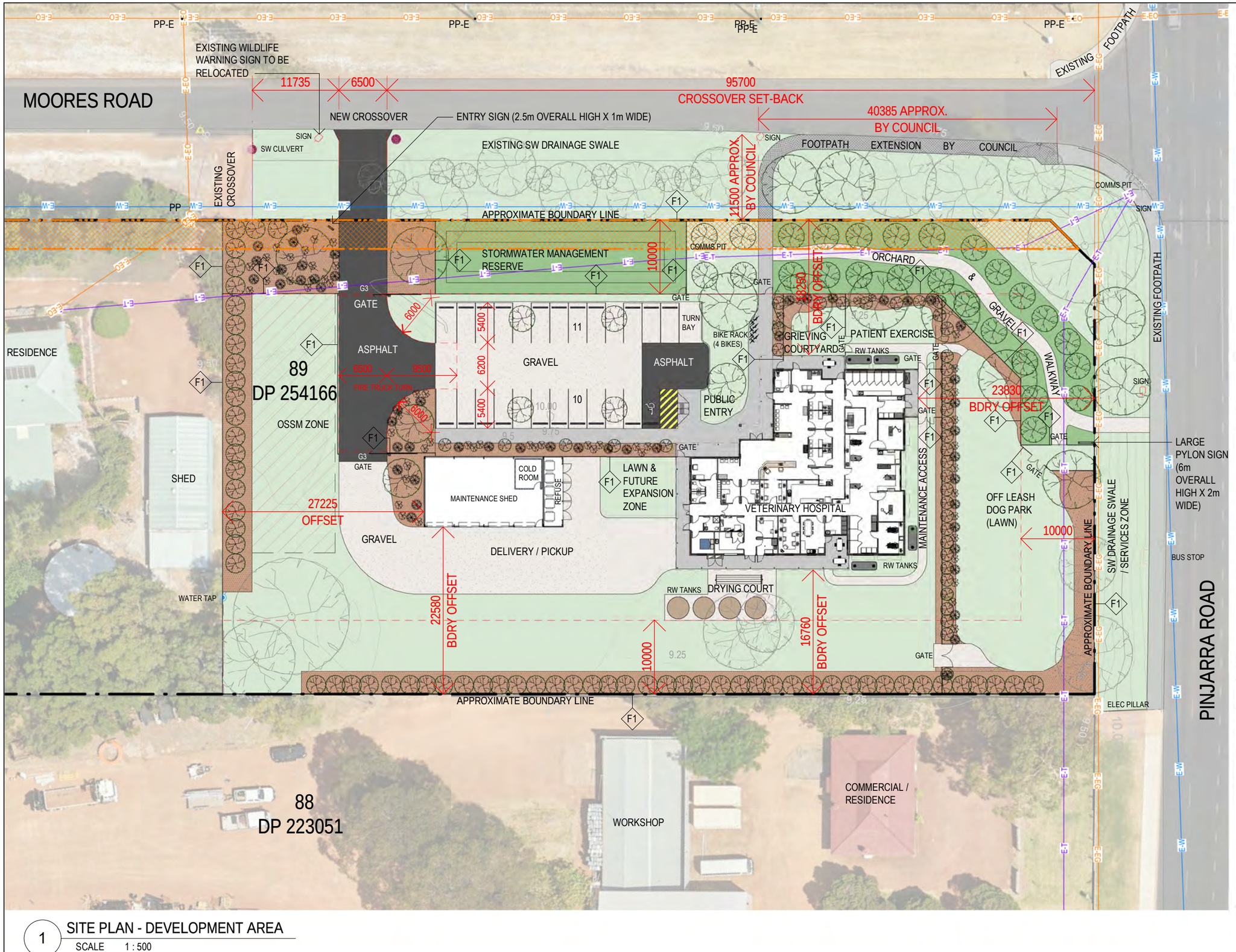

1 SITE PLAN - DEVELOPMENT AREA

SCALE 1 : 500

LEGEND:

- GRAVEL
- ASPHALT
- CONCRETE
- GRASSED LANDSCAPING AREAS
- PLANTING & MULCHED LANDSCAPING AREAS
- DENOTES INDICATIVE LOCATION OF PLANTING OR TREE. DIAGRAMMATIC ONLY.

NOTE: ALL VEGETATION & LANDSCAPING AREAS INDICATED ON THIS DRAWING ARE DIAGRAMMATIC SUBJECT TO THE FINAL LANDSCAPING DESIGN BY OTHERS. ALL NEW VEGETATION & LANDSCAPING AREAS ARE TO BE COMPLAINT WITH THE APZ REQUIREMENTS OUTLINED IN THE BUSHFIRE MANAGEMENT PLAN PREPARED BY BUSHFIRE SMART.

- ABOVE GROUND RAINWATER TANKS

FENCING & GATES LEGEND:

	F1 FENCE TYPE - 1	2.1m HIGH BLACK PLASTIC COATED CHAIN WIRE FENCE & GATES WITH POWDERCOAT POSTS & TOP/BOTTOM RAILS.
	G3 GATE TYPE - 3	2.1m HIGH BLACK POWDERCOAT ALUMINIUM BATTEN SLIDING GATE.

EXISTING SERVICES LEGEND:

- E-EC-E-EG — EXISTING ELECTRICAL SERVICES (IN-GROUND & ELECTRICAL PILLAR)
- E-EC-E-EO — EXISTING ELECTRICAL SERVICES (OVERHEAD POWER LINES)
- •E-PP — EXISTING POWERPOLE
- E-T-E-T — EXISTING TELECOMMUNICATIONS (IN-GROUND SERVICES AND COMMS PITS)
- E-W-E-W — EXISTING WATER MAINS (IN- GROUND)

SERVICES SHOWN DIAGRAMMATICALLY ONLY. PREPARED USING THE INFORMATION PROVIDED BY BYDA ON THE 16/10/2024 & THE SURVEY PREPARED BY RM SURVEYS, REV 0 ON 05/03/2024.

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WEB: www.therian.com.au

CLIENT: PINJARRA VETERINARY HOSPITAL

PROJECT: PINJARRA VETERINARY HOSPITAL

ADDRESS: 11 MOORES ROAD, PINJARRA, WA. 6208

REV	DATE	DESCRIPTION
A	18/03/2025	FOR DEVELOPMENT APPROVAL

SITE PLAN - PROPOSED DEVELOPMENT AREA

DATE: 18/03/2025
DRAWN BY: SH
PROJECT No. P054
REV. A
DRAWING No. DA-0.05
A3

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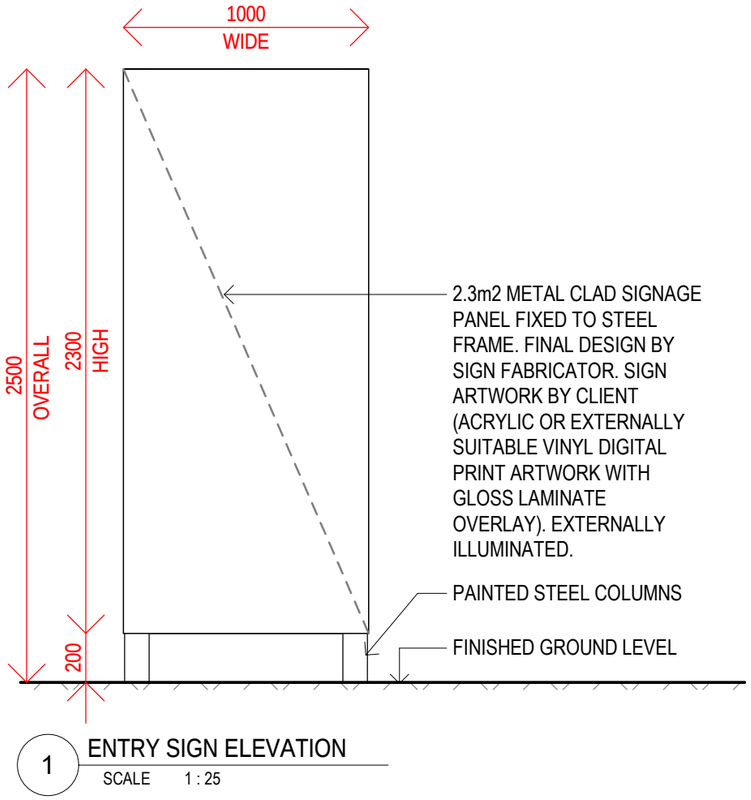
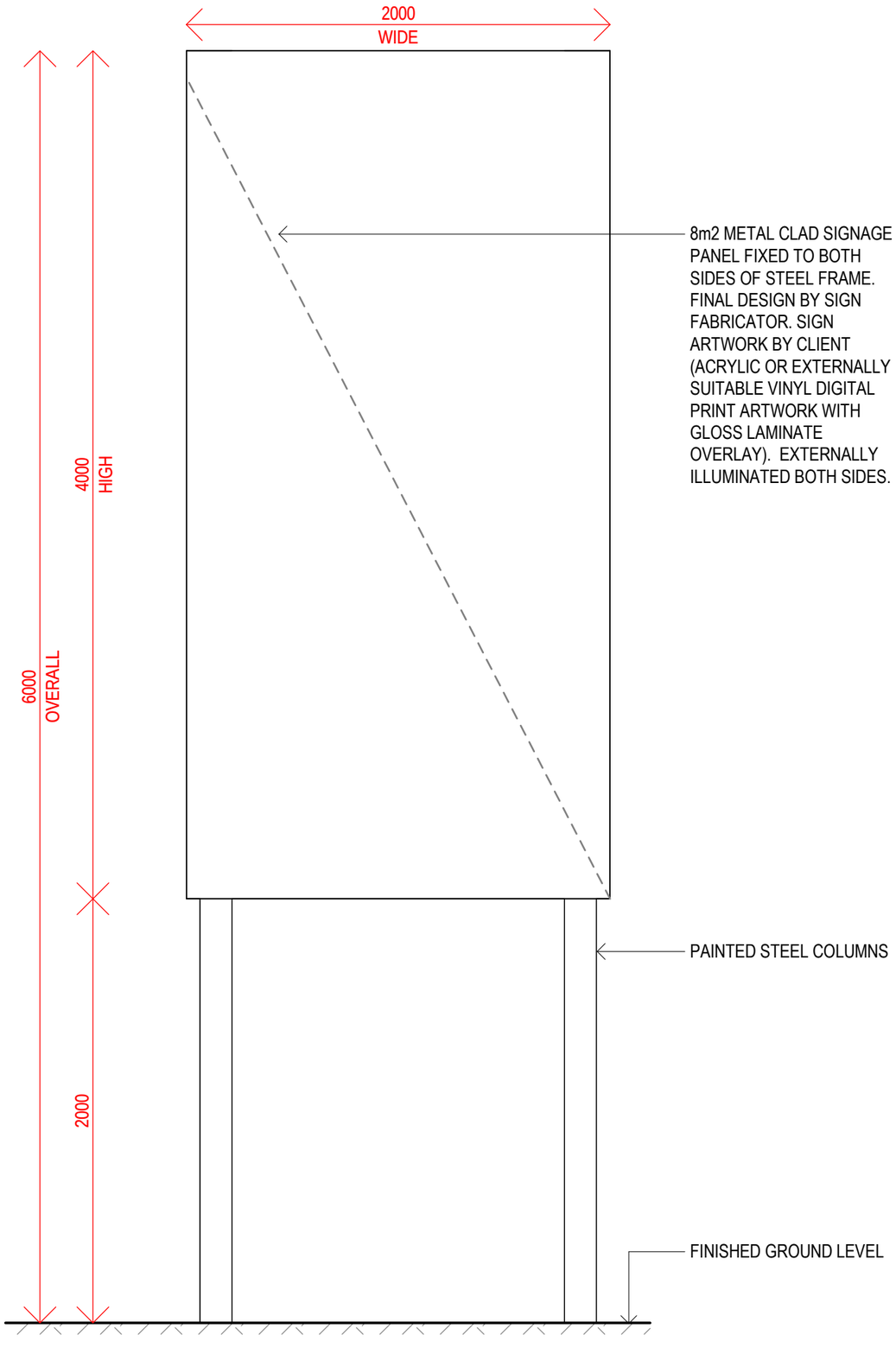


1 ENTRY SIGN ELEVATION

SCALE 1 : 25



2 LARGE PYLON SIGN - TYPICAL ELEVATION

SCALE 1 : 25

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CLIENT:

PINJARRA VETERINARY HOSPITAL

PROJECT:

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ADDRESS:

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REV	DATE	DESCRIPTION
A	18/03/2025	FOR DEVELOPMENT APPROVAL

SIGNAGE DETAILS

DATE: 18/03/2025

DRAWN BY: SH

PROJECT No. P054

REV. A

DRAWING No. DA-0.06

A3

PATIENT EXERCISE

ROOF OVER

GRIEVING COURTYARD
9.5 x 1.8m

RW TANK

RW TANK

WINDOW HOOD OVER

WINDOW HOOD OVER

RUN 1 RUN 2 RUN 3 RUN 4 RUN 5 RUN 6 RUN 7 RUN 8

HB

HYDRO
1.8 X 3.0m

LARGE DOG WARD
7.8 x 3.3m

DA-0.08
2

PUBLIC ENTRY LAWN

ASF
2.2 x 2.8m

MET

CONSULT 1
4.7 x 2.8m

ROOF OVER

CONSULT 2
3.1 x 2.5m

FET

SH-P

FET

CONSULT 3
3.1 x 2.5m

DOG WAITING
4.1 x 4.4m

BULKHEAD OVER

SMALL DOG WARD
3.3 x 3.1m
10 CAGES

ROOF OVER

X-RAY
2.7 x 3.4m

ST

SURGERY 1
3.3 x 4.1m

WINDOW HOOD OVER

CONSULT 4
3.1 x 2.5m

FET

COFFEE / TEA

ROOF OVER

PUBLIC ENTRY & RECEPTION
8.8 x 4.4m

SCALE

FET

CONSULT 5
3.1 x 2.5m

WPT

PTC

DPT

PACK PREP
3.0 x 1.8m

AC

TREATMENT
4.3 x 11m

SCRUB SINK

LACTATION / QUIET ROOM
3.3 x 2.8m

CAT WAITING
3.1 x 2.7m

SH-P

SURGERY PREP
3.0 x 3.4m

MET

1 DA-0.08

CLN
1.7 x 0.7m

MET

F
1.8 x 1.5m

LOCKERS

CONSULT 7
2.5 x 3.1m

CONSULT 6
2.5 x 3.1m

FET

CS

WORKROOM
3.6 x 3.1m

LAB & PHARMACY
7.8 x 3.0m

PTC

SURGERY 2
3.3 x 4.1m

CBX

REF

M
1.8 x 1.5m

LAWN & FUTURE EXPANSION ZONE

DA-0.08 4

ROOF OVER

STAFF ENTRY
3.8 x 1.6m

ST

WINDOW HOOD OVER

MAINTENANCE ACCESS

SHR
2.1 x 2.0m

ELECTRICAL
3.0 x 2.0m

COMMS

D & H.M. OFFICE
2.9 x 3.0m

DOCTORS OFFICE
2.9 x 5.1m

CAT WARD
3.1 x 2.5m

8 CAGES

RUN 1

2 CAGES & OXY CAGE

WPT
DENTAL
3.3 x 4.2m

ACCOMMODATION
3.0 x 3.0m

WM/D

HWL

UTILITY
3.9 X 3.0m

STAFF
3.2 X 5.1m

RUN 2

RECOVERY & ICU
3.9 x 5.2m

RW TANK

ISO
2.9 X 2.0m

2 CAGES

FET

REF

RUN 3

5-6 CAGES

WPT

DELIVERY

STAFF OUTDOOR
2.8 x 4.8m

SOLAR STORE

WINDOW HOOD OVER

WINDOW HOOD OVER

RW TANK

DRYING COURT

ROOF OVER

3
DA-0.08

1 GROUND FLOOR PLAN
SCALE 1 : 125

FOR DEVELOPMENT APPROVAL

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WEB: www.therian.com.au

CLIENT:
PINJARRA VETERINARY HOSPITAL

PROJECT:
PINJARRA VETERINARY HOSPITAL

ADDRESS:
11 MOORES ROAD, PINJARRA, WA. 6208

REV	DATE	DESCRIPTION
A	18/03/2025	FOR DEVELOPMENT APPROVAL

GROUND FLOOR PLAN

DATE: 18/03/2025
DRAWN BY: SH
PROJECT No. P054
REV. A
DRAWING No. DA-0.07
A3

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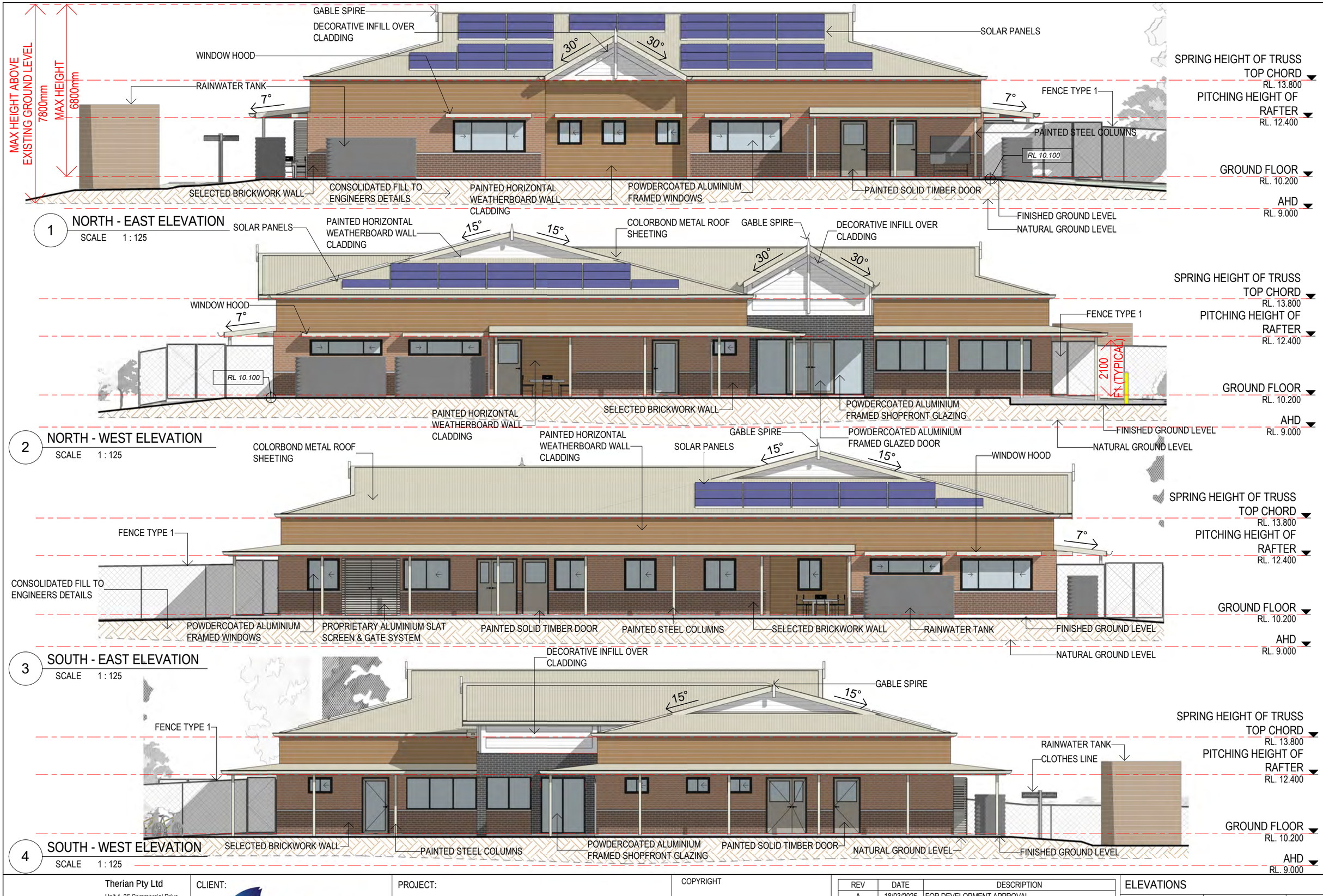

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Ashmore QLD, Australia 4214
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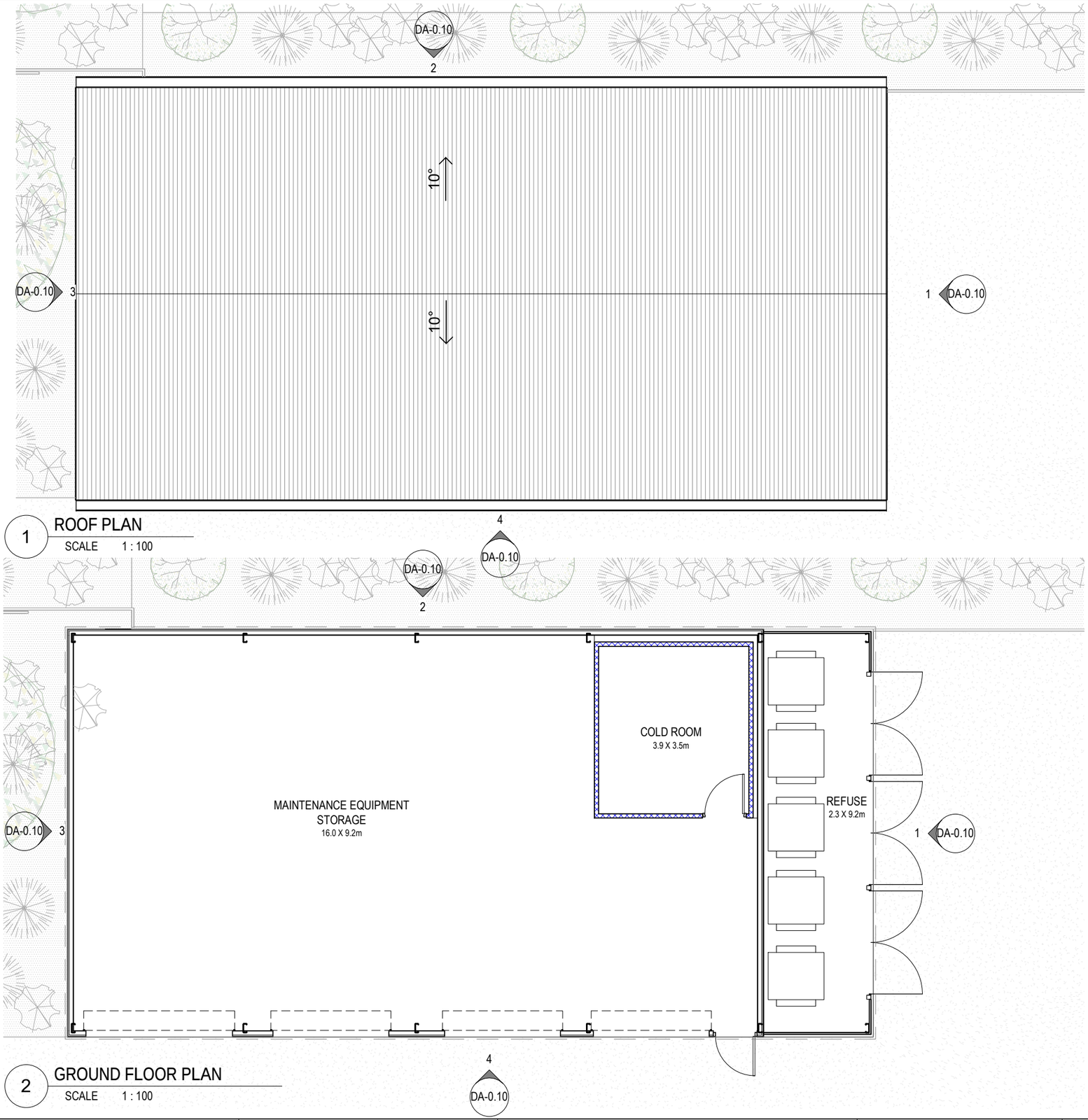
11 MOORES ROAD, PINJARRA, WA. 6208

REV	DATE	DESCRIPTION
A	18/03/2025	FOR DEVELOPMENT APPROVAL

ELEVATIONS

DATE: 18/03/2025
DRAWN BY: SH
PROJECT No. P054
REV. A
DRAWING No. DA-0.08
A3



1 ROOF PLAN
SCALE 1 : 100

2 GROUND FLOOR PLAN
SCALE 1 : 100

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Unit 4, 26 Commercial Drive,
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CLIENT:
PINJARRA VETERINARY HOSPITAL

PROJECT:
PINJARRA VETERINARY HOSPITAL

ADDRESS:
11 MOORES ROAD, PINJARRA, WA. 6208

REV	DATE	DESCRIPTION
A	18/03/2025	FOR DEVELOPMENT APPROVAL

MAINTENANCE SHED

DATE: 18/03/2025
DRAWN BY: SH
PROJECT No. P054
REV. A
DRAWING No. DA-0.09
A3

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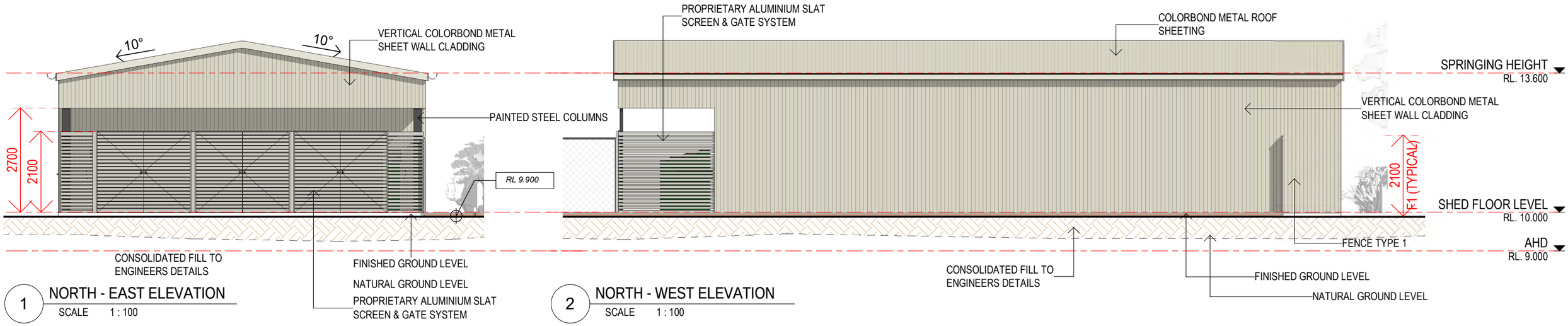
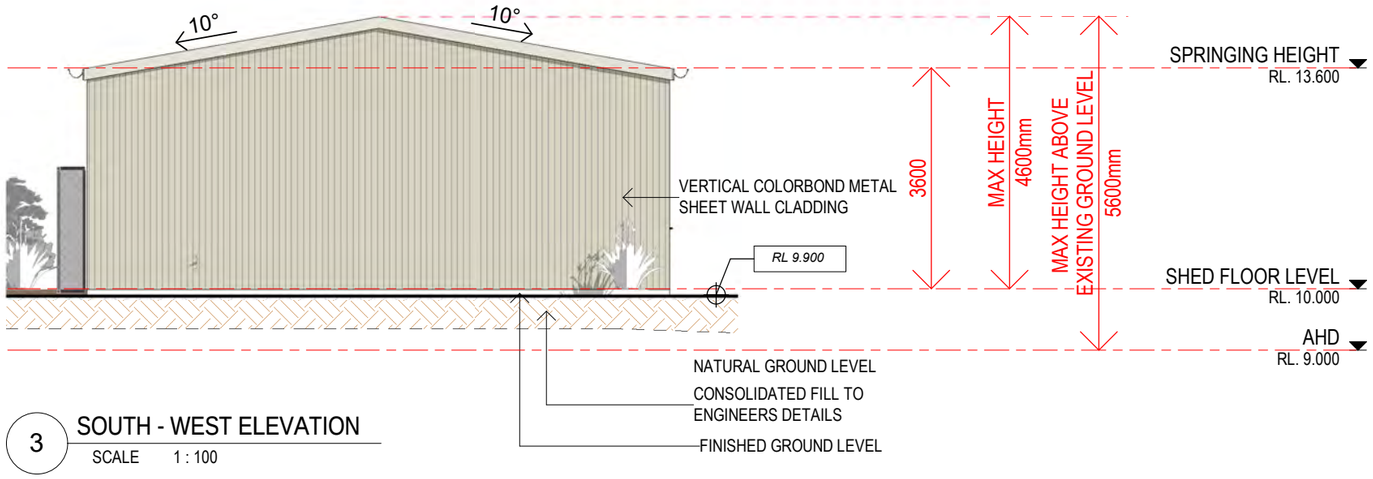
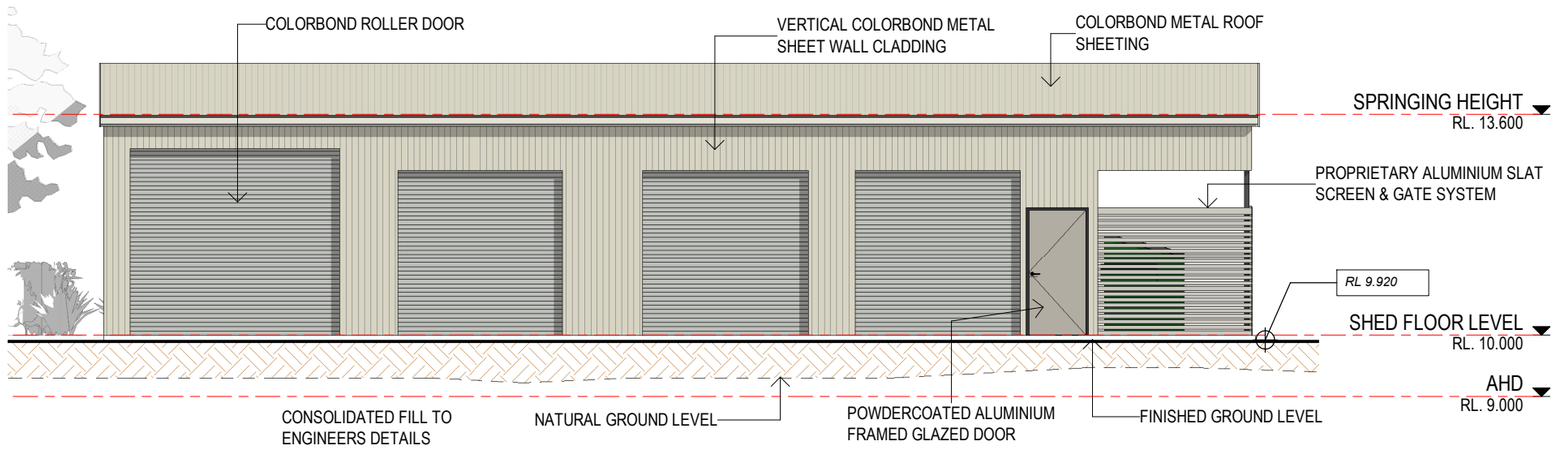


1 NORTH - EAST ELEVATION
SCALE 1 : 100

2 NORTH - WEST ELEVATION
SCALE 1 : 100



3 SOUTH - WEST ELEVATION
SCALE 1 : 100



4 SOUTH - EAST ELEVATION
SCALE 1 : 100

FOR DEVELOPMENT APPROVAL

Therian
Therian Pty Ltd
Unit 4, 26 Commercial Drive,
Ashmore QLD, Australia 4214
TEL: (07) 5657-6777
FAX: (07) 5657-6788
EMAIL: info@therian.com.au
WEB: www.therian.com.au

CLIENT:
Pinjarra Veterinary Hospital
PINJARRA VETERINARY HOSPITAL

PROJECT:
PINJARRA VETERINARY HOSPITAL

ADDRESS:
11 MOORES ROAD, PINJARRA, WA. 6208

REV	DATE	DESCRIPTION
A	18/03/2025	FOR DEVELOPMENT APPROVAL

MAINTENANCE SHED

DATE: 18/03/2025
DRAWN BY: SH
PROJECT No. P054
REV. A
DRAWING No. DA-0.10
A3

1 MOORES ROAD PEDESTRIAN ENTRANCE

2 GRIEVING YARD
SCALE 1 : 1

3 NORTH-EASTERN STAFF AREA

4 PATIENT EXERCISE YARD

FOR DEVELOPMENT APPROVAL

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Ashmore QLD, Australia 4214
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ADDRESS:
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REV	DATE	DESCRIPTION
A	18/03/2025	FOR DEVELOPMENT APPROVAL

PERSPECTIVES

DATE: 18/03/2025
DRAWN BY: SH
PROJECT No. P054
REV. A
DRAWING No. DA-0.11
A3

1 ORCHARD WAY

2 MAINTENANCE SHED

3 PINJARRA ROAD FRONTAGE & DOG PARK

4 INTERNAL RECEPTION AREA

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PROJECT:
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ADDRESS:
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REV	DATE	DESCRIPTION
A	18/03/2025	FOR DEVELOPMENT APPROVAL

PERSPECTIVES

DATE: 18/03/2025
DRAWN BY: SH
PROJECT No. P054
REV. A
DRAWING No. DA-0.12
A3

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Appendix B - Certificate of Title

WESTERN AUSTRALIA

TITLE NUMBER	
Volume	Folio
1229	**693**

RECORD OF CERTIFICATE OF TITLE

UNDER THE TRANSFER OF LAND ACT 1893

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

BGRoberts

REGISTRAR OF TITLES

REGISTRAR OF TITLES WESTERN AUSTRALIA

LAND DESCRIPTION:

LOT 89 ON DEPOSITED PLAN 254166

REGISTERED PROPRIETOR:
(FIRST SCHEDULE)

BILCLAR PTY LTD OF PO BOX 478 PINJARRA

(T N213211) REGISTERED 24/12/2015

LIMITATIONS, INTERESTS, ENCUMBRANCES AND NOTIFICATIONS:
(SECOND SCHEDULE)

1. TITLE EXCLUDES THE LAND SHOWN ON S.O. DIAGRAM 79116.
2. N213212 MORTGAGE TO BANK OF QUEENSLAND LTD REGISTERED 24/12/2015.

Warning: A current search of the sketch of the land should be obtained where detail of position, dimensions or area of the lot is required. Lot as described in the land description may be a lot or location.

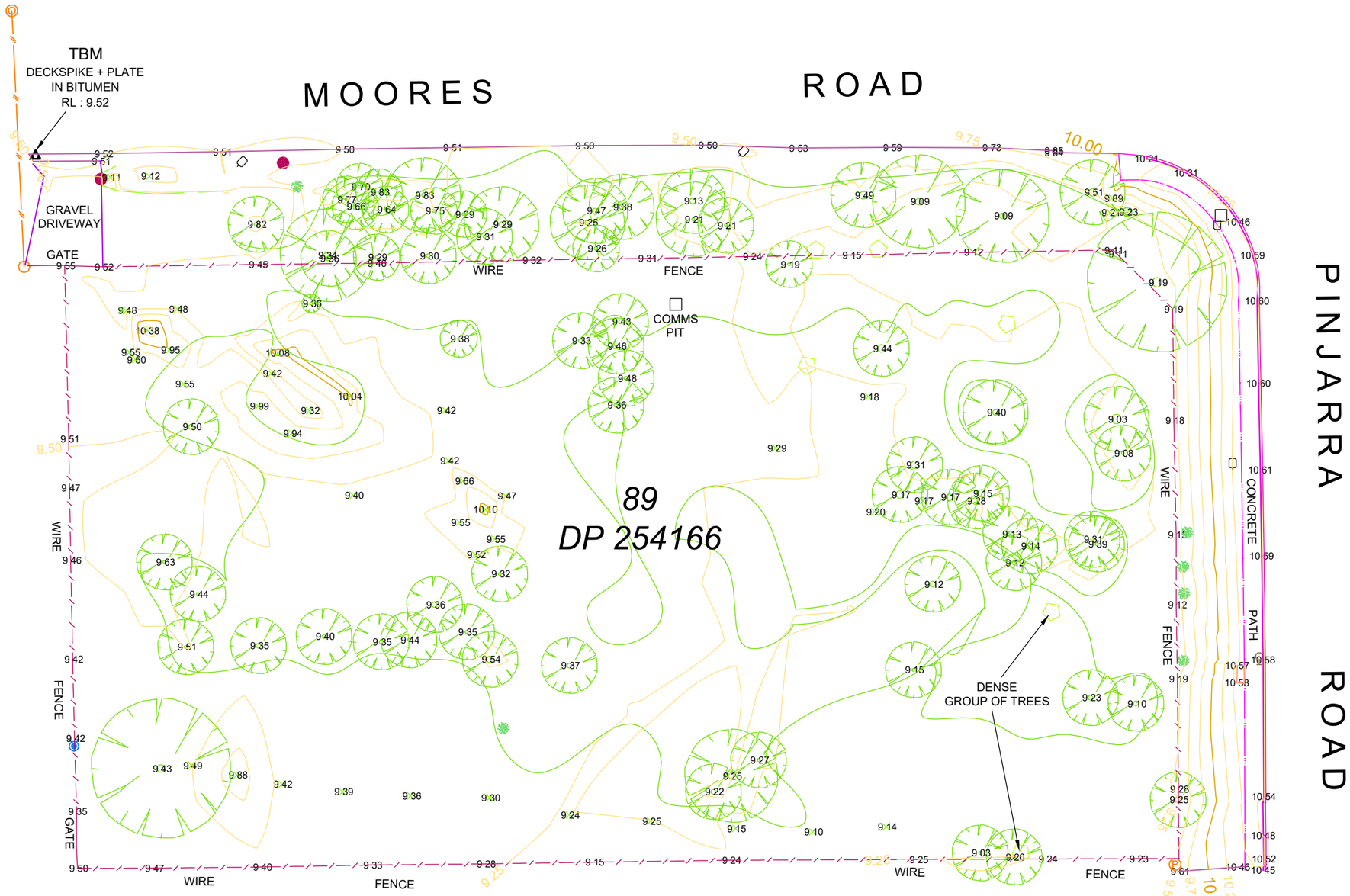
----------END OF CERTIFICATE OF TITLE----------

STATEMENTS:

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

SKETCH OF LAND:	1229-693 (89/DP254166)
PREVIOUS TITLE:	1229-693
PROPERTY STREET ADDRESS:	11 MOORES RD, PINJARRA.
LOCAL GOVERNMENT AUTHORITY:	SHIRE OF MURRAY

Appendix C - Site Feature Survey



LEGEND

- TBM
- NAT SURFACE PT
- TREE
- BUSH
- BOLLARD
- TAP
- POWER POLE
- POWER DOME
- CONSUMER POLE
- SIGN - SINGLE POLE
- COMMS PIT
- BUS STOP
- DENSE GROUP OF TREES

LINE TYPES

- BOTTOM OF KERB
- TOP OF KERB
- EDGE OF BITUMEN
- UNSEALED ROAD
- FOOTPATH
- TOP OF BANK
- BOTTOM OF BANK
- TREE LINE
- BENCH
- FENCE
- GATE
- OVERHEAD POWER

NOTE:
AHD DATUM BASED ON SSM PINJARA 266A.

SUBSURFACE UTILITY INFORMATION

PRESENT ON THIS DRAWING	METHOD OF LOCATION	CLASSIFICATION OF SUBSURFACE UTILITY INFORMATION AS 5488-2013	POTENTIAL RISK OF UTILITY DAMAGE
✓	DBYD PLANS OR UNKNOWN SOURCE	QUALITY "D" H & V UNKNOWN	HIGH
✓	VISUAL UTILITY IDENTIFICATION (VISIBLE PITS SURVEYED)	QUALITY "C" H+500mm V+500mm	HIGH
	UTILITIES LOCATED AND MARKED (ELECTRO/GPR)	QUALITY "B" Ha300mm Va500mm	MEDIUM
	UTILITIES POTHOLED, TRACED/SIGHTED OR SURVEYED AT INSTALLATION	QUALITY "A" Ha50mm Va50mm	LOW

NOTE:
THIS DRAWING DOES NOT SHOW ALL SUBSURFACE UTILITIES. CURRENT DIAL BEFORE YOU DIG (DBYD) INFORMATION SHOULD BE OBTAINED AND DUE DILIGENCE EXCERCISED BEFORE COMMENCING ANY EXCAVATION WORKS.

RM SURVEYS
LICENSED SURVEYORS
PHONE: 08 9457 7900
EMAIL: INFO@RMSURVEYS.COM.AU
WEBSITE: RMSURVEYS.COM.AU

Endorsed by ISO 45001 certified Equal Assurance · ISO 9001 certified Equal Assurance · ISO 14001 certified Equal Assurance

0 10 20 30 40
SCALE 1:500
ALL DISTANCES IN METRES
PAPER SIZE A3

SURVEYOR	VERTICAL DATUM
LD	AHD
SURVEY DATE	HORIZONTAL DATUM
21/02/2024	PCG2020

CLIENT:
TRENT DURWARD

REV	DESCRIPTION	DRN	CKD	APP	DATE
0	INITIAL ISSUE	TL	LD	SM	05/03/2024

FEATURE AND CONTOUR SURVEY

LOT 89 ON DP254166
11 MOORES ROAD, PINJARRA
SHIRE OF MURRAY

JOB No.	DRAWING No.	REV
MPLAN-MOORES	MPLAN-MOORES-DW-001(Sheet1)	0

Appendix D - Flora and Vegetation Assessment

Detailed Flora and Vegetation Survey

11 Moores Rd, Pinjarra
2024.

Prepared for: Coterra Environment

Prepared by: **Del Botanics Environmental Consulting**
PO Box 119
Mt Helena WA 6082
Email delbotanics@bigpond.com

February 2025

EXECUTIVE SUMMARY

This report has been prepared by Del Botanics Environmental Consulting on behalf of Coterra Environment to present the results of a spring Detailed Flora and Vegetation survey at 11 Moores Rd, Pinjarra. The location of the site is shown on **Figures 1** and **2.**

The recent Flora and Vegetation Assessment undertaken in the area described above identified 48 flora species, with 45.8% represented by weed species. The vegetation condition is "Good" to "Completely Degraded."

One vegetation community was recorded at a local level during the survey. No species of Threatened (T), or Priority Flora or Threatened Ecological Communities (TEC's) pursuant to the *Biodiversity Conservation* (BC) Act, 2016 and the *Environment Protection and Biodiversity Conservation* (EPBC) Act, 1999 were located during the time of the survey.

STATEMENT OF LIMITATIONS

This environmental report has been prepared in accordance with the scope of services set out in the original quotation. In preparing the report, Del Botanics Environmental Consulting relied on data, surveys, analyses, designs, plans and other information provided by the Client and other individuals and organisations, most of which are referred to in the report. Del Botanics Environmental Consulting has not verified the accuracy or completeness of the data to the extent that the statements, opinions, facts, information, conclusions and/or recommendations in the report are based in whole or in part on the data, those conclusions are contingent upon the accuracy and completeness of the data. Del Botanics Environmental Consulting will not be liable in relation to incorrect conclusions should any data, information or condition be incorrect or have been concealed, withheld, unavailable, misrepresented or otherwise not fully disclosed.

In accordance with the scope of services, Del Botanics Environmental Consulting has relied on the data and have conducted environmental field monitoring in the preparation of the report. The nature and extent of monitoring conducted is described in the report. Within the limitations imposed by the scope of services, the monitoring and preparation of this report have been undertaken and performed in a professional manner, in accordance with generally accepted practices and using a degree of skill and care. No other warranty, express or implied, is made.

The report has been prepared for the benefit of the Client and for no other party. Del Botanics Environmental Consulting assumes no responsibility and will not be liable to any other person or organisation for or in relation to any matter dealt with or conclusions expressed in the report, or for any loss or damage suffered by any other person or organisation arising from matters dealt with or conclusions expressed in the report. Other parties should not rely upon the report or the accuracy or completeness of any conclusions and should make their own enquiries and obtain independent advice in relation to such matters.

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TABLES

FIGURES

APPENDICES

1. INTRODUCTION

1.1 BACKGROUND

This report has been prepared by Del Botanics Environmental Consulting on behalf of Coterra Environment to present the results of a spring Detailed Flora and Vegetation survey within 11 Moores Rd, Pinjarra. The location of the site is shown on **Figures 1** & **2**. The site is approximately 81.8 kilometres south of the Perth central area.

The botanical survey of the flora species and vegetation was undertaken on 22nd October 2024.

Figure 1: Site Location

Figure 2: Survey Area

1.2 PURPOSE OF THIS REPORT

This report was prepared to present the results of the Flora and Vegetation Survey undertaken within the area described above. The flora species and vegetation were used to determine the significance of the site. In summary this report provides:

- A Department of Biodiversity, Conservation and Attractions (DBCA)Threatened Flora (T) and Threatened Ecological Communities (TEC's) database search;
- A Department of Climate Change, Energy, the Environment and Water (DCCEEW) database search;
- A spring botanical survey; and
- An assessment of vegetation communities and conditions.

2. EXISTING ENVIRONMENT

2.1 LANDFORM, TOPOGRAPHY AND SOILS

Soil-landscape system mapping of Western Australia describes broad soil and landscape characteristics from regional to local scales. The survey area is within the Bassendean System.

The Bassendean system occurs along the Swan Coastal Plain from Busselton to Jurien. It consists of fixed dunes inland from the coastal dune zone. It has non-calcareous mid Pleistocene Bassendean sand and podsolised soils with low-lying wet areas. It contains dunes and sandplains with pale deep sand, semi-wet and wet soil. Associated vegetation includes Banksia-paperbark woodlands and mixed heaths (Department of Agriculture and Food WA, 2012).

2.2 VEGETATION

The survey area lies in the Drummond Botanical Subdistrict within the Southwest Botanical Province as described by Beard (1990). Flora composition has been described by Beard (1990) as predominantly consisting of Banksia Low Woodlands on leached sands with Melaleuca swamps, where ill drained and Woodlands of Eucalyptus spp. on less leached soils.

2.2.1 Regional vegetation

The Biogeographic Regionalisation of Australia (IBRA) divides Australia into 89 bioregions based on major biological and geographical/geological attributes. Western Australia has 26 biogeographic regions, and 53 subregions based on dominant landscape characteristics of climate, lithology, geology, landform and vegetation. The study area is on the Swan Coastal Plain (SWA) bioregion. The Swan Coastal Plain Bioregion comprises of the Dandaragan Plateau and the Perth Coastal Plain. The Swan Coastal Plain (SCP) is dominated by woodlands of Banksia and Tuart on sandy soils, Sheoak on outwash plains, and Paperbark in swampy areas (DCCEEW, 2024).

2.2.2 Vegetation Complex

The term vegetation complex describes the pre-1750 distribution of vegetation communities of the southwest forest region of Western Australia described by Mattiske and Havel (1998). This was part of the biodiversity assessment for the comprehensive regional assessment for the southwest forest region.

Based on this mapping at a scale of 1:50,000, the Department of Primary Industries and Regional Development (DPIRD) has compiled a list of vegetation extent and types across WA. This mapping

suggests one vegetation complex occurs within the survey area. The survey area lies within the Swan Complex.

The Swan vegetation complex consists of fringing woodland of *Eucalyptus rudis* (Flooded Gum) - *Melaleuca rhaphiophylla* (Swamp Paperbark) with localised occurrence of low open forest of *Casuarina obesa* (Swamp Sheoak) and *Melaleuca cuticularis* (Saltwater Paperbark) (DataWA, 2024).

3. CLIMATE

The closest Bureau of Meteorology (BoM) weather station is approximately 19km west of the survey area in Mandurah (Site No.009977). The long-term mean minimum temperature for Mandurah ranged from 10.1˚C in July to 19.4˚C in February between 2001 and 2025. The long-term mean maximum temperature ranged from 17.7˚C in July to 29.9˚C in February between 2001 to 2025 (Bureau of Meteorology, 2024).

The long-term annual average rainfall is 707.2 millimetres (mm) from 2001 to 2025 (Bureau of Meteorology, 2024). Recent annual data is show below on **Figure 3**.

The temperature recorded in October 2024 was within the normal climatic conditions historically recorded for this area. The rainfall recorded in October 2024 was 7.4mm more than recorded in October 2023. This is however consistent with the annual average rainfall recorded between 2001 to 2025 and therefore would not have had a significant impact on the flora recorded within the survey area.

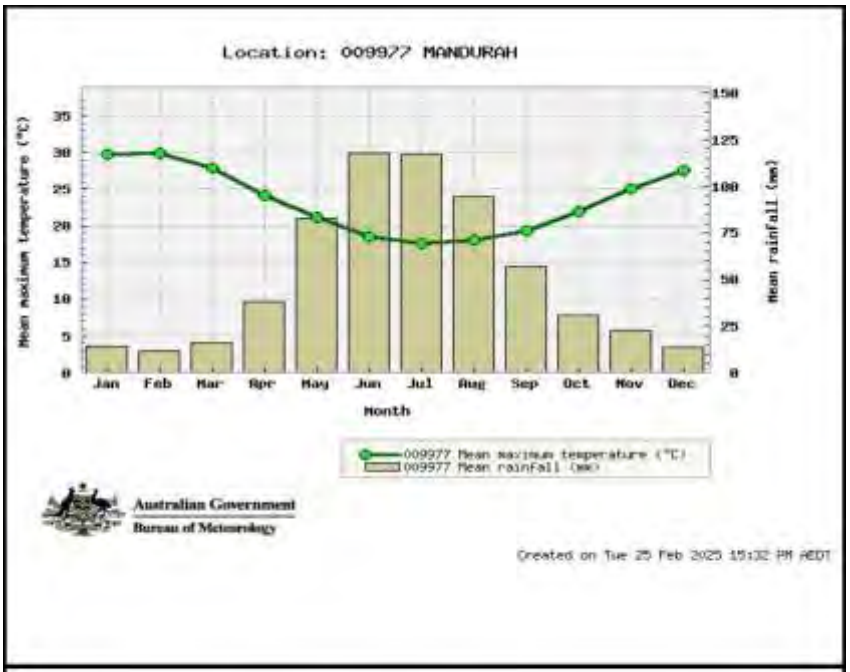

Figure 3: Weather Data

4. FLORA AND VEGETATION ASSESSMENT

4.1 VEGETATION METHODS

A Detailed Flora and Vegetation Survey was undertaken on the 22nd October 2024. The site was surveyed for flora species including, Threatened Flora (T), Priority Flora (PF), potential areas of Threatened Ecological Communities (TEC's) and vegetation condition. Each variation or difference in vegetation was recorded with three 10 metre by 10 metre quadrats.

Data was recorded to statistically determine vegetation communities and condition. In total, three quadrats were assembled to record each vegetation community. Each quadrat recorded flora species, heights, percentage cover and percentage dead and alive. Quadrats were not assembled permanently; Quadrat data is available in **Appendix B.**

The survey methodology was undertaken in accordance with EPA Position Statement No.3: *Terrestrial Biological Surveys as an Element of Biodiversity Protection* and EPA Guidance Statement No. 51: *Terrestrial Flora and Vegetation Surveys for Environmental Impact Assessment in Western Australia.*

All plant specimens collected during the field survey were dried, pressed and then sorted in accordance with the requirements of the Western Australian State Herbarium. Identification of specimens occurred through comparison with named material and through the use of taxonomic keys.

The use of standard data collection forms ensured the data was collected in a systematic and consistent manner. At each quadrat the following information was recorded:

- Vegetation condition;
- Vegetation community;
- Flora species;
- Local disturbances;
- Topography;
- Soils; and
- Age since fire.

The vegetation communities occurring on this site were described in detail. Aerial photography was used to extrapolate and map plant communities in combination with running notes made during the course of the survey.

4.2 DECLARED RARE AND PRIORITY FLORA

Species of flora acquire “Threatened”, “Presumed Extinct” or “Priority” conservation status where populations are restricted geographically or threatened by local processes.

The Department of Biodiversity, Conservation and Attractions (DBCA) recognise these threats and subsequently applies regulations towards population protection and species conservation. The DBCA enforces regulations under the *Biodiversity Conservation Act,* 2016 to conserve Threatened species and protect significant populations. Priority Flora species are potentially rare or threatened and are classified in order of threat. Threatened and Priority Flora category definitions are listed in **Table 1**.

The likelihood of each flora species and vegetation community occurring onsite is determined by background research on the known soil types and vegetation communities. This information together with botanical knowledge provides an informative result on whether the flora species is likely to occur on the site.

Table 1: Definition of Threatened and Priority Flora Species (DEC 2012)

Conservation Code	Category
T	**Threatened Flora (Declared Rare Flora – Extant)**. Schedule 1 under the Wildlife Conservation Act 1950 Rare Flora Notice Taxa which have been adequately searched for and are deemed to be in the wild either rare, in danger of extinction, or otherwise in need of special protection, and have been gazetted as such. **Threatened Flora (Schedule 1) are further ranked by the Department according to their level of threat using IUCN Red List criteria:** **CR**: Critically Endangered - considered to be facing an extremely high risk of extinction in the wild. **EN**: Endangered considered to be facing a very high risk of extinction in the wild. **VU**: Vulnerable - considered to be facing a high risk of extinction in the wild
X	**Presumed Extinct Flora (Declared Rare Flora – Extinct)** Schedule 2 under the Wildlife Conservation Act 1950 Rare Flora Notice Taxa which have been adequately searched for and there is no reasonable doubt that the last individual has died and have been gazetted as such.
P1	**Priority One: Poorly known species** Species that are known from one or a few collections or sight records (generally less than five), all on lands not managed for conservation, e.g. agricultural or pastoral lands, urban areas, Shire, Westrail and Main Roads WA road, gravel and soil reserves, and active mineral leases and under threat of habitat destruction or degradation. Species may be included if they are comparatively well known from one or more localities but do not meet adequacy of survey requirements and appear to be under immediate threat from known threatening processes
P2	**Priority Two: Poorly known species** Species that are known from one or a few collections or sight records, some of which are on land not under imminent threat of habitat destruction or degradation, e.g. national parks, conservation parks, nature reserves, State Forest, vacant Crown land, water reserves, etc. Species may be included if they are comparatively well known from one or more localities but do not meet adequacy of survey requirements and appear to be under threat from known threatening processes.
P3	**Priority Three: Poorly known species** Species that are known from collections or sight records from several localities not under imminent threat, or from few but widespread localities with either large population size or significant remaining areas of apparently suitable habitat, much of it not under imminent threat. Species may be included if they are comparatively well known from several localities but do not meet adequacy of survey requirements and known threatening processes exist that could affect them.
P4	**Priority Four: Rare, Near Threatened and other species in need of monitoring** (a) Rare. Species that are considered to have been adequately surveyed, or for which sufficient knowledge is available, and that are considered not currently threatened or in need of special protection but could be if present circumstances change. These species are usually represented on conservation lands. (b) Near Threatened. Species that are considered to have been adequately surveyed and that do not qualify for Conservation Dependent, but that are close to qualifying for Vulnerable. (c) Species that have been removed from the list of threatened species during the past five years for reasons other than taxonomy.
P5	**Priority Five: Conservation Dependent species** Species that are not threatened but are subject to a specific conservation program, the cessation of which would result in the species becoming threatened within five years

4.2.1 Environment Protection and Biodiversity Conservation Act (1999) – Species level significance

The *Environment Protection and Biodiversity Conservation* (EPBC) *Act*, 1999, promotes the conservation of biodiversity by providing strong protection for plants at a species level. Section 178 and 179 provides the lists and categories of threatened species under the Act and is presented in **Table 2** below.

Table 2: Categories of Threatened Species (EPBC Act, Section 179, 1999)

1	**Extinct** A native species is eligible to be included in the extinct category at a particular time if, at that time, there is no reasonable doubt that the last member of the species has died.
2	**Extinct in the Wild** A native species is eligible to be included in the **extinct in the wild** category at a particular time if, at that time:(a) it is known only to survive in cultivation, in captivity or as a naturalised population well outside its past range; or (b) it has not been recorded in its known and/or expected habitat, at appropriate seasons, anywhere in its past range, despite exhaustive surveys over a time frame appropriate to its life cycle and form.
3	**Critically Endangered** A native species is eligible to be included in the critically endangered category at a particular time if, at that time, it is facing an extremely high risk of extinction in the wild in the immediate future, as determined in accordance with the prescribed criteria.
4	**Endangered** A native species is eligible to be included in the endangered category at a particular time if, at that time: (a) it is not critically endangered; and (b) it is facing a very high risk of extinction in the wild in the near future, as determined in accordance with the prescribed criteria.
5	**Vulnerable** A native species is eligible to be included in the vulnerable category at a particular time if, at that time: (a) it is not critically endangered or endangered; and (b) it is facing a high risk of extinction in the wild in the medium-term future, as determined in accordance with the prescribed criteria.
6	**Conservation Dependant** A native species is eligible to be included in the conservation dependent category at a particular time if, at that time: (a) the species is the focus of a specific conservation program the cessation of which would result in the species becoming vulnerable, endangered or critically endangered; or (b) the following subparagraphs are satisfied: (i) the species is a species of fish; (ii) the species is the focus of a plan of management that provides for management actions necessary to stop the decline of, and support the recovery of, the species so that its chances of long-term survival in nature are maximised; (iii) the plan of management is in force under a law of the Commonwealth or of a State or Territory; (iv) cessation of the plan of management would adversely affect the conservation status of the species.

A search using the Department of Climate Change, Energy, the Environmental and Water (DCCEEW) Protected Matters Tool was undertaken within a 5km radius of the site. The search result noted thirteen flora species of significance likely to occur in the area. Seven flora species have been listed as Endangered; four species are listed as Vulnerable, and two are recorded as Critically Endangered. These species are listed in **Table 3** below.

Table 3: DCCEEW Protected Matters listed flora species.

Species Name	Conservation Code	Likely to occur onsite	Survey undertaken in flowering time
Andersonia gracilis	Endangered	Yes	Yes
Banksia mimica	Endangered	Yes	No
Caladenia huegelii	Endangered	No	Yes
Diuris drummondii	Vulnerable	Yes	No
Diuris micrantha	Vulnerable	No	Yes
Diuris purdiei	Endangered	Yes	Yes
Drakaea elastica	Endangered	Yes	Yes
Drakaea micrantha	Vulnerable	Yes	Yes
Morelotia australiensis	Vulnerable (listed as *Tetraria*	Unknown	Unknown

	australiensis)		
Synaphea sp. Fairbridge Farm	Critically Endangered	Yes	Yes
Synaphea sp. Pinjarra Plain	Endangered	Yes	Yes
Synaphea sp. Serpentine	Critically Endangered	Unknown	Unknown
Synaphea stenoloba	Endangered	Yes	Yes

4.2.2 Department of Biodiversity, Conservation and Attractions (DBCA) Database Search

In addition to the background search undertaken through the DCCEEW Protected Matters, a Threatened and Priority flora search was undertaken through the DBCA. The search is undertaken on records from the Threatened and Priority Flora Database (TPFL) and the WA Herbarium database (WAHerb), which provides known locations of each species. The results are provided below in **Table 4**. The search was conducted within a 10km radial area from the central coordinate.

Table 4: DBCA Threatened and Priority Flora Search Results

Taxon	Conservation Status EPBC	DBCA	Likely to occur onsite	Survey undertaken in flowering time
Acacia benthamii	2		No	Yes
Acacia lasiocarpa var. *bracteolata*	1		Yes	No
Amanita drummondii	3		No	No
Aponogeton hexatepalus	4		No	Yes
Blennospora doliiformis	3		No	Yes
Caladenia huegelii	T		No	Yes
Caladenia speciosa	4		Yes	Yes
Calothamnus graniticus subsp. *leptophyllus*	4		No	No
Chamaescilla gibsonii	3		No	Yes
Cyanothamnus tenuis	4		Unknown	Unknown
Cyathochaeta teretifolia	3		No	Unknown
Dillwynia dillwynioides	3		No	Yes
Diuris drummondii	T	EN	Yes	No
Diuris micrantha	T	VU	No	Yes
Diuris purdiei	T	EN	Yes	Yes
Drakaea elastica	T	CR	Yes	Yes
Drosera occidentalis	4		No	Yes
Drosera paleacea	1		Yes	Yes
Eryngium sp. Ferox	3		Unknown	Unknown
Eucalyptus rudis subsp. *cratyantha*	4		No	Yes
Grevillea bipinnatifida subsp. *pagna*	1		No	Yes
Grevillea ornithopoda	2		No	Yes
Hemigenia microphylla	3		No	Yes
Hibbertia acrotoma	1		Unknown	Unknown
Jacksonia gracillima	3		Yes	Yes
Jacksonia sericea	4		Yes	Yes
Johnsonia pubescens subsp. *cygnorum*	2		Yes	No
Levenhookia preissii	1		Yes	Yes
Microtis quadrata	4		Unknown	Unknown

Morelotia australiensis	T	VU	Unknown	Unknown
Myriophyllum echinatum	3		Unknown	Unknown
Ornduffia submersa	4		Unknown	Unknown
Parsonsia diaphanophleba	4		No	No
Phyllangium palustre	2		No	Yes
Pterostylis frenchii	2		Yes	Unknown
Ptilotus sericostachyus subsp. *roseus*	X		Yes	Yes
Rumex drummondii	4		Yes	Unknown
Schoenus benthamii	3		Yes	Yes
Schoenus natans	4		Yes	Yes
Schoenus pennisetis	3		Yes	Yes
Schoenus sp. Waroona	3		Yes	Yes
Stylidium aceratum	3		No	Yes
Stylidium longitubum	4		Yes	Yes
Stylidium roseonanum	3		No	Yes
Synaphea sp. Fairbridge Farm	T	CR	Yes	Yes
Synaphea sp. Pinjarra	T	CR	Yes	Yes
Synaphea stenoloba	T	EN	Yes	Yes
Tripterococcus sp. Brachylobus	4		Unknown	Unknown
Trithuria australis	4		Unknown	Unknown
Verticordia plumosa var. *ananeotes*	T		No	No

4.3 THREATENED ECOLOGICAL COMMUNITIES

In Western Australia Threatened Ecological Communities (TECs) are assessed through a procedure coordinated by the DBCA and are assigned to one of the categories outlined below in **Table 5**. While they are not afforded direct statutory protection at a state level (unlike Threatened Flora under the *Biodiversity Conservation Act,* 2016) their significance is acknowledged through other State environmental approval processes (i.e. Environmental Impact Assessment pursuant to Part IV of the *Environmental Protection Act,* 1986). Scheduled TECs are afforded statutory protection at a federal level pursuant to the EPBC Act.

The Department has been identifying and listing threatened ecological communities since 1994 through the non-statutory process.

The Minister for Environment previously listed ecological communities as threatened through a non-statutory process if the community was presumed to be totally destroyed or at risk of becoming totally destroyed. The *Biodiversity Conservation Act, 2*016 (BC Act) provides for the statutory listing of threatened ecological communities (TECs) by the Minister. The new legislation also describes statutory processes for preparing recovery plans for TECs, the registration of their critical habitat, and penalties for unauthorised modification of TECs.

The Department has been identifying and listing TECs since 1994 through the non-statutory process. The WA Minister for Environment has endorsed 69 ecological communities as threatened in the following categories:

- 20 critically endangered
- 17 endangered
- 28 vulnerable
- 4 presumed totally destroyed.

25 of these are listed under the Commonwealth's *Environment Protection and Biodiversity Conservation Act,* 1999. As of January 2019, an additional 393 ecological communities (community types and sub-types) with insufficient information available to be considered a TEC, or which are rare but not currently threatened, have been placed on the Priority list and referred to as Priority Ecological Communities (PECs)**.**

Table 5: Categories of DBCA's Threatened Ecological Communities

PD	**Presumably Totally Destroyed** An ecological community that has been adequately searched for but for which no representative occurrences have been located.
CE	**Critically Endangered** An ecological community that has been adequately surveyed and is found to be facing an extremely high risk of total destruction in the immediate future.
E	**Endangered** An ecological community that has been adequately surveyed and is not critically endangered but is facing a very high risk of total destruction in the near future.
V	**Vulnerable** An ecological community that has been adequately surveyed and is not critically endangered or endangered but is facing a high risk of total destruction or significant modification in the medium to long-term future.

The EPBC Act provides for the strong protection of TECs, which are listed under section 181 of the Act and are described as 'Critically Endangered', 'Endangered' or 'Vulnerable' under section 182. Schedules of protected TECs maintained pursuant to the EPBC Act are based on the same Floristic Community Types (FCTs) as adopted by DBCA, however not all TECs listed by the DBCA are scheduled under the EPBC Act.

The Department of Climate Change, Energy, the Environment and Water (DCCEEW) Protected Matters Report indicated there are four known Threatened Ecological Communities (TECs) likely to occur within a 5km radius of the area, the TECs are listed in **Table 6** below.

Table 6: DCCEEW listed Threatened Ecological Communities

Species Name	Conservation Code	Likely to occur on site
Tuart (*Eucalyptus gomphocephala*) Woodlands and Forests of the Swan Coastal Plain ecological community	Critically Endangered	No
Empodisma peatlands of southwestern Australia	Endangered	No
Clay Pans of the Swan Coastal Plain	Critically Endangered	No
Banksia Woodlands of the Swan Coastal Plain ecological community	Endangered	Yes

4.3.1 Department of Biodiversity, Conservation and Attractions (DBCA) Database Search

In addition to the background search undertaken through the DCCEEW Protected Matters, a Threatened Ecological Community (TEC) search was undertaken through the DBCA. The search is undertaken on records from the DBCA, which provides known locations of TECs. The results noted four known TECs to occur within a 10km radial area from the central coordinate. This information is provided in **Table 7** below.

Table 7: DBCA listed Threatened Ecological Communities

Species Name	Conservation Code	Likely to occur on site
SCP07 Herb rich saline shrubland in clay pans (FCT 7 as originally described in Gibson et al. 1994)	Endangered [DBCA] Critically Endangered [EPBC]	No
SCP 09 Dense shrublands on clay flats (FCT 9 as originally described in Gibson et al. 1994)	Endangered [DBCA] Critically Endangered [EPBC]	No
SCP3a *Corymbia calophylla-Kingia australis* woodlands on heavy soils (FCT 3a as originally described in Gibson et al. 1994)	Critically Endangered [DBCA] Endangered [EPBC]	No
SCP15 Forests and woodlands of deep seasonal wetlands of the Swan Coastal Plain (FCT 15 as originally described in Gibson et al. 1994)	Critically Endangered [DBCA]	No

5. FLORA AND VEGETATION ASSESSMENT RESULTS

A total of 48 taxa, comprising of 19 families and 45 genera were recorded on site. A list of these species has been provided in **Appendix A**. Species representation was greatest among the Asteraceae and Poaceae families.

5.1 INTRODUCED SPECIES

Twenty-two introduced flora species were recorded on the site, shown in **Table 8** below. This represents 45.8% of the total number of flora species recorded on site. No weeds recorded onsite are listed as Weeds of National Significance (WoNS) (Department of Climate Change Energy, the Environment and Water (DCCEEW 2024). Definitions are provided in **Appendix C**.

Table 8: Introduced Flora Recorded in the Survey Area

Taxa	Common Name	BAM Act
**Agapanthus* sp.	African lily	Unable to determine
**Arctotheca calendula*	Cape Weed	Permitted - s11
**Briza maxima*	Blowfly Garss	Permitted - s11
**Briza minor*	Shivery Grass	Permitted - s11
**Cotula turbinata*	Funnel Weed	Permitted - s11
**Ehrharta longiflora*	Annual Veldt Grass	Permitted - s11
**Eragrostis curvula*	African Lovegrass	Permitted - s11
**Eucalyptus camaldulensis*	River Gum	Permitted - s11
**Hypochaeris glabra*	Smooth Cats-ear	Permitted - s11
**Lagurus ovatus*	Hare's Tail Grass	Permitted - s11
**Lotus angustissimus*	Narrowleaf Trefoil	Permitted - s11
**Ornithopus compressus*	Yellow Serradella	Permitted - s11
**Ornithopus pinnatus*	Slender Serradella	Permitted - s11
**Oxalis glabra*	Finger-leaf Oxalis	Permitted - s11
**Romulea rosea*	Guildford Grass	Permitted - s11
**Schismus barbatus*	Kelch Grass	Permitted - s11
**Taraxacum khatoonae*	Dandelion	Permitted - s11
**Ursinia anthemoides*	Ursinia	Permitted - s11
**Vellereophyton dealbatum*	White Cudweed	Permitted - s11
**Vulpia bromoides*	Squirrel Tail Fescue	Permitted - s11
**Vulpia* sp.	Vulpia	Unable to determine
**Wahlenbergia capensis*	Cape Bluebell	Permitted - s11

5.2 THREATENED AND PRIORITY FLORA

No species of Threatened (T) or Priority Flora were recorded during the survey; No other flora, pursuant to the *Biodiversity Conservation* (BC) Act, 2016 or the *Environment Protection and Biodiversity*

Conservation (EPBC) Act, 1999 or listed by the Department of Biodiversity, Conservation and Attractions (DBCA) were located during the time of the survey.

5.3 THREATENED ECOLOGICAL COMMUNITIES

No Threatened Ecological Communities listed by the Department of Climate Change, Energy, the Environment and Water (DCCEEW) or Department of Biodiversity, Conservation and Attractions (DBCA) were located during the time of the survey.

5.4 LOCAL VEGETATION COMMUNITIES

Vegetation structure recorded in each vegetation community is used to determine the coverage class as described below in **Table 9.** These vegetation structure classes are defined in the Technical Guidance – *Flora and Vegetation Surveys for Environmental Impact Assessment* (2016).

Table 9: Vegetation Structure Classes

Life Form/ Height Class	**Canopy Cover (percentage)**			
	100% - 70%	**70% - 30%**	**30% - 10%**	**10% - 2%**
Trees 10-30m Trees < 10m	Closed Forest Low Closed Forest	Open Forest Low Open Forest	Woodland Low Woodland	Open Woodland Low Open Woodland
Shrub Mallee	Closed Shrub Mallee	Shrub Mallee	Open Shrub Mallee	Very Open Shrub Mallee
Shrubs > 2m Shrubs 1-2m Shrubs <1m	Closed Tall Scrub Closed Heath Closed Low Heath	Tall Open Scrub Open Heath Open Low Heath	Tall Shrubland Shrubland Low Shrubland	Tall Open Shrubland Open Shrubland Low Open Shrubland
Grasses	Closed Grassland	Grassland	Open Grassland	Very Open Grassland
Herbs	Closed Herbland	Herbland	Open Herbland	Very Open Herbland
Sedges	Closed Sedgeland	Sedgeland	Open Sedgeland	Very Open Sedgeland

One vegetation community was represented on the site at a local level, which has been described below in **Table 10.** Photographic representations of the vegetation community are shown in the Quadrat data sheets in **Appendix B**. The vegetation community, conditions and quadrat locations are shown on **Figures 4** & **5.**

Table 10: Local Vegetation Community recorded within 11 Moores Rd, Pinjarra, October 2024.

Community Description
Vegetation Community 1 –*Melaleuca preissiana* Woodland
Low woodland of *Melaleuca preissiana* over tall shrubland of *Kunzea ericifolia* over open sedgeland of *Chaetanthus aristatus* over very open herbland of **Taraxacum khatoonae* and**Hypochaeris glabra.*

Figure 4: Vegetation Communities and Quadrat Locations

6. VEGETATION CONDITION

Many bushland remnants have been historically degraded and current land use activities continue degradation and fragmentation processes. As a result, these remnants are especially susceptible to disturbances arising from indirect impacts such as surrounding developments and human activity.

Degradation is caused by a wide range of factors, including isolation and edge effects, weed invasion, plant diseases, changes in fire frequency and behaviour, landscape fragmentation, increased predation on native fauna by feral animals, resulting in a decrease in species richness and general modification of ecological function (Urban Bushland Council, 2018).

The site has had significant historic land disturbances, primarily for agriculture. The survey area has limited structure with significant bare areas and isolated remnants of vegetation. The remnant vegetation

is predominantly shrubland with few trees and a high weed density and diversity. The site is currently used for stock grazing.

The vegetation condition was rated according to the Vegetation Condition Scale used in the Technical Guidance – *Flora and Vegetation Surveys for Environmental Impact Assessment* (2016). The definitions are described in **Table 11** below.

Table 11: Vegetation Condition Scale

Vegetation Condition	Southwest and Interzone Botanical Provinces	Eremaean and Northern Botanical Provinces
Pristine	Pristine or nearly so, no obvious signs of disturbance or damage caused by human activities since European settlement.	
Excellent	Vegetation structure intact, disturbance affecting individual species and weeds are non-aggressive species. Damage to trees caused by fire, the presence of non-aggressive weeds and occasional vehicle tracks.	Pristine or nearly so, no obvious signs of damage caused by human activities since European settlement
Very Good	Vegetation structure altered, obvious signs of disturbance. Disturbance to vegetation structure caused by repeated fires, the presence of some more aggressive weeds, dieback, logging and grazing.	Some relatively slight signs of damage caused by human activities since European settlement. For example, some signs of damage to tree trunks caused by repeated fire, the presence of some relatively non-aggressive weeds, or occasional vehicle tracks
Good	Vegetation structure significantly altered by very obvious signs of multiple disturbances. Retains basic vegetation structure or ability to regenerate it. Disturbance to vegetation structure caused by very frequent fires, the presence of very aggressive weeds, partial clearing, dieback and grazing.	More obvious signs of damage caused by human activity since European settlement, including some obvious impact on the vegetation structure such as that caused by low levels of grazing or slightly aggressive weeds
Poor		Still retains basic vegetation structure or ability to regenerate it after very obvious impacts of human activities since European settlement, such as grazing, partial clearing, frequent fires or aggressive weeds
Degraded	Basic vegetation structure severely impacted by disturbance. Scope for regeneration but not to a state approaching good condition without intensive management. Disturbance to vegetation structure caused by very frequent fires, the presence of very aggressive weeds at high density, partial clearing, dieback and grazing.	Severely impacted by grazing, very frequent fires, clearing or a combination of these activities. Scope for some regeneration but not to a state approaching good condition without intensive management. Usually with a number of weed species present including very aggressive species.
Completely Degraded	The structure of the vegetation is no longer intact and the area is completely or almost completely without native species. These areas are often described as 'parkland cleared' with the flora comprising weed or crop species with isolated native trees and shrubs.	Areas that are completely or almost completely without native species in the structure of their vegetation; i.e. areas that are cleared or 'parkland cleared' with their flora comprising weed or crop species with isolated native trees or shrubs

The vegetation condition recorded across the site was "Good" to "Completely Degraded". Vegetation condition mapping is provided on **Figure 5.**

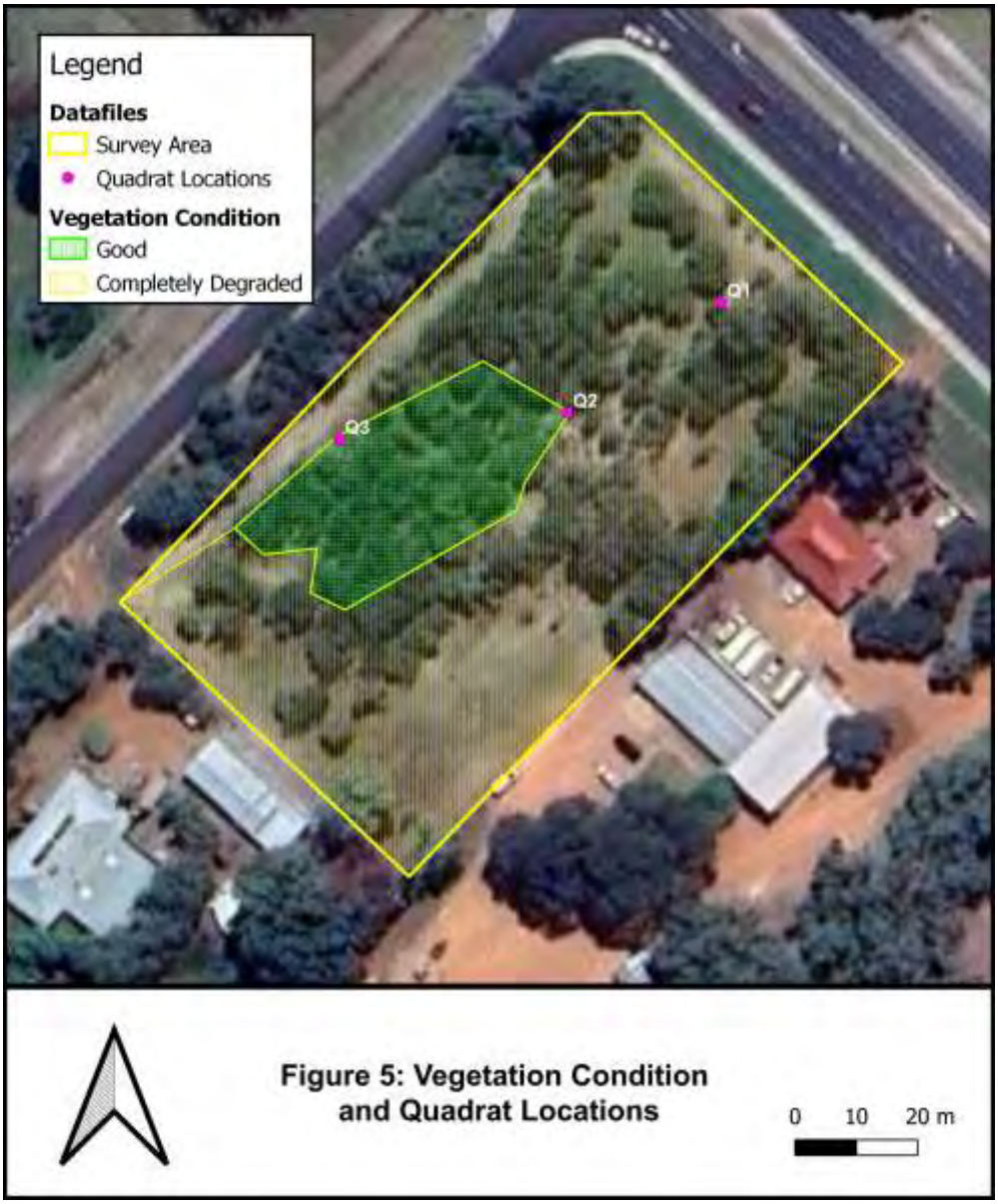

Figure 5: Vegetation Condition and Quadrat Locations

7. DISCUSSION AND CONCLUSION

The Detailed Flora and Vegetation survey within 11 Moored Rd, Pinjarra identified a total of 48 taxa representing 45 genera and 19 families. Weed species comprised of 45.8% of the total flora recorded. The vegetation condition across the site is "Good" to "Completely Degraded".

One vegetation community was recorded at a local level during the survey. Vegetation consisted of low woodland of *Melaleuca preissiana* over tall shrubland of *Kunzea ericifolia* over open sedgeland of *Chaetanthus aristatus* over very open herbland of **Taraxacum khatoonae* and**Hypochaeris glabra.*

No species of Threatened (T), or Priority Flora pursuant to the *Biodiversity Conservation* (BC) Act 2016 or the *Environment Protection and Biodiversity Conservation* (EPBC) Act 1999 were located during the time of the survey.

The botanical survey was undertaken in spring to coincide with the majority of the flowering times of the threatened species. A number of species listed in **Tables 3 & 4**, have been acknowledged as likely to occur within the survey area, based on soils and vegetation composition. The high diversity and density of weed species combined with stock grazing and the degraded condition of the site, suggests that it is unlikely to support any of the listed Threatened or Priority flora species. Most of the species identified as likely to occur were also recorded as flowering during the time of the sure, which would suggest they would be visible if occurring within the survey area. The listed species not flowering but are likely to be onsite are recognisable without flowers, including *Johnsonia pubescens* subsp. *cygnorum*, *Banksia mimica* and *Acacia lasiocarpa* var. *bracteolate.* Only one species not flowering and likely to occur within the survey area is *Diuris drummondii,* however due to recent grazing it is unlikely to occur within the survey area.

No Threatened Ecological Communities listed by the Department of Climate Change, Energy, the Environment and Water (DCCEEW) or Department of Biodiversity, Conservation and Attractions (DBCA) were located during the time of the survey.

The vegetation lacks the appropriate structure and species diversity to be classified as the only TEC likely to occur within the survey area. The likely TEC is *Banksia Woodlands of the Swan Coastal Plain* Ecological Community. In addition, the size and condition of the remnant vegetation and species composition in the survey area, does not meet the size and condition thresholds for the other listed (**Tables 6 & 7**) Ecological Communities. The survey area consists of low woodland of *Melaleuca preissiana* with a very degraded understorey. This species composition recorded in the survey area does

not represents those recorded as the likely TECs in the vicinity. Historical land uses and current grazing has impacted the site and degraded the vegetation condition.

8. REFERENCES

Beard J. S. (1990). *Plant life of Western Australia*. Kangaroo Press, Perth.

Bureau of Meteorology (2024) *Monthly climate data statistics Climate Data Online - Map search.*

Department of Climate Change, Energy the Environment and Water (DCCEEW) (2024) Australia's bioregions (IBRA). https://www.dcceew.gov.au/environment/land/nrs/science/ibra.

DataWa (2024), Government of Western Australia. Vegetation Complexes - Swan Coastal Plain (DBCA-046) (ID: 47).

Department of Agriculture and Food WA (2012) *Soil-landscape systems of Western Australia (GIS dataset)*. Perth, Australia.

English, V. and Blyth, J. (1997). *Identifying and conserving Threatened Ecological Communities in the South West Botanical Province*. ANCA National Reserves System Cooperative Program, Project Number N702.

Environmental Protection Authority (2001a). Position Statement No. 2. *Environmental Protection of Native Vegetation in Western Australia*. EPA, Perth.

Environmental Protection Authority (2001b). Position Statement No. 3. *Terrestrial biological surveys as an element of biodiversity protection*. EPA, Perth.

Environmental Protection Authority (2003a). Guidance statement No. 10. *Guidance for the Assessment of Environmental Factors – Level of assessment for proposals affecting natural areas within the System 6 Region and Swan Coastal Plain portion of the System 1 Region*. EPA, Perth.

Environmental Protection Authority (2003b). Guidance statement No. 51. *Guidance for the Assessment of Environmental Factors –Terrestrial flora and vegetation surveys for environmental impact assessment in Western Australia*. EPA, Perth.

Heddle, E.M., Loneragan, O.W. and Havel, J.J. (1980). *Darling Systems – Vegetation Complexes*. In: Atlas of Natural Resources Darling System, Western Australia. Department of Conservation and Environment, Perth.

Urban Bushland Council WA Inc. (2024) Threats to Bushland, Weeds - Urban Bushland Council WA www.bushlandperth.org.au/weeds.

Western Australian Herbarium (2024). *FloraBase - The Western Australian Flora*. Department of Biodiversity, Conservation and Attractions.

APPENDIX A
VASCULAR PLANT SPECIES RECORDED

APPENDIX A:
VASCULAR PLANT SPECIES RECORDED AT 11 MOORES RD, PINJARRA, OCTOBER 2024
*(*Denotes a weed species)*

Amaryllidaceae	**Agapanthus* sp.
Apiaceae	*Homalosciadium homalocarpum*
Araliaceae	*Trachymene pilosa*
Asteraceae	**Arctotheca calendula*
	**Cotula turbinata*
	**Hypochaeris glabra*
	**Taraxacum khatoonae*
	**Ursinia anthemoides*
	**Vellereophyton dealbatum*
	Asteraceae sp.
	Hypocalymma angustifolium
	Myriocephalus occidentalis
Campanulaceae	**Wahlenbergia capensis*
Dasypogonaceae	*Dasypogon bromeliifolius*
Fabaceae	**Lotus angustissimus*
	**Ornithopus compressus*
	**Ornithopus pinnatus*
	Acacia saligna
	Bossiaea eriocarpa
	Isotropis cuneifolia
Haemodoraceae	*Conostylis* sp.
Hemerocallidaceae	*?Caesia micrantha*
Iridaceae	**Romulea rosea*
Juncaceae	*Juncus pallidus*
Loranthaceae	*Nuytsia floribunda*
Myrtaceae	**Eucalyptus camaldulensis*
	Agonis flexuosa
	Astartea?affinis
	Hypocalymma angustifolium
	Kunzea ericifolia
	Leptospermopsis erubescens
	Melaleuca preissiana
Oxalidaceae	**Oxalis glabra*
Poaceae	**Briza maxima*
	**Briza minor*
	**Ehrharta longiflora*
	**Eragrostis curvula*
	**Lagurus ovatus*
	**Lotus angustissimus*
	**Schismus barbatus*
	**Vulpia bromoides*
	**Vulpia* sp.
	Austrostipa sp.
Proteaceaea	*Adenanthos?obovatus*
Restionaceae	*Desmocladus asper*
	Chaetanthus aristatus

Stylidiaceae	*Stylidium* sp.
Xanthorrhoeaceae	*Xanthorrhoea preissii*

APPENDIX B
QUADRAT DATA

Del Botanics Environmental Consulting

FIELD SHEET – FLORA AND VEGETATION SURVEY

Job Code: 11 Moores Rd, Pinjarra	**Date:** 22/10/2024	**Site:** Q1
GPS Datum: (50) 393145.70 m E 6390284.91 m S	**Topography:** Lower slope	**Litter cover:** 5 % twigs, 20 % leaves 0% logs
Age since fire: >10 yrs	**Disturbance: Hi** Med Lo	**Soils:** Grey sand
Vegetation Description: *Melaleuca preissiana* woodland		
Vegetation Condition: Completely Degraded		
Observations: Heavily grazed, compacted soils. Good stand of old Melaleuca trees.		

Coll No.	Taxon	Ht (cm)	% Alive	% Dead	% Cover
Top	*Melaleuca preissiana*	300	100		25
	Agonis flexuosa	500	100		7
Middle	*Kunzea ericifolia*	300	100		25
Bottom SP1	*Chaetanthus aristatus*	40	95	5	35
	**Hypochaeris glabra*	5	100		7
	**Taraxacum khatoonae*	5	100		7
	**Arctotheca calendula*				
	**Briza minor*				
	**Lotus angustissimus*				
SP2	**Cotula turbinata*				
	Juncus pallidus				
	**Ursinia anthemoides*				
	Austrostipa sp.				

	**Ehrharta longiflora*				
	**Briza maxima*				
	Acacia saligna				
	**Oxalis glabra*				
	**Lagurus ovatus*				
SP3	**Schismus barbatus*				
SP4	**Ornithopus pinnatus*				
Opp	*Xanthorrhoea preissii*				
Opp	**Eucalyptus camaldulensis*				
Opp	**Agapanthus* sp.				

Del Botanics

FIELD SHEET – FLORA AND VEGETATION SURVEY

Job Code: 11 Moores Rd, Pinjarra	**Date:** 22/10/2024	**Site:** Q2
GPS Datum: (50) 393120.54 m E 6390266.89 m S	**Topography:** Lower slope	**Litter cover:** 10 % twigs, 25 % leaves 0% logs
Age since fire: >10 yrs	**Disturbance: Hi** Med Lo	**Soils:** Grey sand
Vegetation Description: *Melaleuca preissiana* woodland		
Vegetation Condition: Good		
Observations: Heavily grazed.		

Coll No.	Taxon	Ht (cm)	% Alive	% Dead	% Cover
Top	**Eucalyptus camaldulensis*	250	100		2.5
	Melaleuca preissiana	500	100		30
Middle	*Kunzea ericifolia*	200	100		7
	Hypocalymma angustifolium	100	100		8
SP6	*Leptospermopsis erubescens*	100	100		3
Bottom SP1	*Chaetanthus aristatus*	100	100		15
	**Hypochaeris glabra*	5	100		6
	**Taraxacum khatoonae*	5	100		7
	**Briza minor*				
	**Ursinia anthemoides*				
SP5	*Myriocephalus occidentalis*				
	**Eragrostis curvula*				

	**Lotus angustissimus*				
	Dasypogon bromeliifolius				
	**Ehrharta longiflora*				
	Xanthorrhoea preissii				
	**Wahlenbergia capensis*				
	**Oxalis glabra*				
SP7	*Homalosciadium homalocarpum*				
	Astartea?affinis				
SP 8	**Vellereophyton dealbatum*				
	**Vulpia bromoides*				

Del Botanics

FIELD SHEET – FLORA AND VEGETATION SURVEY

Job Code: 11 Moores Rd, Pinjarra	**Date:** 22/10/2024	**Site:** Q3
GPS Datum: (50) 393083.30 m E 6390262.54 m S	**Topography:** Lower slope	**Litter cover:** 10 % twigs, 20 % leaves 0% logs
Age since fire: >10 yrs	**Disturbance: Hi** Med Lo	**Soils:** Grey sand
Vegetation Description: *Melaleuca preissiana* woodland with *Kunzea ericifolia*		
Vegetation Condition: Completely Degraded		
Observations: Heavily grazed, compacted soils. Good stand of old Melaleuca trees.		

Coll No.	Taxon	Ht (cm)	% Alive	% Dead	% Cover
Middle	*Kunzea ericifolia*	800	100		50
	Hypocalymma angustifolium	150	100		35
	Xanthorrhoea preissii	100	100		2.5
Bottom	*Dasypogon bromeliifolius*	40	70	30	5
	**Taraxacum khatoonae*	5	100		2
	Hypocalymma angustifolium	5	100		
SP 9	*Adenanthos?obovatus*				
	**Briza maxima*				
	**Briza minor*				
SP7	*Homalosciadium homalocarpum*				
	**Lotus angustissimus*				
	Desmocladus asper				

	**Romulea rosea*				
	**Ehrharta longiflora*				
	**Ursinia anthemoides*				
	Asteraceae sp.				
SP5	*Myriocephalus occidentalis*				
	**Wahlenbergia capensis*				
	Conostylis sp.				
SP1	*Chaetanthus aristatus*				
	Trachymene pilosa				
	Isotropis cuneifolia				
	Stylidium sp				
	Bossiaea eriocarpa				
	**Ornithopus compressus*				
	**Vulpia* sp.				
SP2	**Cotula turbinata*				

APPENDIX C
BAM ACT DEFINITIONS

BAM Act Definitions

Legal status

Each listed organism is declared under the Biosecurity Management act with certain legal requirements:

Declared Pest, Prohibited - s12

Prohibited organisms are declared pests by virtue of section 22(1), and may only be imported and kept subject to permits. Permit conditions applicable to some species may only be appropriate or available to research organisations or similarly secure institutions.

Permitted - s11

Permitted organisms must satisfy any applicable import requirements when imported. They may be subject to an import permit if they are potential carriers of high-risk organisms.

Declared Pest - s22(2)

Declared pests must satisfy any applicable import requirements when imported, and may be subject to an import permit if they are potential carriers of high-risk organisms. They may also be subject to control and keeping requirements once within Western Australia.

Permitted, Requires Permit - r73

Regulation 73 permitted organisms may only be imported subject to an import permit. These organisms may be subject to restriction under legislation other than the *Biosecurity and Agriculture Management Act 2007*. Permit conditions applicable to some species may only be appropriate or available to research organisations or similarly secure institutions.

Unlisted - s14

If you are considering importing an unlisted organism/s you will need to submit the name/s for assessment, as unlisted organisms are automatically prohibited entry

Appendix E - Traffic Impact Statement

Project:	**Transport Impact and Car Parking Assessment – V1** 11 Moores Road, Pinjarra Proposed Veterinary Hospital
Owners:	**Pinjarra Veterinary Hospital**
Author:	Heidi Herget
Signature:	
Date:	13th February 2025

P.O. Box 1146 BOORAGOON WA 6954
PHONE +61 0434 189 788
EMAIL info@moveconsultants.com.au

Document Status.

Ver. No.	Author	Reviewed by	Date	Issued for	Signature	Date
1	HH	HH	12/02/2025	FINAL		13/02/2025

CONTENTS

1. INTRODUCTION

Move Consultants has been commissioned to prepare a Transport Impact and Parking Assessment for a proposed veterinary hospital to be located at 11 Moores Road, Pinjarra in the Shire of Murray. This assessment has been prepared in accordance with the Shire of Murray's *Local Planning Scheme No.4, Local Planning Polic: General Development Provisions - Building Setbacks, Car Parking Standards* and the WAPC *Transport Impact Assessment Guidelines – Vol. 4: Individual Developments* as well as in the context of documented traffic generation and car parking demand surveys for similar developments and industry design standards and guidelines.

1.1 Location

The site is located within the south-west corner of Pinjarra Road and Moores Road on the south-east side of Moores Road approximately 1.6km due north-west of the Pinjarra Town Centre and shown in Figure 1.. It is also located approximately 6.5km due south-east of the Forrest Highway.

Figure 1 – Local Context

The location of the site in a regional context is shown in **Figure 2**.

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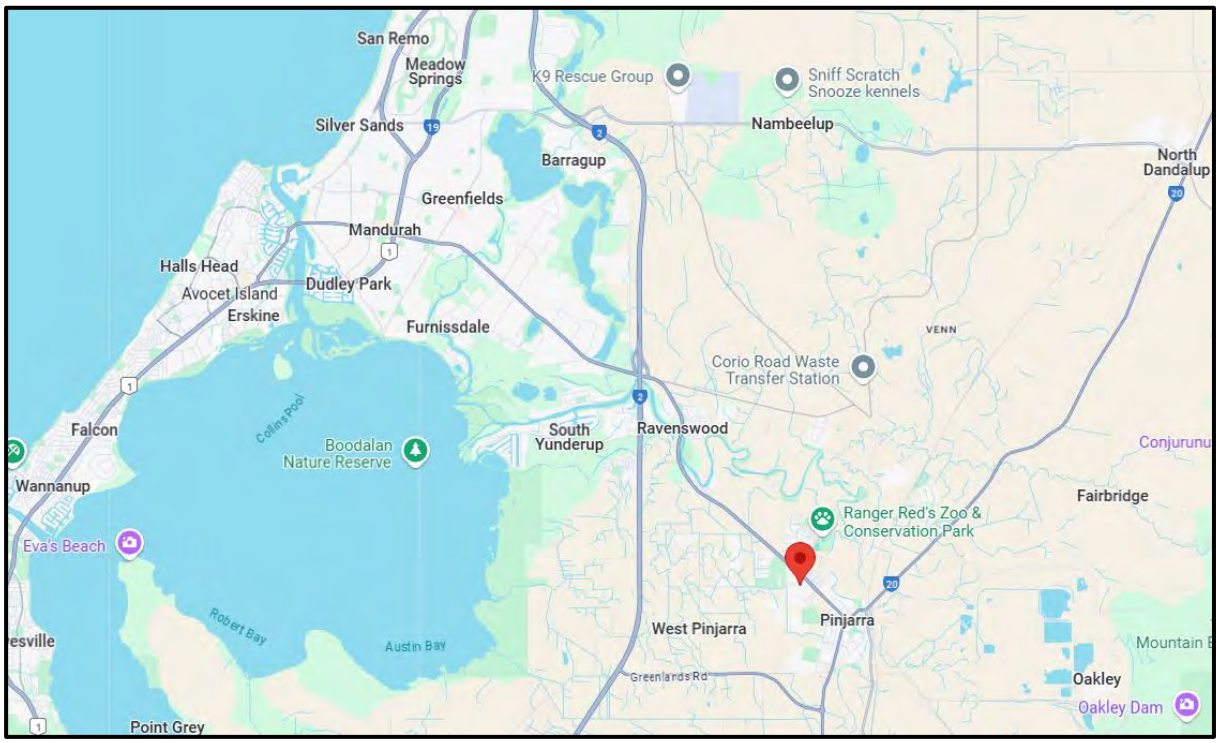

Figure 2: Metropolitan Context

The proposal consists of the proposed development of a veterinary clinic with a maximum of two (2) consultants and seven (7) support staff operating at the facility at any one time. A copy of the proposed site plan is attached in in **Appendix A**.

A site visit was undertaken on Thursday 6th February 2025 to identify any potential traffic-related issues associated with the proposal and to undertake 'spot surveys' with regard to traffic on the boundary road network, and car parking demands at adjacent and proximate existing developments queuing, in the vicinity of the site

In addition to the data collection, a review of the existing road geometry, travel patterns and speed zoning in place was also undertaken.

1.2 Scope of Assessment

This report has been prepared in accordance with the Western Australian Planning Commission's *Transport Assessment Guidelines for Developments: Volume 4 – Individual Developments* (2006), the Shire of Murray's planning policies and relevant industry standards such as Australian Standards and Austroads guidelines

Specifically, this report aims to assess the impacts of the proposed development on the boundary road network in the vicinity of the site to identify any modifications, to site or road layout, which may be required to serve the proposed site. In addition, the assessment considers the proposed access, circulation, and egress arrangements to and from the site and car parking demands associated with the proposal.

For this purpose, the traffic operations on the adjacent and broader local road network have been assessed under both existing and future proposed traffic conditions with regard to the potential impacts from additional traffic generated by the proposed development of the site.

2. EXISTING MOVEMENT NETWORK

2.1 Road Infrastructure

Pinjarra Road to the north-east of the site has been designated as a *Primary Distributor* road under the Main Roads WA *Functional Road Hierarchy* and is defined as a road which *"...provides for major regional and inter-regional traffic movement and carry large volumes of generally fast moving traffic. Some are strategic freight routes, and all are National or State roads and are managed by Main Roads."* It operates under a posted speed limit of 110kph to the north-west of the site transitioning to 60kph on approach to George Street/South-Western Highway. Pinjarra Road has been constructed as a dual divided carriageway to the north-east of the site and is owned, operated and maintained by Main Roads WA.

Moores Road, which is located along the north-western boundary of the site, is a local road providing direct access to the local industrial precinct to the west of the site as well as access to existing rural residential properties. It has been constructed as a standard width single undivided carriageway with a 6.2m seal. Moores Road has been classified as an *Access Road* under the Main Roads WA *Functional Road Hierarchy* which is defined as a road which *"...provides access to abutting properties with amenity, safety and aesthetic aspects having priority over the vehicle movement function. These roads are bicycle and pedestrian friendly and are managed by Local Government."* It operates under a speed limit of 50kph in the vicinity of the site and is owned, operated and maintained by the Shire of Murray.

An extract from the MRWA's *Functional Road Hierarchy* is shown in **Figure 3**.

Figure 3 – MRWA Functional Road Hierarchy

The intersection of Pinjarra Road/Moores Road to the north-east of the site, operates under 4-way Stop Control with Moores Road to the south-west of Pinjarra Road and Sutton Street to the north-east of Pinjarra Road functioning as the minor approaches, respectively.

Table 1 shows the indicative existing daily traffic volumes for the boundary road network in the vicinity of the site.

Table 1: Existing Traffic Volumes

Road Name	Existing Daily Volume (vpd)	Practical Capacity (vpd)
Pinjarra Road (West of Wilson Road)	12,700 vpd (MRWA, 2023/24)	40,000 to 50,000 vpd
Moores Road (South-West of Pinjarra Road)	Est.800vpd (Based upon 'spot surveys')	3,000 vpd

2.2 Pedestrian and Cycling Infrastructure

There is a wide footpath pn both sides of Pinjarra Road to the north-west of the site with a new dual use path on the south side of Pinjarra Road, east of Moores Road. On road sealed shoulders are also in place on both side of Pinjarra Road. No dedicated pedestrian or cycling infrastructure is in place on Moores Road.

2.3 Public Transport Infrastructure

The closest bus stops are in place to the north-east of the site on Pinjarra Road, north-east of intersection with Moores Road/Sutton Street with the following routes providing line haul service:

- Route 600 – Mandurah Station to Pinjarra: Via Pinjarra Road and Ravenswood
- Route 605 – Mandurah Station to Pinjarra: Via Pinjarra Road, Ravenswood, Murray Bend and Murray River Country Estate

These services provide a combined frequency of 15-30 minutes during the weekday peak periods and hourly service outside these periods with no services on Sundays or public holidays. **Figure 4** shows the line haul bus services in the vicinity of the site.

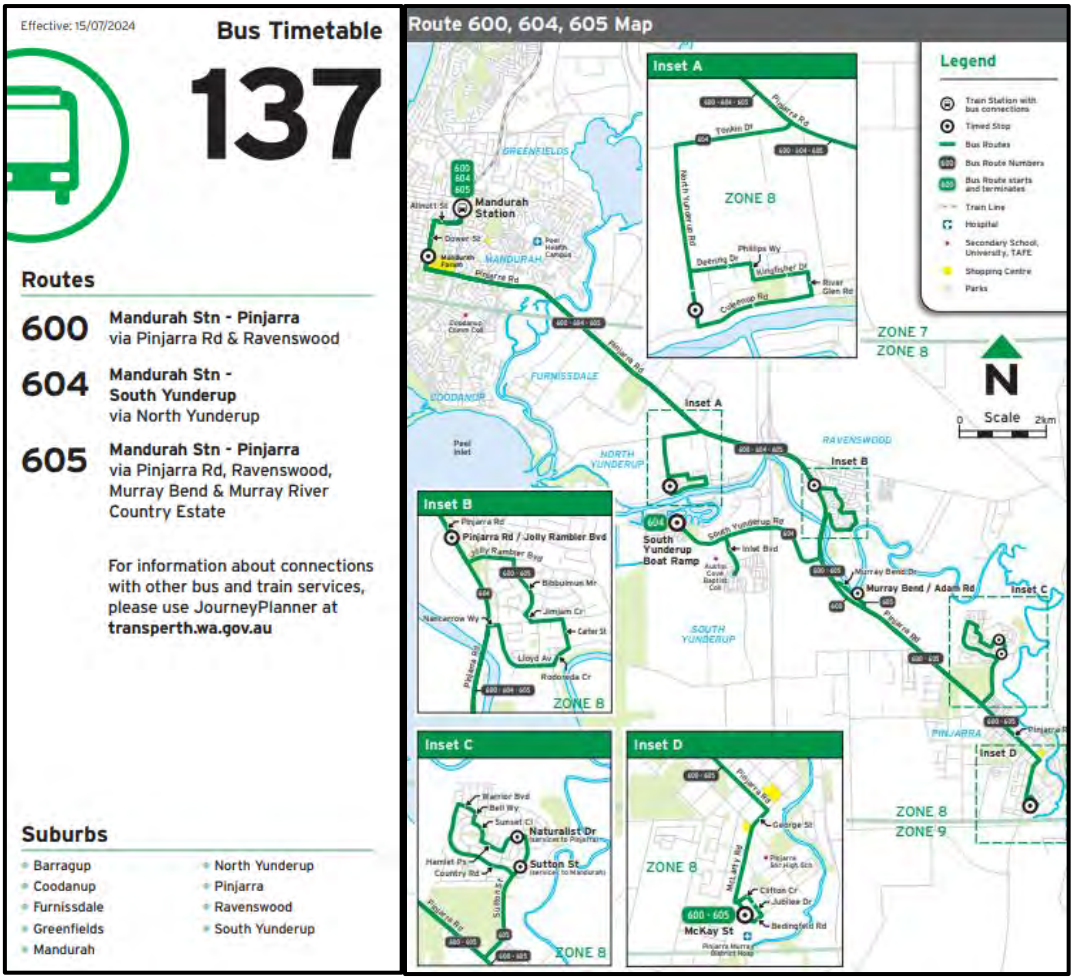

Figure 4: Line Haul Bus Services (Source: TransPerth)

3. DEVELOPMENT PROPOSAL

3.1 Development Details

The development application consists of a proposal for a veterinary clinic with development plans for the development are attached in **Appendix A.**

Details relating to the proposal are as follows:

- A maximum of 5 Veterinarians and 10 support staff, with 2 administrative staff at any given time.
- 21 on-site car parking bays inclusive of one (1) ACROD bay.
- Operating Hours:
    - Monday to Friday – 8:00 a.m. to 6:00 p.m.
    - Saturdays – 8:00 a.m. to 1:00 p.m.

Appointments will typically be booked on a 30-minute basis with only emergency walk-in service provided. The operating theatre will typically only be in use from 11:00 a.m. to 3:00 p.m.

3.2 Car Parking and Access

Vehicular access to the site is proposed to be maintained via a single full movements crossover to the south-east side of Moores Road, south-west of the intersection with Pinjarra Road/Sutton Street (2).

The proposed on-site car parking supply consists of 21 bays, inclusive of one (1) ACROD bay situated along the Moores Road frontage plus ancillary service/delivery/pick-up area at the rear of the building.

3.3 Bicycle Parking

End-of-trip facilities (including secure bicycle parking) can be provided for staff internal to the building and visitor bays can be provided external to the building along the eastern frontage in the form of a minimum of two (2) bays via secured U-rail installation. This is consistent with Council's TPS, long-term bicycle strategy and industry best-practice.

4. TRAFFIC ANALYSIS

A traffic generation and distribution exercise has been undertaken to assess the potential traffic impacts associated with the proposed development. The aim of this exercise was to establish the traffic volumes which would be generated from the proposed development and to quantify the effect that the additional traffic has on the surrounding road network, including on Pinjarra Road and Moores Road.

4.1. Trip Generation and Distribution

The traffic generated by the proposed development has been predicted by applying trip generation rates for the proposed uses were derived from a combination of a review of the Institute of Transportation Engineers' (ITE) *Trip Generation Manual, 10th Edition* and the anticipated staff and patient/visitor demand profile on a typical day. The total anticipated traffic generated by the proposed development is estimated to be in the order of 76 vehicular trips (50% inbound/50% outbound) on a daily basis; 9 vehicular trips (7 inbound/2 outbound) during the a.m. peak hour; and 10 vehicular trips (3 inbound/7 outbound) during the p.m. peak hour.

Based upon the existing traffic patterns in the area and the spatial distribution of adjacent land uses, the following distribution for the proposed development generated traffic has been assumed broadly: to be as follows

- 45% to and from the north via Pinjarra Road and Moores Road.
- 45% to and from the south via Pinjarra Road and Moores Road.
- 10% to and from the south-west via Moores Road.

The number of trips entering / exiting the site via the proposed site crossover/connections has been assigned based upon the most logical route for vehicles to take given their origin / destination. The following outlines the anticipated impact on the local road network:

- Pinjarra Road (North):
  - Daily: +34 vpd
  - A.M. Peak Hour: +4 vph
  - P.M. Peak Hour: +5 vph
- Pinjarra Road (South):
  - Daily: +34 vpd
  - A.M. Peak Hour: +4 vph
  - P.M. Peak Hour: +4 vph
- Moores Road:
  - Daily: +76 vehicular trips
  - A.M. Peak Hour: +9 vph
  - P.M. Peak Hour: +10 vph

These increases in daily and weekday peak hour volumes will have a minimal impact on existing traffic operations in the area and can be comfortably accommodated within the practical capacities of the respective links on the boundary road network.

5. TRAFFIC ENGINEERING REVIEW AND CAR PARKING ASSESSMENT

5.1. Review of Site Layout and On-Site Circulation

A review of the proposed on-site layout indicates that it has been designed in compliance with Australian Standards *AS 2890.1: Off-Street Parking* with all vehicles entering and exiting the site in forward gear inclusive of the waste collection collections, where required.

5.2. Crash History, Sightlines and Pedestrian Safety

A review of the crash history on the boundary road network in the vicinity of the site crossover during the 5-year reporting period 2019-2023 of indicates that while there have been five (5) crashes on Moores Road with all of these crashes occurring at the Pinjarra Road/Moores Road intersection with no driveway crashes along the frontage of the site.

A review of the sightlines at the site crossovers indicates that there are sufficient sightlines in place to accommodate minimum AGSD, SISD and MGSD requirements under a design speed of 60kph along Moores Road.

5.3. Rubbish Collection and Loading, Servicing and Delivery

Rubbish collection arrangements would be undertaken in consultation with the Shire of Murray A separate Waste Management Plan can be prepared and submitted under separate cover. Loading, servicing, and delivery activities will be undertaken on-site within the dedicated loading/service and delivery area designated at the rear of the site.

5.4. Car Parking

The proposed car parking supply on the site is 21 bays inclusive of one (1) ACROD bay. This proposed on-site supply is compliant with the requirements outlined in the City's TPS and *Local Planning Policy: General Development Provisions – Building Setbacks, Car Parking Standards* to cater to the maximum demands during operating hours.

6. CONCLUSIONS

Move Consultants has been commissioned to prepare a Transport Impact and Parking Assessment for a proposed veterinary hospital to be located at 11 Moores Road, Pinjarra in the Shire of Murray. This assessment has been prepared in accordance with the Shire of Murray's *Local Planning Scheme No.4, Local Planning Polic: General Development Provisions - Building Setbacks, Car Parking Standards* and the WAPC *Transport Impact Assessment Guidelines – Vol. 4: Individual Developments* as well as in the context of documented traffic generation and car parking demand surveys for similar developments and industry design standards and guidelines.

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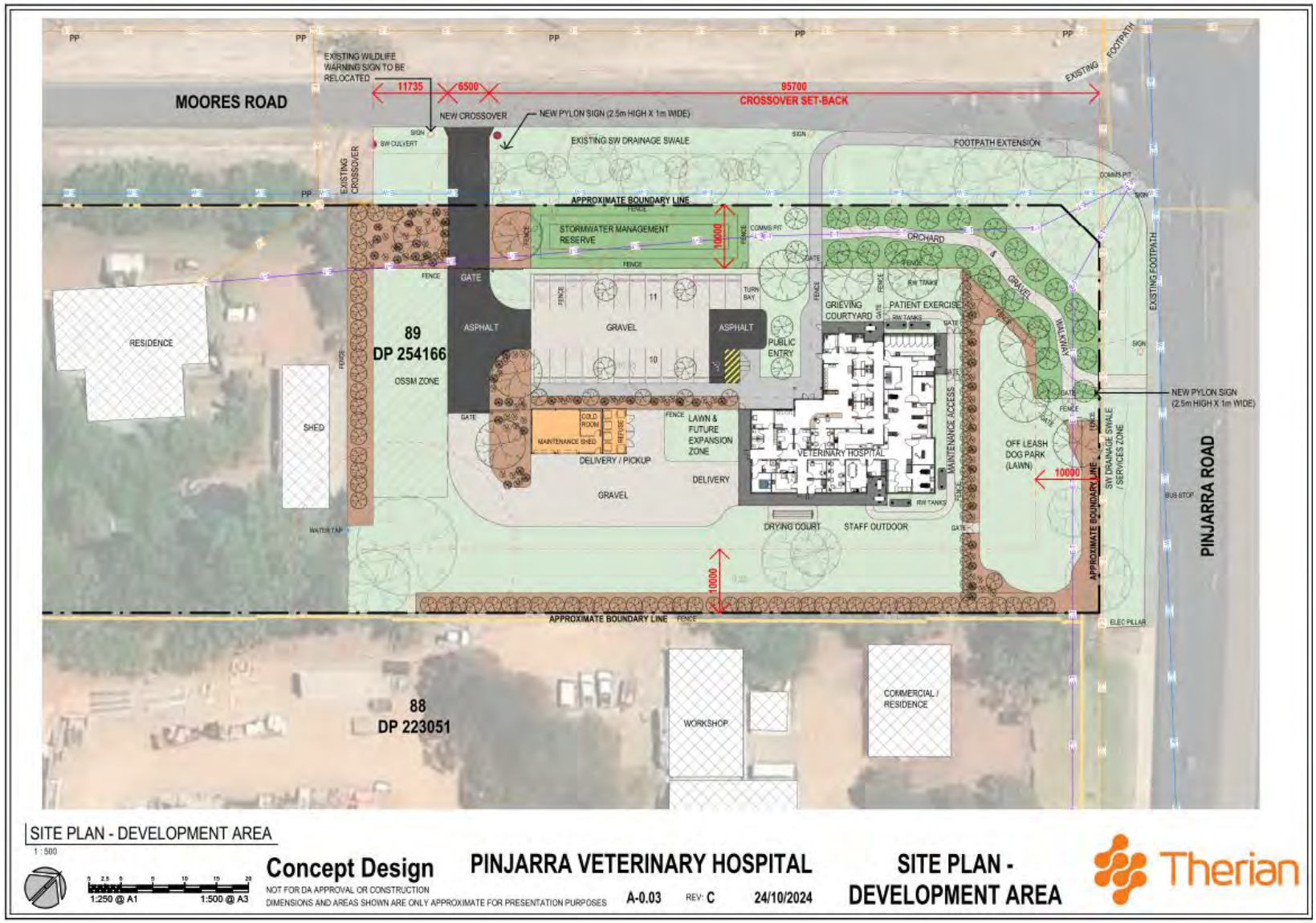
In conclusion, based upon the results of this transport analysis, traffic engineering review and car parking assessment, there are not anticipated to be any safety, or operational concerns associated with the proposal and the proposed on-site car parking is appropriate and are therefore supported from a traffic perspective.

7. APPENDIX A – SITE PLAN


MOORES ROAD
EXISTING WILDLIFE WARNING SIGN TO BE RELOCATED
11735
6500
95700
CROSSOVER SET-BACK
NEW CROSSOVER
NEW PYLON SIGN (2.5m HIGH X 1m WIDE)
EXISTING SW DRAINAGE SWALE
FOOTPATH EXTENSION
EXISTING CROSSOVER
APPROXIMATE BOUNDARY LINE
STORMWATER MANAGEMENT RESERVE
10000
ORCHARD
GRIEVING COURTYARD
PATIENT EXERCISE
GRAVEL
WALKWAY
EXISTING FOOTPATH
RESIDENCE
89
DP 254166
OSSM ZONE
SHED
ASPHALT
GRAVEL
PUBLIC ENTRY
LAWN & FUTURE EXPANSION ZONE
MAINTENANCE SHED
DELIVERY / PICKUP
DELIVERY
VETERINARY HOSPITAL
MAINTENANCE ACCESS
OFF LEASH DOG PARK (LAWN)
SW DRAINAGE SWALE / SERVICES ZONE
NEW PYLON SIGN (2.5m HIGH X 1m WIDE)
PINJARRA ROAD
DRYING COURT
STAFF OUTDOOR
88
DP 223051
WORKSHOP
COMMERCIAL / RESIDENCE
SITE PLAN - DEVELOPMENT AREA
1 : 500
Concept Design
NOT FOR DA APPROVAL OR CONSTRUCTION
DIMENSIONS AND AREAS SHOWN ARE ONLY APPROXIMATE FOR PRESENTATION PURPOSES
1:250 @ A1
1:500 @ A3
PINJARRA VETERINARY HOSPITAL
A-0.03
REV: C
24/10/2024
SITE PLAN - DEVELOPMENT AREA
Therian

Appendix F - Geotechnical Report

LOCAL GEOTECHNICS

19 November 2024

Report on

Geotechnical Site Classification

11 Moores Road, Pinjarra WA

Project:
LGK0372024SC Rev_0

Client:
Method Planning

Geotech | Civil | Pavement | Drainage

12/8 Production Road, Canning Vale WA 6155
PO Box 5050, Canning Vale South, WA 6155

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LOCAL GEOTECHNICS

19 November 2024

To
Method Planning

Dear Sir/Madam,

RE: Geotechnical Site Classification for 11 Moores Road, Pinjarra WA.

This letter presents our report on a geotechnical site classification carried out at *11 Moores Road, Pinjarra WA*. The report must be thoroughly read and implemented in full, no partial implementation of this report is allowed.

If you have any questions in regards to the geotechnical site investigation or we can be of further assistance, please do not hesitate to contact Local Geotechnics.

Sincerely yours

Dr. Harun Meer
Ph.D.(Geotech), M. Eng. (Geotech), B. Eng. (Civil)
MIEAust, CPEng, EngExec, NER, APEC Engineer, IntPE(Aust)
Director
Local Geotechnics

PROJECT INFORMATION

Project	**LGK0372024SCRev_0** **Geotechnical Site Classification**
Site Location	**11 Moores Road, Pinjarra WA**

Rev	Description	Date	Prepared by	Approved by
0	Issued to client	19 November 2024	L Su	H Meer

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EXECUTIVE SUMMARY

Method Planning commissioned Local Geotechnics to prepare a geotechnical site classification report for 11 Moores Road, Pinjarra WA.

The proposed construction will be the Pinjarra Veterinary Hospital.

The objectives of the site class investigation were to obtain information on the subsurface conditions in order to classify the site in accordance with the definitions provided in Australian Standard AS2870 – 2011.

Field works were conducted on 12 November 2024 in fine and sunny weather conditions. The investigation work consisted of field observation, documentation, sub-surface probing, soil profile logging and conducting of penetrometer testing alongside the test holes.

The findings of the site classifications are presented in the following sections

It is observed from the PSP test that the site soil is in loose to dense condition.

Site Classification
Provided earthworks are completed as per the recommendation in Section 6.0 of this report, based on the site soil profile, laboratory test results and surrounding condition, the site can be classified as ***"CLASS S"*** in accordance with definitions provided in the Australian Standard AS2870 -2011. The characteristics surface movement ***Ys*** is considered to be 10 mm.

Stormwater Drainage
We recommend discharging of surface and roof runoff onsite via soakwell. The drainage system must be designed by a qualified engineer as per requirements of the local government authority.

It is highly recommended that a competent geotechnical engineer should supervise earthworks and construction to ensure that all organic, roots, demolition debris, loose material have been adequately removed from the area and that the fill material is adequately compacted.

1.0 INTRODUCTION

Method Planning commissioned Local Geotechnics (LG) to prepare a geotechnical site classification report for 11 Moores Road, Pinjarra WA (the project). The site location is shown in Figure 1.

Figure 1. Aerial View of the Site Location (Source: Landgate Map)

The objectives of the investigation are to obtain information on the sub-surface conditions to classify the site in accordance to the definitions provided in Australian Standard AS2870 – 2011 and to provide recommendations on stormwater drainage system for the site. Field works were conducted on 12 November 2024. Weather condition on the day of field investigation was fine and sunny.

The scope of the investigation did not include compaction control, bearing capacity, wind force calculations or classifications, slope stability checking, and settlement calculation. Environmental issues were not considered in this report.

2.0 PROPOSED DEVELOPMENT

The proposed construction will be the Pinjarra Veterinary Hospital.

3.0 SCOPE AND OBJECTIVES

The scope and objectives of the investigation are as follows:

- Desktop review of geological survey maps, groundwater atlas and other publicly available information for the site;
- Conducting of up to four (04) Test Holes by using a hand auger up to 2.5 m or refusal;
- Conducting of Perth Sand Penetrometer (PSP) tests alongside the test holes up to a depth of 1.05 m or refusal;
- Logging of site soil profile as per Australian Standard AS1726;
- Groundwater recording as per test hole observation;
- Submit a factual report on findings to classify the site in accordance with the Australian Standard AS2870 - 2011;
- Provide recommendation on earthworks; and
- Provide recommendation on stormwater drainage.

4.0 SITE CONDITIONS

4.1 Surface Condition

The surface condition and the overall topography of the site are generally flat. There are medium to large sizes trees can be observed at the time of investigation. The site boundaries are enclosed with fences. There are surrounding houses adjacent to the property.

Ground water table was encountered at depths of 1.3 m, 1.0 m, 1.0 m and 0.6 m at TH1, TH2, TH3 and TH4 during the time of investigation. Site photos taken during the field investigation are shown in Appendix C.

4.2 Subsurface Condition

A review of Environmental Geological Western Australia survey Map of Pinjarra 1:250,000 (Sheet SI 50-2 and Part Sheet SI 50-1) was conducted before site investigation. Environmental Geological map of Pinjarra revealed that the site is consisted of Guildford Formation (Qpa): alluvium (clay, loam, sand, gravel) variably lateritized and podsolized.

4.3 Water Table and Drainage

A review of 'Perth Ground Water Atlas' of the Department of Water was carried out for this site. No existing ground water information was available during the time of investigation on 'Perth Ground Water Atlas'.

5.0 FIELD INVESTIGATION

The field investigation consists of sub-surface probing by using a hand auger at four locations, taking photograph and Perth Sand Penetrometer (PSP) testing alongside the test holes.

5.1 Test Hole Logs

Four Test Holes (TH1, TH2, TH3 and TH4) were conducted at the site by using a hand auger. Test hole locations are shown in the site sketch in Appendix A.

During sub-surface probing, the spoil was stockpiled adjacent to the test location. The subsurface profiles exposed in the boreholes were logged in accordance with AS1726 and were photographed to provide a visual record of subsurface conditions encountered. Following these activities, each test location was progressively backfilled in the reverse order of excavation works.

Test holes TH1 – TH4 consist of similar soil profile as described below:

- **Topsoil, Silty SAND (SM)** – fine to medium grained, grey, with low plasticity silt, grass and roots, slightly moist, loose to dense, up to a depth of 0.1 m; followed by
- **Silty SAND (SM)** – fine to medium grained, grey, with low plasticity silt, slightly moist, loose to dense, up to a depth of 0.5 m; followed by
- **SAND (SP)** – fine to medium grained, pale grey to pale brown, slightly moist to wet, loose to dense, up to the maximum investigated depth.

TH1, TH2, TH3 and TH4 were terminated at depths of 1.7 m, 1.5 m, 1.8 m and 1.5 m respectively due to hole collapsed. Ground water table was encountered at depths of 1.3 m, 1.0 m, 1.0 m and 0.6 m at TH1, TH2, TH3 and TH4 during the time of investigation. Test hole logs are attached in Appendix B.

5.2 Perth Sand Penetrometer (PSP) Tests

PSP tests (PSP1 to PSP4) were conducted alongside the test holes. PSP tests indicate the soil density of the site as per Standard Australia HB 160-2006, Table 6.4.6.2. PSP data are presented in Table 1 and PSP test certificates are attached in Appendix B.

Table 1. Summary of PSP test data Ref. Table 6.4.6.2 HB 160-2006

PSP Location	PSP1		PSP2		PSP3		PSP4	
Depth (mm)	**No. of Blows/300mm (Density Classification)**							
0 – 150	Seating		Seating		Seating		Seating	
150 – 450	4	L	5	L	5	L	10	D
450 – 750	6	MD	6	MD	5	L	11	D
750 – 1050	6	MD	6	MD	5	L	11	D
Note: Density Classification is obtained based on Number of blows required for 300 mm penetration of PSP Very Loose (VL) < 2; Loose (L) 2 – 6; Medium Dense (MD) 6 – 8; Dense (D) 8 – 15; Very Dense (VD) > 15								

It is observed from the PSP test that the site soil is in loose to dense condition.

6.0 EARTHWORKS RECOMMENDATION

Any earthworks at the site should be carried out in general accordance with the Australian Standard AS 3798-2007 “Guidelines on Earthworks for Commercial and Residential Developments”. Asbestos and septic tank investigation was not in the scope of this investigation. Client must confirm that the site is free from asbestos and there is no septic tank at the site. Followings are general guidelines to be followed during earthworks:

- Clear any unsuitable material from the topsoil of the site. Unsuitable materials generally includes: organics, grass roots, uncontrolled fill of building rubbles, bricks, stone blocks, concrete, wood, asphalt, bore well, different types of waste etc.
- There is a bore at the site. Fill the bore in layers and compact to dense condition.
- Remove all the trees with roots from the site and backfill with clean sand.
- Before laying a foundation, compact the site up to 1050 mm depth to a dense condition as per AS 3798-2007. We recommend, PSP seating for 0-150 mm, 8 PSP blows for 150-450 mm, 9 PSP blows for 450-750 mm and 10 PSP blows for 750-1050 mm and 10 PSP blows for every 300 mm of penetration.
- In order to achieve the desired compaction, we recommend, box out approximately 300 mm top layer and stockpile at the site to reuse after screening. Compact bottom layer to bring it to dense condition. Later backfill the area to raise the site to the existing surface level by using clean sand (or screened site soil) and compact to a dense condition as per AS 3798.
- The backfilling layer should not exceed more than 300 mm in loose condition. Each 300 mm layer of backfilling should be compacted to dense condition as per AS 3798-2007.
- Site should be prepared in a way so that surrounding stormwater runoff or surface water runoff does not pass through the building envelop.
- Care needs to be given to any existing or adjacent structures to avoid any damage from excessive vibrations during compaction and earthworks.
- Retaining wall is required if there is an elevation difference of 250 mm or as per requirement of the local council.
- For site maintenance it is recommended to follow the CSIRO publication “Guide to Home Owners on Foundation Maintenance and Footing Performance” in Building Technology File Number 18. This document provides important information about implications of plumbing, property maintenance, site classification on foundation design, drainage and performance expectations.
- *It is highly recommended that a competent geotechnical engineer should supervise earthworks and construction.*

7.0 ENGINEERING CONSIDERATIONS AND RECOMMENDATIONS

7.1 Site Classification

Provided earthworks are completed as per the recommendation in Section 6.0 of this report, based on the site soil profile, laboratory test results and surrounding condition, the site can be classified as ***"CLASS S"*** in accordance with definitions provided in the Australian Standard AS2870 -2011. The characteristics surface movement ***Ys*** is considered to be 10 mm.

An assumption of soil suction change of 2.5 m is made in this case. General definition of 'Site Class' is shown in Table 2 (Source: AS 2870-2011).

Table 2. General Definition of Site Class (Source: AS 2870-2011)

Site Class	Soil Description	Characteristic Surface Movement (mm)
A	Most SAND and ROCK sites with little or no ground movement due to moisture content variation	little or no ground movement
S	Slightly reactive clayey or silty SAND, which will cause slight ground movement due to moisture content variation	0 < Ys ≤ 20
M	Moderately reactive clayey or silty soil which will cause moderate ground movement due to moisture content variation	20 < Ys ≤ 40
H1	Highly reactive clayey or silty soil which will cause high ground moved due to moisture content variation	40 < Ys ≤ 60
H2	Highly reactive clayey or silty soil which will cause high ground moved due to moisture content variation	60 < Ys ≤ 75
E	Extremely reactive clayey or silty soil which will cause extreme ground movement due to moisture content variation	Ys > 75
P	Problematic sites, sites consisted of soft soils, soft clay or silt or loose sand; landfills, mine subsidence, collapsing soils, very reactive soils, subjected to erosion and sites which cannot be classified as A to E.	-

7.2 Earthquake Design Factor

Australian Standard AS1170.4-2007 Structural design actions Part 4 "Earthquake actions in Australia" is recommended for earthquake consideration. AS1170.4-2007 outlines the design criteria required for a structure in consideration of the risk of being subjected to earthquake loads. Earthquake design factors are summarised in Table 3.

Table 3. Earthquake Design Factors

Factor/Class	Value/Name	Ref. AS1170.4- 2007
Hazard Factor (z)	0.09	Section 3 Figure 3.2(C)
Site subsoil class	Class C_e – Shallow Soil	Section 4

7.3 Stormwater Drainage

We recommend discharging of surface and roof runoff onsite via soakwell. The drainage system must be designed by a qualified engineer as per requirements of the local government authority.

8.0 LIMITATION OF USE

The ground is a product of continuing natural and man-made processes and therefore exhibits characteristics and properties which may vary from place to place and can change with time. Geotechnical site investigation involves gathering and assimilating limited facts about these characteristics and properties in order to better understand or predict the behaviour of the ground at a particular site under certain conditions.

This site investigation has been carried out by inspection, using a limited amount of pit excavations, sampling, testing or other means of investigation. Achieving a full coverage of the site to ensure all variations is not practical and is seldom done due to cost constraints as well as the impracticality.

It should be noted that the subsurface conditions encountered by the limited number of pit excavation as part of this geotechnical site investigation represents the ground conditions at the locations where the samples were taken and where tests have been undertaken and as such are an extremely small proportion of the site to be developed.

The facts reported in this document are directly relevant only to the ground at the place where, and time when, the investigation was carried out and are believed to be reported accurately. Given the limited number of test pits and limited field and laboratory testing carried out with respect to the overall site area, variations between investigation locations is likely and ground conditions different to those presented in this report may be present within the subject site area. The risk associated with this variability and the impact it will have on the proposed development should be carefully considered.

The level of geotechnical investigation that has been completed to date is considered appropriate for the project objectives. If the above mentioned client, its subcontractors, agents or employees use this factual information for any other purpose for which it was not intended, then the client, its subcontractors, agents or employees does so at its own risk and Local Geotechnics will not and cannot accept liability in respect of the advice, whether under law of contract, tort or otherwise.

Any interpretation or recommendation given in this report is based on judgement and experience and not on greater knowledge of the facts reported. Local Geotechnics does not represent that the information or interpretation contained in this report addresses completely the existing features, subsurface conditions or ground behaviour at the subject site.

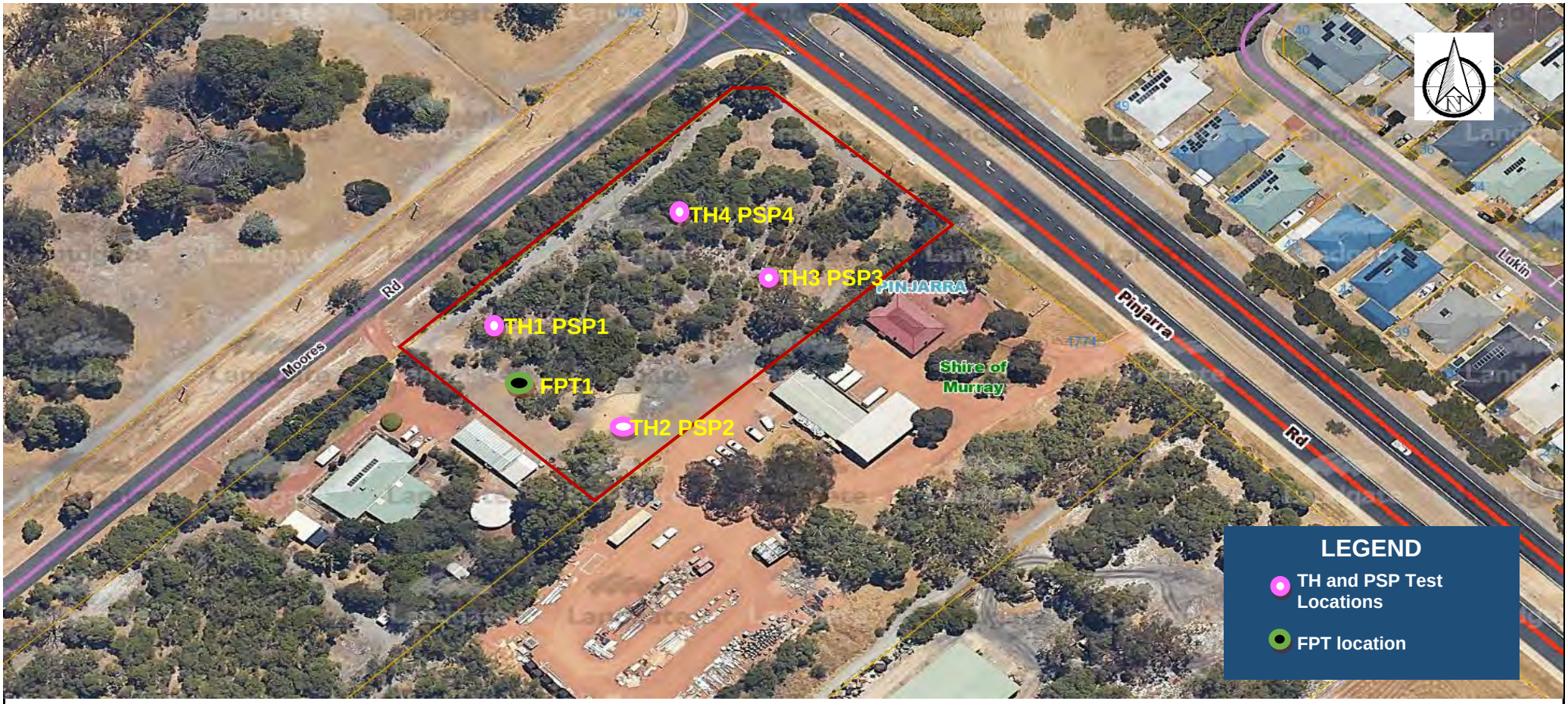
9.0 REFERENCES

- Australian Standard AS1170.4-2007, *"Earthquake Actions in Australia"*.
- Australian Standard AS 1726-1993 *"Geotechnical Site Investigations".*
- Australian Standard AS 2870-2011, *"Residential Slabs and Footings".*
- Australian Standard AS 3798-2007, *"Guidelines on Earthworks for Commercial and Residential Developments".*
- CSIRO publication *"Guide to Home Owners on Foundation Maintenance and Footing Performance"* in Building Technology File Number 18.
- Environmental Geological Western Australia survey Map of Pinjarra 1:250,000 (Sheet SI 50-2 and Part Sheet SI 50-1)
- Standards Australia, Hand Book HB 160-2006 *"Soil Testing".*

LOCAL
GEOTECHNICS

APPENDIX A

SITE SKETCH



Site Sketch : Test Hole (TH), Perth Sand Penetrometer (PSP) and Field Permeability Test (FPT) Locations

Reference:	LGK0372024SC & SSE
Client:	Method Planning
Project:	Site Soil Evaluation 11 Moores Road, Pinjarra WA

LOCAL GEOTECHNICS
Unit 12, 8 Production Road Canning Vale WA 6155
PO Box 5050, Canning Vale South WA 6155
Phone: 08 9457 3517
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Web: www.localgeotechnics.com.au

APPENDIX B

TEST HOLE LOGS AND PSP TEST CERTIFICATES

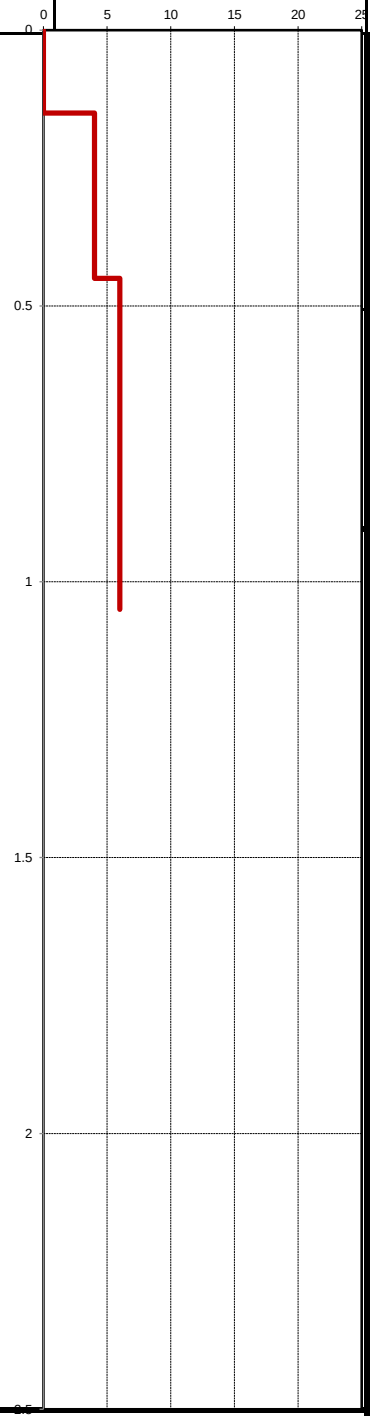
ENGINEERING LOG

RESULT OF TEST HOLES/PITS

LOCAL GEOTECHNICS
ABN:61 737 984 867
12/8 Production Road, Canning Vale WA 6155
PO Box 5050 Canning Vale South WA 6155
admin@localgeotechnics.com.au

Reference	: LGK0372024SC & SSE	Test Pit/BH No.:	TH1
Client	: Method Planning	Date Excavated:	12-Nov-2024
Project	: Site Soil Evaluation	Date completed:	12-Nov-2024
Location	: 11 Moores Road, Pinjarra WA	Equipment Type:	HA, PSP and FPT
GPS Zone 50	: Northing: 6 390 230 Easting: 393 085	Water Table:	1.3 mbgl

Depth (m)	RL (m)	Method	Penetration resistance	Sampling Type	Graphic Log	Classification Symbol	Description of Soil Strata	Additional observations
0.0						SM	**Topsoil, Silty SAND** - fine to medium grained, grey, with low plasticity silt, grass and roots, slightly moist, loose	
0.1						SM	**Silty SAND** - fine to medium grained, grey, with low plasticity silt, slightly moist, loose	
0.4						SP	**SAND** - fine to medium grained, pale grey, slightly moist, medium dense	
0.5								
0.8							colour changes to pale brown	
1.0								
1.3							water table encountered	
1.5								
1.7							**Terminated at a depth of 1.7 m due to hole collapsed**	
2.0								
2.5								



Notes:

Sampling Type :
B - Bulk/Disturbed Sample,
UD - Undisturbed Sample

Method:
HA - Hand Auger
E - Excavator
BH - Backhoe Bucket

Moisture:
D - Dry
M - Moist
W - Wet

Symbols:
W_L - Plastic Limit
W_P - Plastic Limit

Logged : YC/LS
Checked: H Meer

ENGINEERING LOG

RESULT OF TEST HOLES/PITS

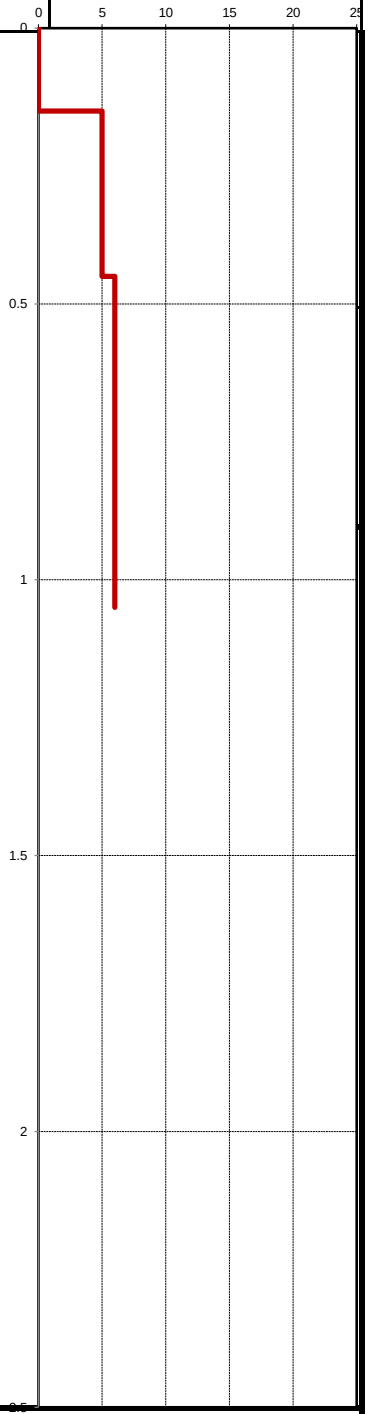
LOCAL GEOTECHNICS
ABN:61 737 984 867
12/8 Production Road, Canning Vale WA 6155
PO Box 5050 Canning Vale South WA 6155
admin@localgeotechnics.com.au

Reference	: LGK0372024SC & SSE	Test Pit/BH No.:	TH2
Client	: Method Planning	Date Excavated:	12-Nov-2024
Project	: Site Soil Evaluation	Date completed:	12-Nov-2024
Location	: 11 Moores Road, Pinjarra WA	Equipment Type:	HA, PSP and FPT
GPS Zone 50	: Northing: 6 390 210 Easting: 393 086	Water Table:	1 mbgl

Depth (m)	Classification Symbol	Description of Soil Strata
0.0	SM	**Topsoil, Silty SAND** - fine to medium grained, grey, with low plasticity silt, grass and roots, slightly moist, loose
0.1	SM	**Silty SAND** - fine to medium grained, grey, with low plasticity silt, slightly moist, loose
0.4	SP	**SAND** - fine to medium grained, pale grey, slightly moist, medium dense
0.5		
0.7		colour changes to pale brown
1.0		water table encountered
1.5		**Terminated at a depth of 1.5 m due to hole collapsed**
2.0		
2.5		

Additional observations

Perth Sand Penetrometer Test (Blows/300mm)



Notes:

Sampling Type :
B - Bulk/Disturbed Sample,
UD - Undisturbed Sample

Method:
HA - Hand Auger
E - Excavator
BH - Backhoe Bucket

Moisture:
D - Dry
M - Moist
W - Wet

Symbols:
W_L - Plastic Limit
W_P - Plastic Limit

Logged : YC/LS
Checked: H Meer

ENGINEERING LOG

RESULT OF TEST HOLES/PITS

LOCAL GEOTECHNICS
ABN:61 737 984 867
12/8 Production Road, Canning Vale WA 6155
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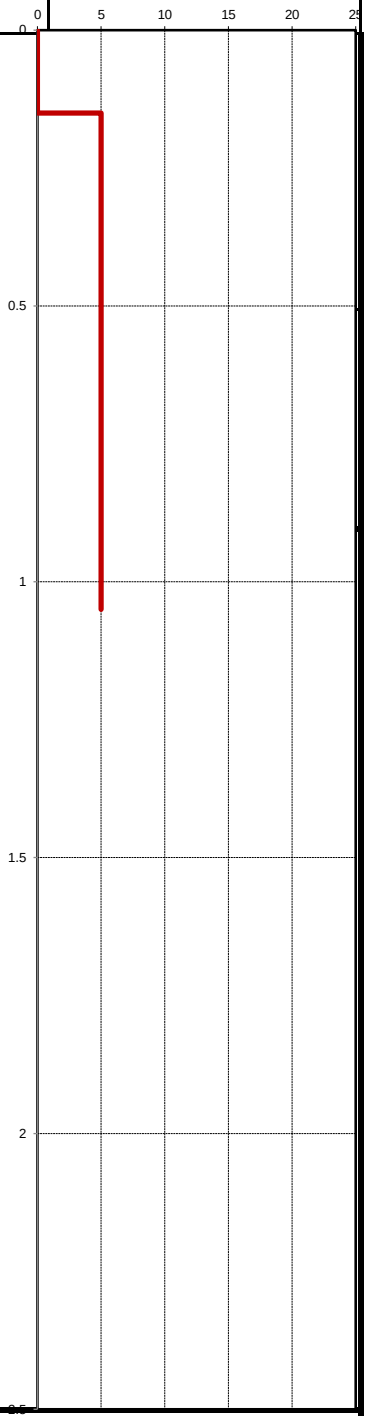
admin@localgeotechnics.com.au

Reference	: LGK0372024SC & SSE	Test Pit/BH No.:	TH3
Client	: Method Planning	Date Excavated:	12-Nov-2024
Project	: Site Soil Evaluation	Date completed:	12-Nov-2024
Location	: 11 Moores Road, Pinjarra WA	Equipment Type:	HA, PSP and FPT
GPS Zone 50	: Northing: 6 390 242 Easting: 393 138	Water Table:	1 mbgl

Depth (m)	RL (m)	Method	Penetration resistance	Sampling Type	Graphic Log	Classification Symbol	Description of Soil Strata	Additional observations
0.0						SM	**Topsoil, Silty SAND** - fine to medium grained, grey, with low plasticity silt, grass and roots, slightly moist, loose	
0.1						SM	**Silty SAND** - fine to medium grained, grey, with low plasticity silt, slightly moist, loose	
0.5						SP	**SAND** - fine to medium grained, pale brown, slightly moist, loose	
1.0							water table encountered	
1.5								
1.8							**Terminated at a depth of 1.8 m due to hole collapsed**	
2.0								
2.5								



Notes:

Sampling Type :
B - Bulk/Disturbed Sample,
UD - Undisturbed Sample

Method:
HA - Hand Auger
E - Excavator
BH - Backhoe Bucket

Moisture:
D - Dry
M - Moist
W - Wet

Symbols:
W_L - Plastic Limit
W_P - Plastic Limit

Logged : YC/LS
Checked: H Meer

ENGINEERING LOG

RESULT OF TEST HOLES/PITS

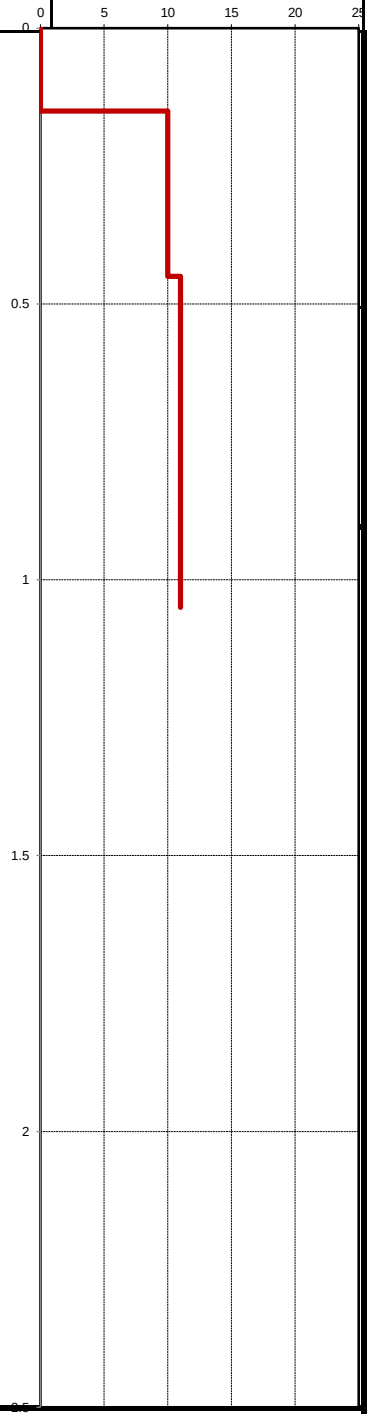
LOCAL GEOTECHNICS
ABN:61 737 984 867
12/8 Production Road, Canning Vale WA 6155
PO Box 5050 Canning Vale South WA 6155
admin@localgeotechnics.com.au

Reference	: LGK0372024SC & SSE	Test Pit/BH No.:	TH4
Client	: Method Planning	Date Excavated:	12-Nov-2024
Project	: Site Soil Evaluation	Date completed:	12-Nov-2024
Location	: 11 Moores Road, Pinjarra WA	Equipment Type:	HA, PSP and FPT
GPS Zone 50	: Northing: 6 390 298 Easting: 393 107	Water Table:	0.6 mbgl

Depth (m)	Classification Symbol	Description of Soil Strata
0.0	SM	**Topsoil, Silty SAND** - fine to medium grained, grey, with low plasticity silt, grass and roots, slightly moist, dense
0.2	SM	**Silty SAND** - fine to medium grained, grey, with low plasticity silt, slightly moist, dense
	SP	**SAND** - fine to medium grained, pale grey, slightly moist, dense
0.5		colour changes to pale brown
0.6		water table encountered
1.5		**Terminated at a depth of 1.5 m due to hole collapsed**

Additional observations

Perth Sand Penetrometer Test (Blows/300mm)



Notes:

Sampling Type :
B - Bulk/Disturbed Sample,
UD - Undisturbed Sample

Method:
HA - Hand Auger
E - Excavator
BH - Backhoe Bucket

Moisture:
D - Dry
M - Moist
W - Wet

Symbols:
W_L - Plastic Limit
W_P - Plastic Limit

Logged : YC/LS
Checked: H Meer

LOCAL GEOTECHNICS

ABN: 61 737 984 867
PO Box 5050
Canning Vale South, WA 6155

PERTH SAND PENETROMETER (PSP)
TEST CERTIFICATES

(AS 1289.6.3.3)

Density Correlation - Table 6.4.6.2 HB 160-2006

Reference	LGK0372024SC & SSE	Test ID	PSP1-4
Client	Method Planning	Date Tested	12-Nov-24
Project	Site Soil Evaluation	Tested by	YC/LS
Site	11 Moores Road, Pinjarra WA	Checked by	H Meer

PSP No.	PSP1		PSP2		PSP3		PSP4	
Depth (mm)	**Penetration Resistance - Blows/300mm I Density Classification**							
0 - 150	Seating		Seating		Seating		Seating	
150 - 450	4	L	5	L	5	L	10	D
450 - 750	6	MD	6	MD	5	L	11	D
750 - 1050	6	MD	6	MD	5	L	11	D

Remarks:

Density Correlation - Table 6.4.6.2 HB 160-2006

Very Loose (VL)	Loose (L)	Medium Dense(MD)	Dense(D)	Very Dense (VD)
≤ 2	2 - 6	6 - 8	8 - 15	≥ 15

LOCAL
GEOTECHNICS

APPENDIX C

SITE PHOTOS

Photo 1. Site, View from Moores Road

Photo 2. General Site Condition

Photo 3. Test Location 02 (TH2), Sub-surface Probing by Using a Hand Auger

Photo 4. Soil from Test Location 02 (TH2)

Photo 5. Test Location 04 (TH4), Sub-surface Probing by Using a Hand Auger

Photo 6. Test Location 04 (PSP4), Testing by Using a Perth Sand Penetrometer

Appendix G - Site Soil Evaluation

LOCAL GEOTECHNICS

19 November 2024

Report on

Site Soil Evaluation

11 Moores Road, Pinjarra WA

Project:
LGK0372024SSE Rev_0

Client:
Method Planning

Geotech | Civil | Pavement | Drainage

12/8 Production Road, Canning Vale WA 6155
PO Box 5050, Canning Vale South, WA 6155
08 9457 3517 (0), 0425 545 508 (M)
ABN 61 737 984 867
admin@localgeotechnics.com.au
localgeotechnics.com.au

LOCAL GEOTECHNICS

19 November 2024

To
Method Planning

RE: Site Soil Evaluation for 11 Moores Road, Pinjarra WA.

This letter presents our report on Site Soil Evaluation carried out at *11 Moores Road, Pinjarra WA*. The report must be thoroughly read and implemented in full, no partial implementation of this report is allowed.

If you have any questions in regards to the Site Soil Evaluation or we can be of further assistance, please do not hesitate to contact Local Geotechnics.

Sincerely yours

Dr. Harun Meer
Ph.D.(Geotech), M. Eng. (Geotech), B. Eng. (Civil)
MIEAust, CPEng, EngExec, NER, APEC Engineer, IntPE(Aust)
Director
Local Geotechnics

PROJECT INFORMATION

Project	**LGK0372024SSERev_0** **Site Soil Evaluation**
Site Location	**11 Moores Road, Pinjarra WA**

Rev	Description	Date	Prepared by	Approved by
0	Issued to client	19 November 2024	Y Chen	H Meer

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EXECUTIVE SUMMARY

Method Planning commissioned Local Geotechnics to prepare Site Soil Evaluation (SSE) report for 11 Moores Road, Pinjarra WA. The objectives of the investigation were to ***site soil evaluation as per AS 1547.***

The proposed construction will be the Pinjarra Veterinary Hospital.

The field investigation was conducted on 12 November 2024. The weather condition was fine and sunny during field investigation.

The findings of the site classifications are presented in the following sections

Site Soil Evaluation as per AS1547

Site soil evaluation was conducted as per AS 1547. *Permeably data can be further assessed for ATU or leach drain by using Table L1 in Australian Standard AS1547. A copy of Table L1 is attached in Appendix B.* The soil category was determined using soil logs, PSD, and permeability results to the soil classification table of the AS/NZS 1547:2012. Summary of site soil evaluations is shown below, and the details are presented in Section 4.1.

Summary of Site Soil Evaluations

Soils Property	Result
Colour	Pale grey to pale brown
Texture	Silty SAND / SAND
Structure	Weakly Structured
Coarse Fragments	fine to medium grained sand
Permeability	6.2 m/day
Soil Category	2 (weakly structured)
Resultant Design Loading Rate (DLR) For conventional trenches (mm/day)	Primary Treated effluent 20 (Ref. Note 1, presented below from AS1547, Table L1) Secondary Treated effluent 50 (Ref. Note 1, presented below from AS1547, Table L1) Evapotranspiration Absorption (ETA)/ Evapotranspiration Seepage (ETS) systems are not normally used on soil Categories 1 to 3 (Ref. Note 4, presented below from AS1547, Table L1)

NOTES:

1 The treatment capacity of the soil and not the hydraulic capacity of the soil or the growth of the clogging layer govern the effluent loading rate in Category 1 and weakly structured Category 2 soils. Land application systems in these soils require design by a suitably qualified and experienced person, and distribution techniques to help achieve even distribution of effluent over the full design surface (see L6.2 and Figure L4 for recommended discharge method by discharge control trench). These soils have low nutrient retention capacities, often allowing accession of nutrients to groundwater.

2 To enable use of such soils for on-site wastewater land application systems, special design requirements and distribution techniques or soil modification procedures will be necessary. For any system designed for these soils, the effluent absorption rate shall be based upon soil permeability testing. Specialist soils advice and special design techniques will be required for clay dominated soils having dispersive (sodic) or shrink/swell behaviour. Such soils shall be treated as Category 6 soils. In most situations, the design will need to rely on more processes than just absorption by the soil.

3 If K_{sat} < 0.06 m/d, a full water balance for the land application can be used to calculate trench/bed size (see Appendix Q).

4 ETA/ETS systems are not normally used on soil Categories 1 to 3.

5 For Category 6 soils ETA/ETS systems are suitable only for use with secondary treated effluent.

The effluent system must be designed as per Australian Standard AS1547 and as per the requirements of the local council or shire.

Recommendation
The effluent system must be designed in accordance with Australian Standard AS1547 and as per the requirements of the local council or shire.

It is recommended that sustainable onsite sewage management systems can be installed to meet the needs of the proposed development.

Based on our site inspection, "Secondary Treatment unit, an Aerobic Treatment Unit (ATU)" is recommended for this site.

However, the city or the Shire can also recommend on sewerage system based on local conventional effluent system for this area.

Water table was not observed at any of the test pits during the field investigation. If shallow water table determination during winter season at the site or before construction, LG recommends adopting of one of the following options:

- Raise the effluent area to accommodate ATU system, at least 1.5 m clearance from the water table; or,
- Dewatering can be an option to keep the surrounding area of ATU system in dry condition; or,
- Change the dimension (shallower depth) of the ATU system.

LAA for this site is **140 m^2**. The proposed location of LAA is shown in Figure 8. **The proposed location in Figure 8 is indicative. Location of effluent system remains at the discretion of the future landowner and effluent system designer.**

Location of ATU system at the discretion of the future landowner as long as the setback distance from environmental and structural landmarks should be assessed in accordance with the Government Sewerage Policy (GSP) 2019. Which states that any on-site sewerage system is not to be located within:

- A wellhead protection zone or on Crown land within a reservoir protection zone;
- 100 metres of the high-water mark of a reservoir or 100 metres of any bore used for public drinking water supply;
- 30 metres of a private bore used for household/drinking water purposes.
- 100 metres of a waterway or significant wetland and not within a waterway foreshore area or wetland buffer. The separation distance should be measured outwards from the outer edge of riparian or wetland vegetation.
- 100 metres of a drainage system that discharges directly into a waterway or significant wetland without treatment; or
- Any area subject to inundation and/or flooding in a 10 per cent Annual Exceedance Probability (AEP) rainfall event.

1.0 INTRODUCTION

Method Planning commissioned Local Geotechnics (LG) to prepare a Site Soil Evaluation report for 11 Moores Road, Pinjarra WA (the project). The site location is shown in Figure 1. The proposed construction will be the Pinjarra Veterinary Hospital, the site plan is attached in Appendix A.

Figure 1. Aerial View of the Site Location (Source: Landgate Map)

The objectives of the investigation were to undertake ***Site Soil Evaluation (SSE) as per Australian Standard AS 1547.*** The field investigation was conducted on 12 November 2024. The weather condition was fine and sunny during field investigation.

The field investigation consisted of field observation, documentation, sub-surface probing and soil profile logging, permeability testing and taking photograph.

The scope of the investigation did not include compaction control, bearing capacity, wind force calculations or classifications, slope stability checking, and settlement calculation. Environmental issues were not considered in this report.

2.0 PROPOSED DEVELOPMENT

The proposed construction will be the Pinjarra Veterinary Hospital.

3.0 SCOPE AND OBJECTIVES

The scope and objectives of the investigation are as follows:

- Desktop review of geological survey maps, groundwater atlas and other publicly available information for the site;
- Conducting of up to four (04) Test Holes by using a hand auger up to 2.5 m or refusal;
- Conducting of Perth Sand Penetrometer (PSP) tests alongside the test holes up to a depth of 1.05 m or refusal;
- Logging of site soil profile as per Australian Standard AS1726;
- Groundwater recording as per test hole observation;

- Submit a factual report on findings to classify the site in accordance with the Australian Standard AS2870 - 2011;
- Conducting of laboratory test at NATA accredited laboratory which included:
  - Phosphorus Retention Index (PRI)

The objective of this inspection is to determine whether the proposed lot is capable of on-site effluent disposal. The scope of the work includes:

- Desktop study and site visit to identify the Expected Available Area (EAA) within the lot;
- Submit a factual report on findings to classify the site in accordance with the Australian Standard AS 1547.
- Providing recommendation on type of effluent system.
- Determining whether this EAA is large enough to accommodate any Land Application Area (LAA);
- An assessment of the GSP 2019 criteria to determine whether any LAA can be established on site; If LAA can be established, provide suggestions on the best treatment and discharge system to dispose effluent into this LAA.

Soil category and soil factors such as slope, groundwater table, and setback distances have been investigated and taken into consideration when assessing the capability of onsite effluent disposal in proposed lot.

4.0 SITE CONDITIONS

4.1 Surface Condition

The surface condition and the overall topography of the site are generally flat. There are medium to large sizes trees can be observed at the time of investigation. The site boundaries are enclosed with fences. There are surrounding houses adjacent to the property.

Ground water table was encountered at depths of 1.3 m, 1.0 m, 1.0 m and 0.6 m at TH1, TH2, TH3 and TH4 during the time of investigation. Site photos taken during the field investigation are shown in Appendix C. Site assessment desktop study is presented in Table 1.

Table 1. Site Assessment

Site Factor	Result
Date of assessment	12 November 2024
Area	Approximately 7,562 m^2
Slope	None
Drainage Pattern	None
Exposure	Sun, wind, rain
Erosion and Land Slip	None
Boulders and Rock Outcrops	None
Vegetation	Grass and Bushes
Water Course	None
Water Bore	None
Water Table	Yes
Weathered Rock	None
Cut and Fill	None
Climate	Hot dry summers, mild wet winters
Flooding	None
Channelled Runoff	None along the site

Site Factor	Result
Soil Surface Condition	Silty SAND (SM) – fine to medium grained
Other Site Specific Factors	None
Flood Potential	Refer to section 4.7 Flood Plain Mapping
Site Drainage	None

4.2 Subsurface

A review of Environmental Geological Western Australia survey Map of Pinjarra 1:250,000 (Sheet SI 50-2 and Part Sheet SI 50-1) was conducted before site investigation. Environmental Geological map of Pinjarra revealed that the site is consisted of Guildford Formation (Qpa): alluvium (clay, loam, sand, gravel) variably lateritized and podsolized.

4.3 Water Table

A review of 'Perth Ground Water Atlas' of the Department of Water was carried out for this site. No existing ground water information was available during the time of investigation on 'Perth Ground Water Atlas'.

4.4 Land use and Zoning

The site falls under the Shire of Murray Local Planning Scheme No.4 Zone according to the Department of Planning, Lands and Heritage. The Local Planning Scheme Zones are shown in Figure 2.

Figure 2. Local Planning Scheme Zones (Source: Department of Planning, Lands and Heritage)

4.5 Public Drinking Water Source Area (PDWSA)

The site does not fall under any public drinking water reserve according to the Department of Water and Environmental Regulation database. The Public Drinking Water Source Area Map is shown in Figure 3.

Figure 3. Public Drinking Water Source Area Map (Source: Department of Water and Environmental Regulation)

4.6 Sewerage Sensitive Area

The site is located within 1 km of significant wetlands and the site is fall under Estuary catchments on the Swan and Scott coastal plains. The sewerage sensitive areas are shown in Figure 4.

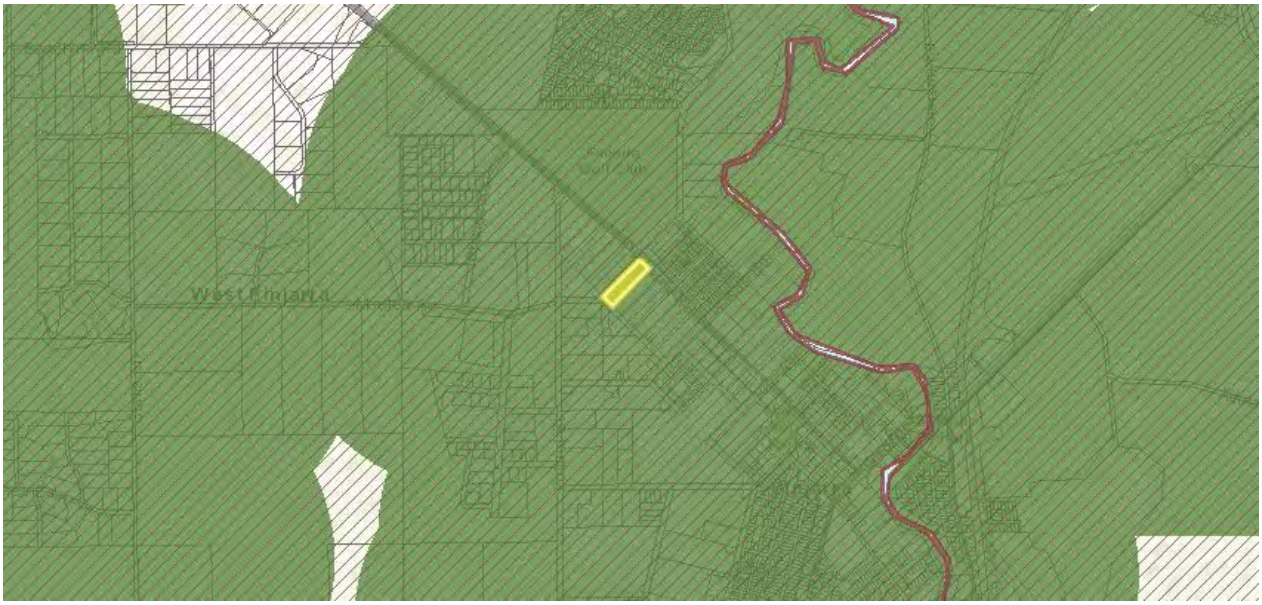


Figure 4. Sewerage Sensitive Area (Source: Department of Planning, Lands and Heritage)

4.7 Flood Plain Mapping

The site is not located within a floodplain according to the Western Australia Flood Plain Mapping database. The Flood Plain Mapping are shown in Figure 5.

Figure 5. Flood Plain Mapping (Source: Department of Water and Environmental Regulation)

4.8 Acid Sulfate Soils (ASS)

A review of 'Perth Ground Water Atlas' of the Department of Water was carried out for this site. The site is located within moderate to low risk of ASS occurring within 3 m of natural soil surface but high to moderate risk of ASS beyond 3m of natural soil surface. The Acid Sulfate Soil Mapping are shown in Figure 6.

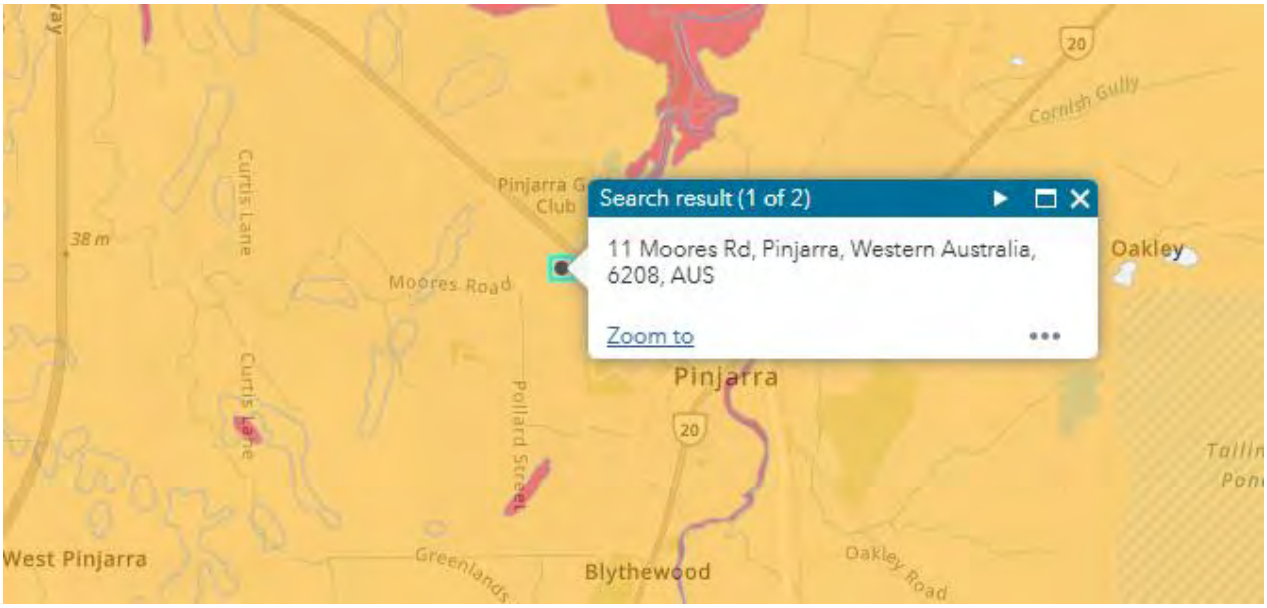


Figure 6. Acid Sulfate Soil information (Source: Department of Water and Environmental Regulation)

5.0 FIELD INVESTIGATION

The field investigation consists of sub-surface probing by using a hand auger at four locations, taking photograph and Perth Sand Penetrometer (PSP) testing alongside the test holes.

5.1 Test Hole Logs

Four Test Holes (TH1, TH2, TH3 and TH4) were conducted at the site by using a hand auger. Test hole locations are shown in the site sketch in Appendix A.

During sub-surface probing, the soil was stockpiled adjacent to the test location. The subsurface profiles exposed in the test pits were logged in accordance with AS1726 and were photographed to provide a visual record of subsurface conditions encountered. Following these activities, each test location was progressively backfilled in the reverse order of excavation works.

Test holes TH1 – TH4 consist of similar soil profile as described below:

- **Topsoil, Silty SAND (SM)** – fine to medium grained, grey, with low plasticity silt, grass and roots, slightly moist, loose to dense, up to a depth of 0.1 m; followed by
- **Silty SAND (SM)** – fine to medium grained, grey, with low plasticity silt, slightly moist, loose to dense, up to a depth of 0.5 m; followed by
- **SAND (SP)** – fine to medium grained, pale grey to pale brown, slightly moist to wet, loose to dense, up to the maximum investigated depth.

TH1, TH2, TH3 and TH4 were terminated at depths of 1.7 m, 1.5 m, 1.8 m and 1.5 m respectively due to hole collapsed. Ground water table was encountered at depths of 1.3 m, 1.0 m, 1.0 m and 0.6 m at TH1, TH2, TH3 and TH4 during the time of investigation. Test hole logs are attached in Appendix B.

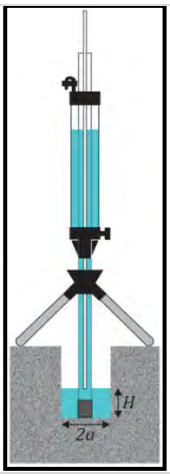
5.2 Field Permeability Test

Two (02) Field Permeability Tests (FPT) was conducted alongside the Bore Holes as per ASTM D5126 – 90 by using a Guelph Permeameter.

5.2.1 Testing Equipment: Guelph Permeameter

Guelph Permeameter is a constant head device that operates on the Mariotte siphon principle. The method involves measuring the steady-state rate of water recharge into unsaturated soil from a cylindrical well hole, in which a constant head of water is maintained. The Guelph Permeameter is capable of measuring hydraulic conductivity in sands and clays. It consists of a tripod to hold the apparatus vertical, the reservoir tube and the inner air tube. A typical test set-up is shown in Figure 7.

(a) Field Set-up



(b) Field Testing

Figure 7. Field Permeability Test by Guelph Permeameter

5.2.2 Testing Procedure

The field permeability test was conducted as per ASTM D5126 – 90. The following steps were followed during testing by using the Guelph Permeameter:

- The testing well (radius = a) was prepared using an auger. Rough auger followed by sizing auger were used to make the hole for permeability test as shown in Figure 3 (b).

- The depth of auger was selected based on head depth to be used in the test.
- Soil around the testing well was saturated by pouring extra water into the test hole. Water pouring was performed a few times to ensure the surrounding area of the hole becomes fully saturated.
- The Guelph Permeameter was then assembled as shown in Figure 3 (a) and both inner and outer reservoirs were filled with water.
- A head (H) was used in the testing by slowly lifting the air tube.
- The outflow from the reservoirs was recorded for a certain time interval. The timing of the reading was determined based on soil type.
- Reading was taken until at least three steady readings were observed during testing.

5.2.3 Test Results

It is assumed that site soil was fully saturated during the field permeability test. Permeability test result is summarised in Table 2 and the test certificate is presented in Appendix B.

Table 2. Summary of Field Permeability Test Data

Test ID	Permeability		Test Depth (m)	Observed Soil type
	m/sec	m/day		
FPT1	$7.1*10^{-5}$	6.2	0.3	Silty SAND

6.0 LABORATORY TEST

Laboratory tests were conducted at CSBP laboratory. The laboratory test certificates are attached in Appendix D.

7.0 ENGINEERING CONSIDERATIONS AND RECOMMENDATIONS

7.1 Site Soil Evaluation as per AS1547

Site soil evaluation was conducted as per AS 1547. *Permeably data can be further assessed for ATU or leach drain by using Table L1 in Australian Standard AS1547. A copy of Table L1 is attached in Appendix B.* The soil category was determined using soil logs and permeability results to the soil classification table of the AS/NZS 1547:2012. Summary of site soil evaluations is shown below, and the details are presented in Section 4.1.

Table 3. Summary of Site Soil Evaluations

Soils Property	Result
Colour	Pale grey to pale brown
Texture	Silty SAND / SAND
Structure	Weakly Structured
Coarse Fragments	fine to medium grained sand
Permeability	6.2 m/day
Soil Category	2 (weakly structured)
Resultant Design Loading Rate (DLR) For conventional trenches (mm/day)	Primary Treated effluent 20 (Ref. Note 1, presented below from AS1547, Table L1) Secondary Treated effluent 50 (Ref. Note 1, presented below from AS1547, Table L1) Evapotranspiration Absorption (ETA)/ Evapotranspiration Seepage (ETS) systems are not normally used on soil Categories 1 to 3 (Ref. Note 4, presented below from AS1547, Table L1)

NOTES:

1 The treatment capacity of the soil and not the hydraulic capacity of the soil or the growth of the clogging layer govern the effluent loading rate in Category 1 and weakly structured Category 2 soils. Land application systems in these soils require design by a suitably qualified and experienced person, and distribution techniques to help achieve even distribution of effluent over the full design surface (see L6.2 and Figure L4 for recommended discharge method by discharge control trench). These soils have low nutrient retention capacities, often allowing accession of nutrients to groundwater.

2 To enable use of such soils for on-site wastewater land application systems, special design requirements and distribution techniques or soil modification procedures will be necessary. For any system designed for these soils, the effluent absorption rate shall be based upon soil permeability testing. Specialist soils advice and special design techniques will be required for clay dominated soils having dispersive (sodic) or shrink/swell behaviour. Such soils shall be treated as Category 6 soils. In most situations, the design will need to rely on more processes than just absorption by the soil.

3 If K_{sat} < 0.06 m/d, a full water balance for the land application can be used to calculate trench/bed size (see Appendix Q).

4 ETA/ETS systems are not normally used on soil Categories 1 to 3.

5 For Category 6 soils ETA/ETS systems are suitable only for use with secondary treated effluent.

The effluent system must be designed as per Australian Standard AS1547 and as per the requirements of the local council or shire.

7.2 Recommendation

The effluent system must be designed in accordance with Australian Standard AS1547 and as per the requirements of the local council or shire.

It is recommended that sustainable onsite sewage management systems can be installed to meet the needs of the proposed development.

The site is located within 1 km radius of Denham North Water Reserve and within 2 km of selected coastal embayment.

Based on our site inspection, "Secondary Treatment unit, an Aerobic Treatment Unit (ATU)" is recommended for this site.

However, the city or the Shire can also recommend on sewerage system based on local conventional effluent system for this area.

Water table was not observed at any of the test pits during the field investigation. If shallow water table determination during winter season at the stie or before construction, LG recommends adopting of one of the following options:

- Raise the effluent area to accommodate ATU system, at least 1.5 m clearance from the water table; or,
- Dewatering can be an option to keep the surrounding area of ATU system in dry condition; or,
- Change the dimension (shallower depth) of the ATU system.

7.3 Proposed Land Application Area (LAA)

Since the number of people at the site will not in regular basis, rather occasionally. Therefore, LG assumes that 4 people regular people will be equivalent to the effluent of load of the above actives.

As per the GSP 2019 formula, the LAA for the proposed lot was calculated as follows:

- Estimated hydraulic load (L/day)

-Occupancy rate (persons) x design loading rate (L/person/day)
-This is estimated by considering the occupancy rate as 10 persons and design loading rate being 70 L/person/day.

- Calculated land application area (m^2)

- Hydraulic load (L/day) x conversion factor (Primary treatment) from Table 2 of Schedule 2 of the GSP 2019, depending on the soil category

LAA calculation is shown in Table 4.

Table 4. Land Application Area (LAA) Calculations

Hydraulic Load (L/day)*	Soil Category	Conversion factor	LAA (m^2)
Occupancy rate (persons) x design loading rate (L/person/day) = 10 x 70 = 700	2	0.2	**140.0**
Note: this is a standard calculation and indicative. LAA Area will vary depending on actual number of user.			

LAA for this site is **140 m^2**. The proposed location of LAA is shown in Figure 8. **The proposed location in Figure 8 is indicative. Location of effluent system remains at the discretion of the future landowner and effluent system designer.**

Figure 8. Proposed Land Application Area (LAA)

Location of ATU system at the discretion of the future landowner as long as the setback distance from environmental and structural landmarks should be assessed in accordance with the Government Sewerage Policy (GSP) 2019. Which states that any on-site sewerage system is not to be located within:

- A wellhead protection zone or on Crown land within a reservoir protection zone;
- 100 metres of the high-water mark of a reservoir or 100 metres of any bore used for public drinking water supply;
- 30 metres of a private bore used for household/drinking water purposes.
- 100 metres of a waterway or significant wetland and not within a waterway foreshore area or wetland buffer. The separation distance should be measured outwards from the outer edge of riparian or wetland vegetation.
- 100 metres of a drainage system that discharges directly into a waterway or significant wetland without treatment; or
- Any area subject to inundation and/or flooding in a 10 per cent Annual Exceedance Probability (AEP) rainfall event.

8.0 LIMITATION OF USE

The ground is a product of continuing natural and man-made processes and therefore exhibits characteristics and properties which may vary from place to place and can change with time. Geotechnical site investigation involves gathering and assimilating limited facts about these characteristics and properties in order to better understand or predict the behaviour of the ground at a particular site under certain conditions.

This site investigation has been carried out by inspection, using a limited amount of pit excavations, sampling, testing or other means of investigation. Achieving a full coverage of the site to ensure all variations is not practical and is seldom done due to cost constraints as well as the impracticality.

It should be noted that the subsurface conditions encountered by the limited number of pit excavation as part of this geotechnical site investigation represents the ground conditions at the locations where the samples were taken and where tests have been undertaken and as such are an extremely small proportion of the site to be developed.

The facts reported in this document are directly relevant only to the ground at the place where, and time when, the investigation was carried out and are believed to be reported accurately. Given the limited number of test pits and limited field and laboratory testing carried out with respect to the overall site area, variations between investigation locations is likely and ground conditions different to those presented in this report may be present within the subject site area. The risk associated with this variability and the impact it will have on the proposed development should be carefully considered.

The level of geotechnical investigation that has been completed to date is considered appropriate for the project objectives. If the above mentioned client, its subcontractors, agents or employees use this factual information for any other purpose for which it was not intended, then the client, its subcontractors, agents or employees does so at its own risk and Local Geotechnics will not and cannot accept liability in respect of the advice, whether under law of contract, tort or otherwise.

Any interpretation or recommendation given in this report is based on judgement and experience and not on greater knowledge of the facts reported. Local Geotechnics does not represent that the information or interpretation contained in this report addresses completely the existing features, subsurface conditions or ground behaviour at the subject site.

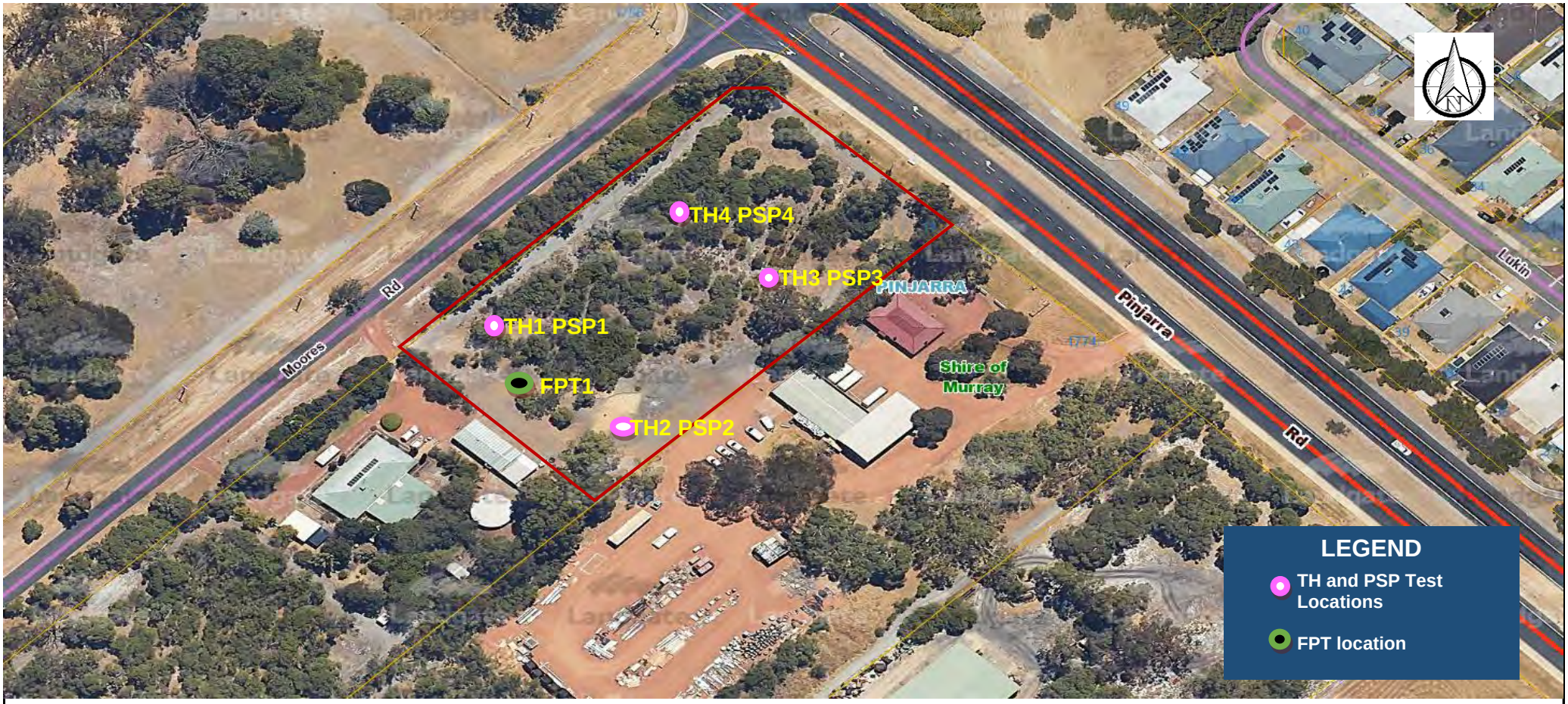
9.0 REFERENCES

- Australian Standard AS 1726-1993 *"Geotechnical Site Investigations".*
- Australian Standard AS 1547-2012, “On-site domestic wastewater management”.
- CSIRO publication *“Guide to Home Owners on Foundation Maintenance and Footing Performance”* in Building Technology File Number 18.
- ‘Perth Ground Water Atlas’ of the Department of Water.
- AS/NZS 1547:2012 On-site domestic wastewater management.
- Department of Water and Environmental Regulations maps and database.
- Department of Planning, Lands and Heritage
- Government of Western Australia Government Sewerage Policy – 2019.
- The Bureau of Meteorology.
- ASS maps Data WA.
- Environmental Geological Western Australia survey Map of Perth, 1:250,000 (Sheet SH 50 -14 and Part of Sheet SH 50 - 13)

LOCAL
GEOTECHNICS

APPENDIX A

SITE SKETCH



Site Sketch : Test Hole (TH), Perth Sand Penetrometer (PSP) and Field Permeability Test (FPT) Locations

Reference:	LGK0372024SC & SSE
Client:	Method Planning
Project:	Site Soil Evaluation 11 Moores Road, Pinjarra WA

LOCAL GEOTECHNICS
Unit 12, 8 Production Road Canning Vale WA 6155
PO Box 5050, Canning Vale South WA 6155
Phone: 08 9457 3517
E-mail: admin@localgeotechnics.com.au
Web: www.localgeotechnics.com.au

TABLE L1
RECOMMENDED DESIGN LOADING RATES FOR TRENCHES AND BEDS

Soil category	Soil texture	Structure	Indicative permeability (K_{sat})(m/d)	Design loading rate (DLR) (mm/d)			
				Trenches and beds			ETA/ETS beds and trenches
				Primary treated effluent		Secondary treated effluent	
				Conservative rate	Maximum rate		
1	Gravels and sands	Structureless (massive)	> 3.0	20 (see Note 1)	35 (see Note 1)	50 (see Note 1)	(see Note 4)
2	Sandy loams	Weakly structured	> 3.0	20 (see Note 1)	30 (see Note 1)	50 (see Note 1)	
		Massive	1.4 – 3.0	15	25	50	
3	Loams	High/ moderate structured	1.5 – 3.0	15	25	50	
		Weakly structured or massive	0.5 – 1.5	10	15	30	
4	Clay loams	High/ moderate structured	0.5 – 1.5	10	15	30	12
		Weakly structured	0.12 – 0.5	6	10	20	8
		Massive	0.06 – 0.12	4	5	10	5
5	Light clays	Strongly structured	0.12 – 0.5	5	8	12	8
		Moderately structured	0.06 – 0.12	(see Notes 2 & 3)	5	10	5 (see Notes 2, 3, & 5)
		Weakly structured or massive	< 0.06			8	
6	Medium to heavy clays	Strongly structured	0.06 – 0.5				
		Moderately structured	< 0.06				
		Weakly structured or massive	< 0.06				

NOTES:

1 The treatment capacity of the soil and not the hydraulic capacity of the soil or the growth of the clogging layer govern the effluent loading rate in Category 1 and weakly structured Category 2 soils. Land application systems in these soils require design by a suitably qualified and experienced person, and distribution techniques to help achieve even distribution of effluent over the full design surface (see L6.2 and Figure L4 for recommended discharge method by discharge control trench). These soils have low nutrient retention capacities, often allowing accession of nutrients to groundwater.

2 To enable use of such soils for on-site wastewater land application systems, special design requirements and distribution techniques or soil modification procedures will be necessary. For any system designed for these soils, the effluent absorption rate shall be based upon soil permeability testing. Specialist soils advice and special design techniques will be required for clay dominated soils having dispersive (sodic) or shrink/swell behaviour. Such soils shall be treated as Category 6 soils. In most situations, the design will need to rely on more processes than just absorption by the soil.

3 If K_{sat} < 0.06 m/d, a full water balance for the land application can be used to calculate trench/bed size (see Appendix Q).

4 ETA/ETS systems are not normally used on soil Categories 1 to 3.

5 For Category 6 soils ETA/ETS systems are suitable only for use with secondary treated effluent.

APPENDIX B

TEST HOLE LOGS AND PSP TEST CERTIFICATES

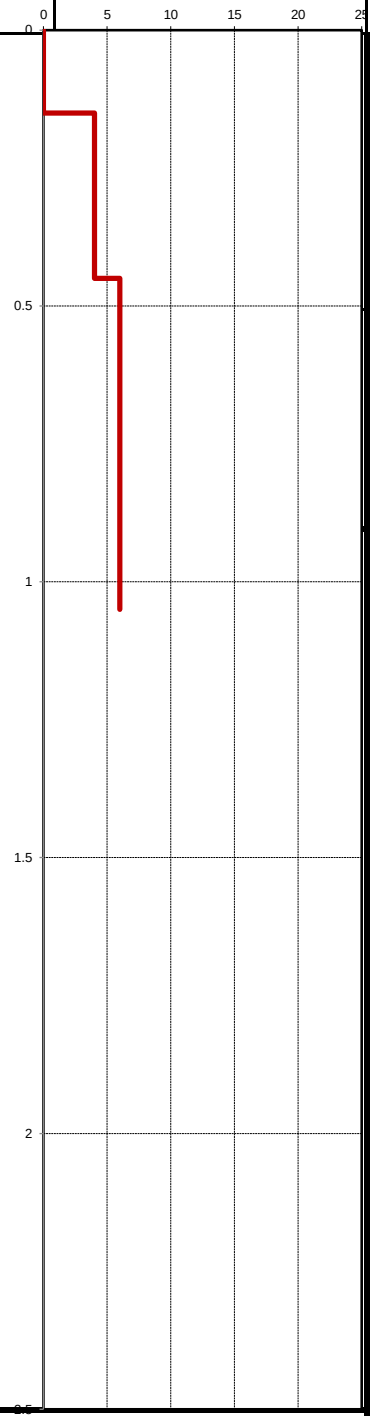
ENGINEERING LOG

RESULT OF TEST HOLES/PITS

LOCAL GEOTECHNICS
ABN:61 737 984 867
12/8 Production Road, Canning Vale WA 6155
PO Box 5050 Canning Vale South WA 6155
admin@localgeotechnics.com.au

Reference	: LGK0372024SC & SSE	Test Pit/BH No.:	TH1
Client	: Method Planning	Date Excavated:	12-Nov-2024
Project	: Site Soil Evaluation	Date completed:	12-Nov-2024
Location	: 11 Moores Road, Pinjarra WA	Equipment Type:	HA, PSP and FPT
GPS Zone 50	: Northing: 6 390 230 Easting: 393 085	Water Table:	1.3 mbgl

Depth (m)	RL (m)	Method	Penetration resistance	Sampling Type	Graphic Log	Classification Symbol	Description of Soil Strata	Additional observations
0.0						SM	**Topsoil, Silty SAND** - fine to medium grained, grey, with low plasticity silt, grass and roots, slightly moist, loose	
0.1						SM	**Silty SAND** - fine to medium grained, grey, with low plasticity silt, slightly moist, loose	
0.4						SP	**SAND** - fine to medium grained, pale grey, slightly moist, medium dense	
0.5								
0.8							colour changes to pale brown	
1.0								
1.3							water table encountered	
1.5								
1.7							**Terminated at a depth of 1.7 m due to hole collapsed**	
2.0								
2.5								



Notes:

Sampling Type :
B - Bulk/Disturbed Sample,
UD - Undisturbed Sample

Method:
HA - Hand Auger
E - Excavator
BH - Backhoe Bucket

Moisture:
D - Dry
M - Moist
W - Wet

Symbols:
W_L - Plastic Limit
W_P - Plastic Limit

Logged : YC/LS
Checked: H Meer

ENGINEERING LOG

RESULT OF TEST HOLES/PITS

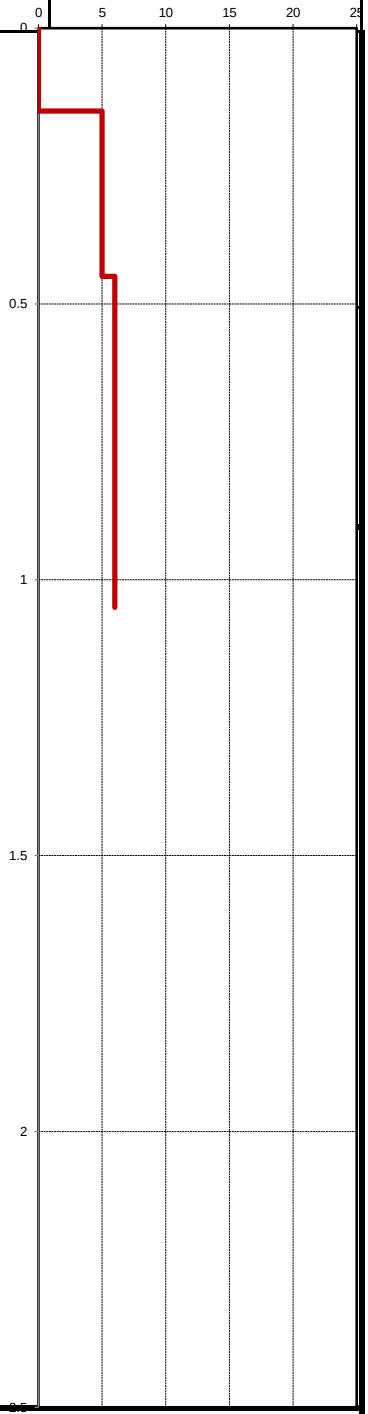
LOCAL GEOTECHNICS
ABN:61 737 984 867
12/8 Production Road, Canning Vale WA 6155
PO Box 5050 Canning Vale South WA 6155
admin@localgeotechnics.com.au

Reference	: LGK0372024SC & SSE	Test Pit/BH No.:	TH2
Client	: Method Planning	Date Excavated:	12-Nov-2024
Project	: Site Soil Evaluation	Date completed:	12-Nov-2024
Location	: 11 Moores Road, Pinjarra WA	Equipment Type:	HA, PSP and FPT
GPS Zone 50	: Northing: 6 390 210 Easting: 393 086	Water Table:	1 mbgl

Depth (m)	Classification Symbol	Description of Soil Strata
0.0	SM	**Topsoil, Silty SAND** - fine to medium grained, grey, with low plasticity silt, grass and roots, slightly moist, loose
0.1	SM	**Silty SAND** - fine to medium grained, grey, with low plasticity silt, slightly moist, loose
0.4	SP	**SAND** - fine to medium grained, pale grey, slightly moist, medium dense
0.5		
0.7		colour changes to pale brown
1.0		water table encountered
1.5		**Terminated at a depth of 1.5 m due to hole collapsed**
2.0		
2.5		

Additional observations

Perth Sand Penetrometer Test (Blows/300mm)



Notes:

Sampling Type :
B - Bulk/Disturbed Sample,
UD - Undisturbed Sample

Method:
HA - Hand Auger
E - Excavator
BH - Backhoe Bucket

Moisture:
D - Dry
M - Moist
W - Wet

Symbols:
W_L - Plastic Limit
W_P - Plastic Limit

Logged : YC/LS
Checked: H Meer

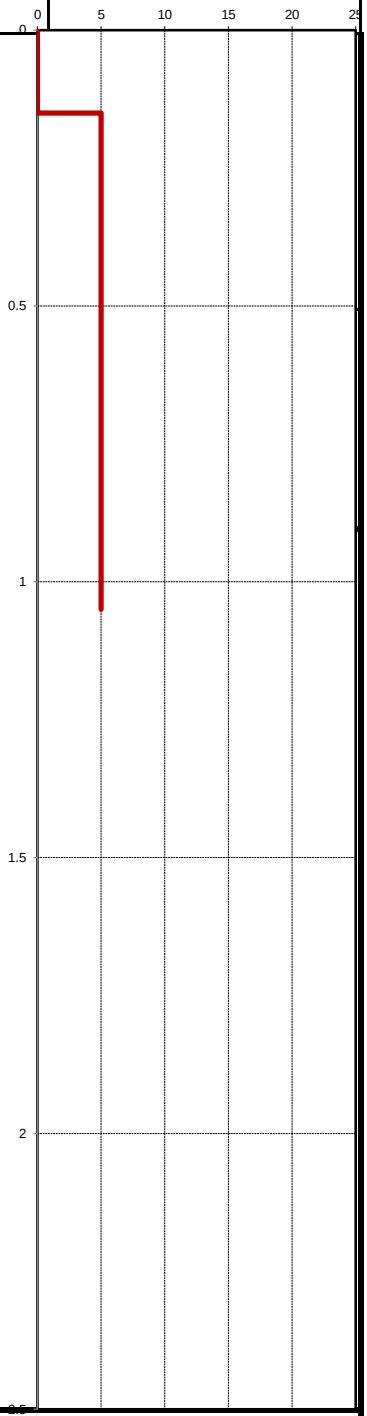
ENGINEERING LOG

RESULT OF TEST HOLES/PITS

LOCAL GEOTECHNICS
ABN:61 737 984 867
12/8 Production Road, Canning Vale WA 6155
PO Box 5050 Canning Vale South WA 6155
admin@localgeotechnics.com.au

Reference	: LGK0372024SC & SSE	Test Pit/BH No.:	TH3
Client	: Method Planning	Date Excavated:	12-Nov-2024
Project	: Site Soil Evaluation	Date completed:	12-Nov-2024
Location	: 11 Moores Road, Pinjarra WA	Equipment Type:	HA, PSP and FPT
GPS Zone 50	: Northing: 6 390 242 Easting: 393 138	Water Table:	1 mbgl

Depth (m)	RL (m)	Method	Penetration resistance	Sampling Type	Graphic Log	Classification Symbol	Description of Soil Strata	Additional observations
0.0						SM	**Topsoil, Silty SAND** - fine to medium grained, grey, with low plasticity silt, grass and roots, slightly moist, loose	
0.1						SM	**Silty SAND** - fine to medium grained, grey, with low plasticity silt, slightly moist, loose	
0.5						SP	**SAND** - fine to medium grained, pale brown, slightly moist, loose	
1.0							water table encountered	
1.5								
1.8							**Terminated at a depth of 1.8 m due to hole collapsed**	
2.0								
2.5								



Notes:

Sampling Type :
B - Bulk/Disturbed Sample,
UD - Undisturbed Sample

Method:
HA - Hand Auger
E - Excavator
BH - Backhoe Bucket

Moisture:
D - Dry
M - Moist
W - Wet

Symbols:
W_L - Plastic Limit
W_P - Plastic Limit

Logged : YC/LS
Checked: H Meer

ENGINEERING LOG

RESULT OF TEST HOLES/PITS

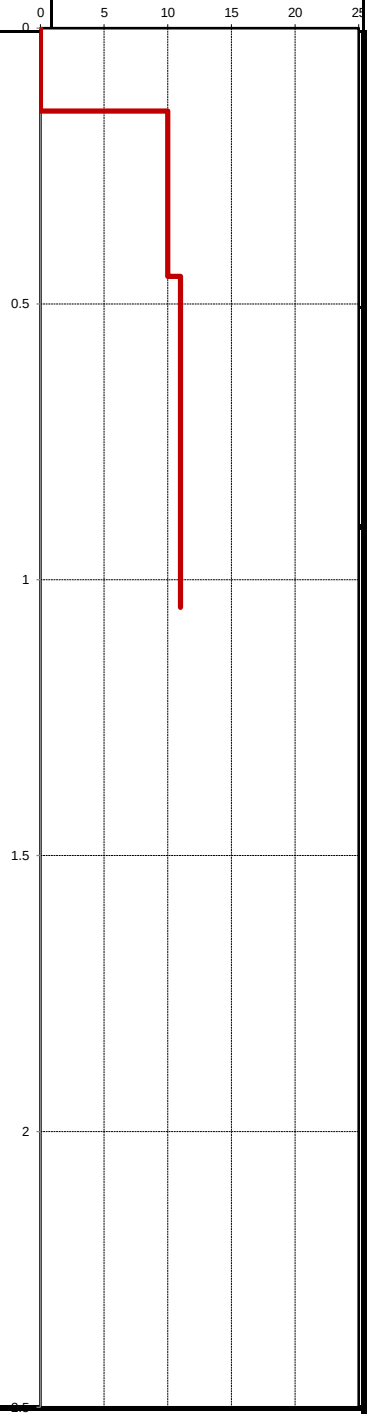
LOCAL GEOTECHNICS
ABN:61 737 984 867
12/8 Production Road, Canning Vale WA 6155
PO Box 5050 Canning Vale South WA 6155
admin@localgeotechnics.com.au

Reference	: LGK0372024SC & SSE	Test Pit/BH No.:	TH4
Client	: Method Planning	Date Excavated:	12-Nov-2024
Project	: Site Soil Evaluation	Date completed:	12-Nov-2024
Location	: 11 Moores Road, Pinjarra WA	Equipment Type:	HA, PSP and FPT
GPS Zone 50	: Northing: 6 390 298 Easting: 393 107	Water Table:	0.6 mbgl

Depth (m)	Classification Symbol	Description of Soil Strata
0.0	SM	**Topsoil, Silty SAND** - fine to medium grained, grey, with low plasticity silt, grass and roots, slightly moist, dense
0.2	SM	**Silty SAND** - fine to medium grained, grey, with low plasticity silt, slightly moist, dense
	SP	**SAND** - fine to medium grained, pale grey, slightly moist, dense
0.5		colour changes to pale brown
0.6		water table encountered
1.5		**Terminated at a depth of 1.5 m due to hole collapsed**

Additional observations

Perth Sand Penetrometer Test (Blows/300mm)



Notes:

Sampling Type :
B - Bulk/Disturbed Sample,
UD - Undisturbed Sample

Method:
HA - Hand Auger
E - Excavator
BH - Backhoe Bucket

Moisture:
D - Dry
M - Moist
W - Wet

Symbols:
W_L - Plastic Limit
W_P - Plastic Limit

Logged : YC/LS
Checked: H Meer

LOCAL GEOTECHNICS

ABN: 61 737 984 867
PO Box 5050
Canning Vale South, WA 6155

PERTH SAND PENETROMETER (PSP)
TEST CERTIFICATES

(AS 1289.6.3.3)

Density Correlation - Table 6.4.6.2 HB 160-2006

Reference	LGK0372024SC & SSE	Test ID	PSP1-4
Client	Method Planning	Date Tested	12-Nov-24
Project	Site Soil Evaluation	Tested by	YC/LS
Site	11 Moores Road, Pinjarra WA	Checked by	H Meer

PSP No.	PSP1		PSP2		PSP3		PSP4	
Depth (mm)	**Penetration Resistance - Blows/300mm I Density Classification**							
0 - 150	Seating		Seating		Seating		Seating	
150 - 450	4	L	5	L	5	L	10	D
450 - 750	6	MD	6	MD	5	L	11	D
750 - 1050	6	MD	6	MD	5	L	11	D

Remarks:

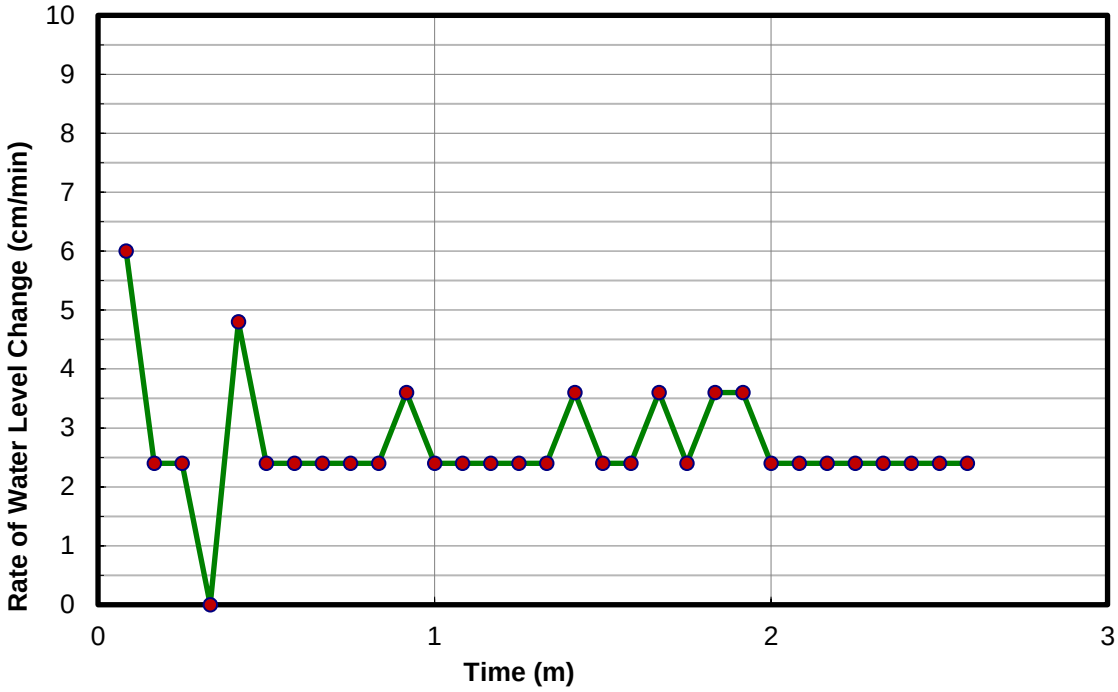
Density Correlation - Table 6.4.6.2 HB 160-2006

Very Loose (VL)	Loose (L)	Medium Dense(MD)	Dense(D)	Very Dense (VD)
≤ 2	2 - 6	6 - 8	8 - 15	≥ 15

ABN: 61 737 984 867
PO Box 5050 Canning Vale South
WA 6155
admin@localgeotechnics.com.au

INFILTRATION TEST CERTIFICATES (AS1547)

Reference	LGK0372024SC & SSE			Test ID	FPT1
Client	Method Planning			Date Tested	12 November 2024
Project	Geotechnical Site Classification			Date Completed	12 November 2024
Location	11 Moores Road, Pinjarra WA			Instrument Type	Guelph Permeameter
Position	Northing:	6 390 226	Easting: 393 077	Tested by	YC/LS



Notes: Test was conducted at a depth of 0.3 m from the existing surface level

Water Hydraulic conductivity K_{fs}: **7.1E-05** **m/sec**

6.2E+00 **m/day**

Signatory: *Dr. Harun Meer*

Date: 12 November 2024

LOCAL
GEOTECHNICS

APPENDIX C

SITE PHOTOS

Photo 1. Site, View from Moores Road

Photo 2. General Site Condition

Photo 3. Test Location 02 (TH2), Sub-surface Probing by Using a Hand Auger

Photo 4. Soil from Test Location 02 (TH2)

Photo 5. Test Location 04 (TH4), Sub-surface Probing by Using a Hand Auger

Photo 6. Test Location 04 (PSP4), Testing by Using a Perth Sand Penetrometer

APPENDIX D

LABORATORY TEST CERTIFICATES

Analysis Results

CSBP Soil and Plant Analysis Laboratory

Customer: Local Geotechnics (98717)
PO/Job Name: LGK0372024SSE
Dates Rec'd: 14/11/2024

	Lab Number	2NOS24148	2NOS24149
	Date Received	14/11/2024	14/11/2024
	Sample Name 1	LGK0372024SSE	LGK0372024SSE
	Sample Name 2	TH4 (0.6-1.0m)	TH3 (0.5-1.0m)
	Sample Name 3	Local Geotechnics	Local Geotechnics
	Depth	0-10	0-10
P Sorption	mg/Kg	15.00	75.85
Phosphorus Retention Index		0.1	31.8

CSBP Lab. Extract Value.

Appendix H - Bushfire Management Plan

Bushfire Management Plan / Statement addressing the Bushfire Protection Criteria coversheet

Site address: Lot 89 (#11) Moores Road, Pinjarra

Site visit: Yes ☒ No ☐

Date of site visit (if applicable): Day 12 Month Dec Year 2024

Report author or reviewer: Nathan Peart

WA BPAD accreditation level (please circle):

Not accredited ☐ Level 1 BAL assessor ☐ Level 2 practitioner ☐ Level 3 practitioner ☒

If accredited, please provide the following.

BPAD accreditation number: 38808 Accreditation expiry: Month May Year 2025

Bushfire management plan version number: 1

Bushfire management plan date: Day 22 Month Jan Year 2025

If one or more of the following are selected, then these should be automatically referred to DFES	YES	NO
Strategic planning is required to address SPP 3.7 and the Guidelines	☐	☐
The application is a vulnerable land use	☐	☐

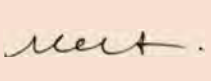
None of the Above ☒

If one or more of the following are selected, and the decision-maker requires input from DFES, then the application can be referred.	YES	NO
The BAL rating has been calculated by a method other than Method 1 as prescribed by AS 3959	☐	☐
An outcomes-based approach has been submitted to demonstrate compliance with the bushfire protection criteria	☐	☐

None of the Above ☒

Note: If a subdivision or development application meets all the acceptable solutions and does not otherwise trigger a referral as listed above, seeking advice from DFES on SPP 3.7 or other matters is at the discretion of the decision-maker.

The information provided within this bushfire management plan to the best of my knowledge is true and correct:

Signature of report author or reviewer  Date 22 January 2025

Bushfire Management Plan (DA)

Proposed Commercial development at: Lot 89 (#11) Moores Road, Pinjarra

Client: Method Planning

Report Number: 24-18507

Assessment Date: 12 December 2024

Report Date: 22 January 2025

Prepared by a BPAD Accredited Practitioner

Document Control

Doc name:	Bushfire Management Plan (DA) - Lot 89 (#11) Moores Road, Pinjarra				
Version	Date	Author		Reviewer	
1	22/01/2025	Jess Calcutt	JC	Nathan Peart	NP
	Initial Report Issued				

Disclaimer and Limitation

This report is prepared solely for the client, any future landowners of the subject lot and is not for the benefit of any other person and may not be relied upon by any other person. Bushfire Smart accepts no liability or responsibility whatsoever for or in respect of any use or reliance upon this report and its supporting material by any third party.

The mitigation strategies contained in this report are considered to be prudent minimum standards only, based on the writer's experience as well as standards prescribed by relevant authorities. It is expressly stated that Bushfire Smart and the writer do not guarantee that if such standards are complied with or if a property owner exercises prudence, that a building or property will not be damaged or destroyed by bushfire or that lives will not be lost in a bush fire. Fire is an extremely unpredictable force of nature. Changing climatic factors (whether predictable or otherwise) either before or at the time of a fire can also significantly affect the nature of a fire and in a bushfire prone area it is not possible to completely guard against bushfire.

Further, the growth, planting or removal of vegetation; poor maintenance of any fire prevention measures; addition of structures not included in this report; or other activity can and will change the bushfire threat to all properties detailed in the report. Further, the achievement of the level of implementation of fire precautions will depend on the actions of the landowner or occupiers of the land, over which Bushfire Smart has no control.

This report does not negate the need to follow Local government authority requirements for Firebreak and Fuel Hazard Reduction. The client agrees that in submitting this report they approve of and will comply with all requirements detailed.

Insurance Coverage Statement

Bushfire Smart is covered by Professional Indemnity Insurance up to $2,000,000 and Public Liability Insurance valued at $20,000,000. These policies provide comprehensive coverage for bushfire attack level assessments, planning, design, and advisory services, in accordance with the FPA Australia Bushfire Planning and Design Accreditation Scheme for a BPAD-Level 3 practitioner.

Author		
Jess Calcutt	BPAD 65772	
Level 1 Bushfire Planning and Design (BPAD) Accredited Practitioner		
E: BAL@BushfireSmart.com.au	Ph: 9555 9444	
Reviewer		
Nathan Peart	BPAD 38808	
Level 3 Bushfire Planning and Design (BPAD) Accredited Practitioner		
E: BAL@BushfireSmart.com.au	Ph: 9555 9444	

Executive Summary

The proposal is at Lot 89 (#11) Moores Road, Pinjarra regarding a commercial development on a lot with an existing building.

The proposal is in an area that has been designated as bushfire prone and must therefore comply with State Planning Policy 3.7 (SPP 3.7). Planning for Bushfire Guidelines Version: September 2024 (the Guidelines) has been used to determine the proposals compliance with SPP 3.7.

An assessment against the Bushfire Protection Criteria 6 is required to be undertaken. The following table summarises the outcome of this assessment.

Table A.1: Summary of assessment against Bushfire Protection Criteria 6

Element	Acceptable Solution	Compliance Method	Compliance notes.
1: Location	-	N/A	
2: Siting of development	A2.1a Siting and design	Acceptable Solution	The building can achieve BAL 29 as demonstrated within the potential bushfire impacts section of this report and A2.2 below.
	A2.1b Siting in an area with a radiant heat impact exceeding 29 kW/m² (BAL-40 or BAL-FZ).	N/A	
	A2.2 Asset Protection Zone (APZ)	Acceptable Solution	An APZ can be achieved and contained within the lot boundaries. APZ dimensions to be: 13m in all directions.
	A2.3 Clearing of native vegetation	Acceptable Solution	The development does not require the clearing of native vegetation
	A2.4 Storage of hazardous, flammable and/or combustible materials	Acceptable Solution	The storage of hazardous, flammable and/or combustible materials (if any) to be within a BAL 29 area with suitable structure to shield the material and prevent the ignition of bushfire prone vegetation.
3: Vehicular Access	A3.1 Private driveways	Acceptable Solution	Private driveways can meet the requirements of the guidelines.
4: Water	A4.1 Water supply for residential habitable buildings	Acceptable Solution	Hydrants provided to comply with Water Corporation's No. 63 Water Reticulation Standard.

Bushfire hazards identified are:

Crown land to the west/northwest of the subject lot and adjoining lots boasts dense forest vegetation, with shrubland and grasses in between. The vegetation interconnects across neighbouring developed lots, with just 250 m separating the subject structure from the undeveloped vegetated lands. Firebreaks are limited and isolated, with no verification of their management or effectiveness, which could increase the bushfire risk. The most significant bushfire risk to the proposed development is the potential for ember attack.

Action Required:

Compliance with this BMP, and therefore SPP 3.7, will require action prior, during and after development. The items requiring implementation include:

- APZ to be established and maintained throughout the life of the proposal.
- Driveway to be constructed and maintained to the standard stated in this BMP.
- Structure around hazardous materials to comply with requirements of this BMP.
- Ongoing compliance with the local government's firebreak notice.

The entire report should be read in conjunction with the guidelines to ensure all requirements are understood.

Table of Contents

Table of Figures

1 Proposal and Site Details

1.1 Proposal Details

Lot 89 (#11) Moores Road, Pinjarra (subject lot) is a 18,042.16 m^2 parcel. The proposal is for the construction of a veterinary hospital on an existing lot.

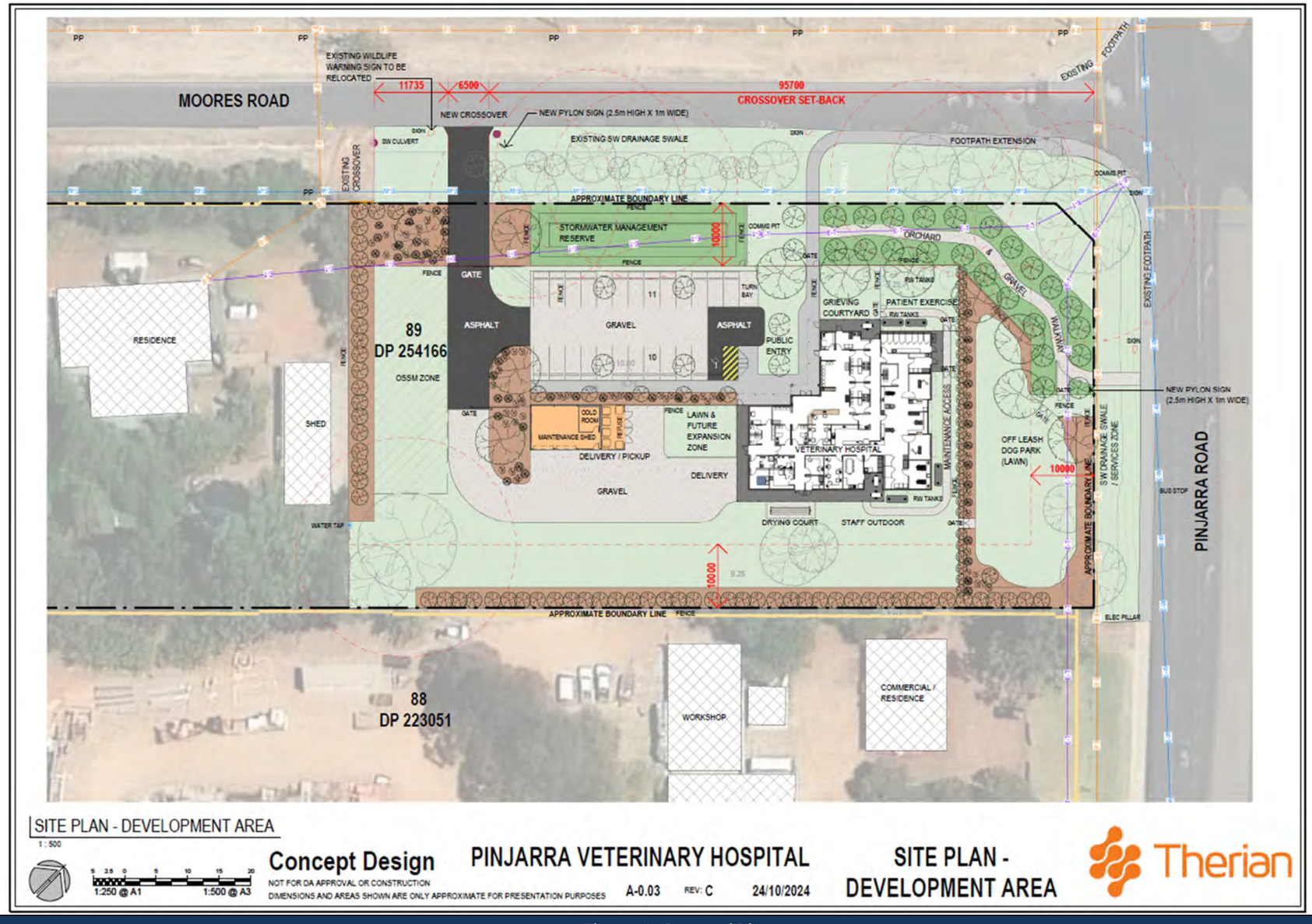


Figure: 1 Proposal Plan

Figure: 2 Location

Figure: 3 Map of Bushfire Prone Area for Subject Site

2 Environmental Considerations

To identify environmental, biodiversity and conservation values on the subject site, the site has been examined against the following databases as shown in Table 1.

Table 1: Assessment against environmental considerations

Object	Database	Identified	Details
Geomorphic Wetlands: Swan Coastal Plain / Augusta to Walpole	DBCA-019 / DBCA-017	Yes	Site identified within area – further action required. 
Ramsar sites (Wetland areas designated under the Ramsar Convention)	DBCA-010	No	Site not identified within database.
Threatened and Priority Flora	DBCA-036	No	Site not identified within database.
Threatened and Priority Fauna	DBCA-037	No	Site not identified within database.
Threatened Ecological Communities	DBCA-038	Yes	Site identified within area – further action required. 
Bush Forever Areas - 2000	DPLH-019	No	Site not identified within database.
Clearing Regulations – Environmentally Sensitive Areas	DWER-046	No	Site not identified within database.
SWAN Bioplan Regionally Significant Natural Areas 2010	DWER-070	No	Site not identified within database.
Local government biodiversity/planning	-	No	-

The subject site has been identified by the Department of Biodiversity, Conservation and Attractions (DBCA) as being within the Geomorphic Wetlands: Swan Coastal Plain area, and is designated as a threatened ecological community.

The applicant will need to seek clarification from the appropriate authorities, which may include the preparation of reports from suitably qualified consultants, to ensure any clearing is appropriate for the area.

2.1 Native vegetation – modification and clearing

The site has been checked against the Native Vegetation mapping conducted by the Department of Primary Industries and Regional Development (DPIRD-005). This database shows native vegetation on the site, as seen in the image below. However, the asset protection zone, as required in this BMP, will not require the removal of native vegetation.

Figure: 4 Map of Native Vegetation Extents for Subject Site

2.2 Revegetation/landscape plans

Vegetation in the existing drainage swale will be retained. Additional replanting of isolated shade trees, grassed areas, and maintained shrubbery will be implemented per the plans supplied.

All future landscaping for the site may need to comply with the APZ requirements of this report.

3 Bushfire Assessment

3.1 Site Assessment

The assessment of this site/development was undertaken by a BPAD Accredited Practitioner for the purpose of determining the Bushfire Attack Level in accordance with AS 3959-2018 Simplified Procedure (Method 1).

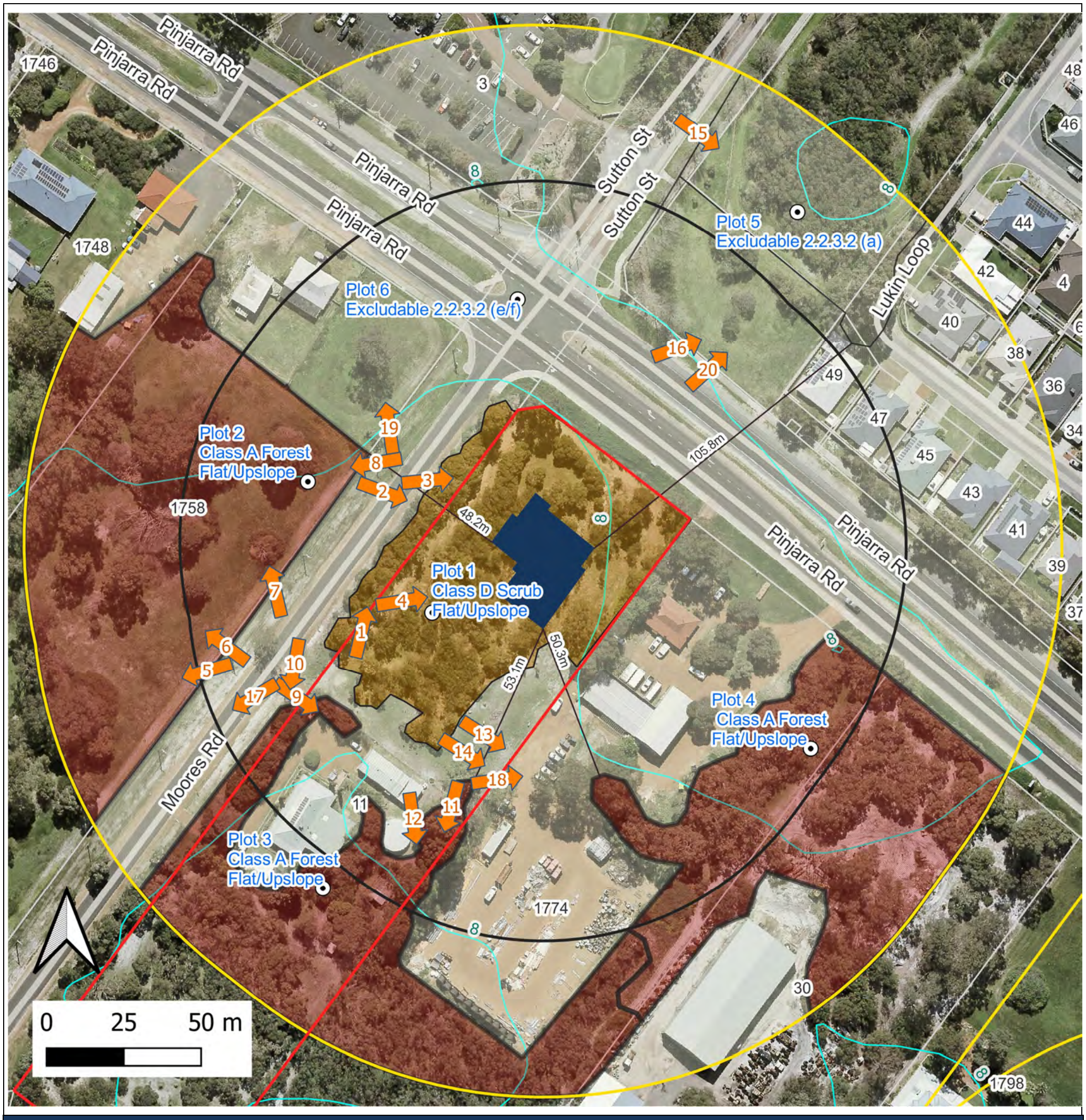


Figure: 5 *Vegetation Classification*

Lot 89 (#11) Moores Road, Pinjarra	Legend											
The aerial imagery used was the best available at the time of review; however, it may no longer reflect the most current conditions.	Proposed Structure	Subject Land	150m area assessment	100m area assessment	Photo point	A Forest	B Woodland	C Shrubland	D Scrub	G Grassland	Excluded	Other

3.2 Vegetation Classification

All vegetation within 150m of the site / proposed development was classified in accordance with Clause 2.2.3 of AS 3959-2018. Each distinguishable vegetation plot with the potential to determine the Bushfire Attack Level is identified below.

Table 2: BAL Analysis

Plot:	1	Effective Slope (°):	Flat/Upslope	Separation Distance (m):	0 m
Vegetation Classification or Exclusion Clause:			Class D Scrub - Closed scrub D-13		
Description / Justification for Classification:					
Tall scrub ~6 m, dominated by Melaleuca species (e.g., Moonah or Modong, and *M. systena*). Understorey consists of unmanaged grasses, high fine fuel loads, and numerous saplings throughout. Parts are separated by a firebreak, though the same structure persists across the subject lot. Foliage cover exceeds 30%.					

Photo ID: 1

Photo ID: 2

Photo ID: 3

Photo ID: 4

Plot:	2	Effective Slope (°):	Flat/Upslope	Separation Distance (m):	48.2 m
Vegetation Classification or Exclusion Clause:			Class A Forest - Open forest A-03		

Description / Justification for Classification:

Open forest on private land west of the subject lot, with an estimated height of ~18 m. Some areas feature a shrubby/scrubby midstorey and unmanaged grasses in the understorey. Laddering of fuels is evident, and foliage cover exceeds 30%.

Photo ID: 5

Photo ID: 6

Photo ID: 7

Photo ID: 8

Plot:	3	Effective Slope (°):	Flat/Upslope	Separation Distance (m):	53.1 m
Vegetation Classification or Exclusion Clause:			Class A Forest - Open forest A-03		

Description / Justification for Classification:

Mixed vegetation consisting of introduced pines (possibly Cypress or Maritime species), ornamentals, and Eucalyptus trees, with an average height of ~17 m. Foliage cover exceeds 30%, with a high fine fuel load present. Some unmanaged grasses and scrub contribute to the midstorey.

Photo ID: 9

Photo ID: 10

Photo ID: 11

Photo ID: 12

08 9555 9444
BAL@bushfiresmart.com.au
Address: 71 Allnutt Street, Mandurah, 6210
Postal: PO Box 4160, Mandurah North, WA, 6210

Plot:	4	Effective Slope (°):	Flat/Upslope	Separation Distance (m):	50.3 m
Vegetation Classification or Exclusion Clause:			Class A Forest - Open forest A-03		
Description / Justification for Classification:					
Predominantly native forest dominated by Eucalyptus species, with an average height of ~22 m. Aerial imagery indicates a contiguous canopy throughout, with foliage cover exceeding 30%.					

Photo ID: 13

Photo ID: 14

Plot:	5	Effective Slope (°):	N/A	Separation Distance (m):	105.8 m
Vegetation Classification or Exclusion Clause:			Excludable - 2.2.3.2(a) >100m from site		
Description / Justification for Classification:					
Melaleuca scrub approximately 6 m in height, located on fenced land to the north of the subject lot. This vegetation lies beyond the 100 m buffer zone.					

Photo ID: 15

Photo ID: 16

Plot:	6	Effective Slope (°):	N/A	Separation Distance (m):	N/A
Vegetation Classification or Exclusion Clause:			Excludable - 2.2.3.2 (e/f) Non-Vegetated Areas & Low Threat Vegetation		
Description / Justification for Classification:					
Permanently non-vegetated areas include public roads, gravel verges, footpaths, and gravel parking areas in commercial lots nearby. Low threat vegetation consists of managed grasses and trees lacking understorey with no canopy connection, golf course areas, and managed urban/rural lots.					

Photo ID: 17

Photo ID: 18

Photo ID: 19

Photo ID: 20

The Fire Danger Index (FDI) – 80-and table 2.4.3 AS3959-2018 applied.

Potential Bushfire Impacts

The potential bushfire impact to the site / proposed development from each of the identified vegetation plots are identified below.

Table 3: BAL Analysis

Plot	Vegetation Classification	Effective Slope	Separation (m)	BAL
1	Class D Scrub	Flat/Upslope	0	BAL – FZ
2	Class A - Forest	Flat/Upslope	48.2	BAL – 12.5
3	Class A - Forest	Flat/Upslope	53.1	BAL – 12.5
4	Class A - Forest	Flat/Upslope	50.3	BAL – 12.5
5	Excludable – Clause 2.2.3.2(a)	N/A	105.8	BAL – LOW
6	Excludable - 2.2.3.2 (e/f) Non-Vegetated Areas & Low Threat Vegetation	N/A	N/A	BAL – LOW

Determined Bushfire Attack Level (BAL)

The Determined Bushfire Attack Level (highest BAL) for the site / proposed development has been determined in accordance with clause 2.2.6 of AS 3959-2018 using the above analysis.

Determined Bushfire Attack Level	BAL – FZ

Indicative Bushfire Attack Level (BAL)

The Bushfire Attack Level (highest BAL) for the site / proposed development can be reduced to the level indicated below with the inclusion of an Asset protection Zone as prescribed in this report as shown in the following table.

Table 4: BAL Analysis with APZ requirements

Plot	Vegetation Classification	Effective Slope	Separation (m)	BAL
1	Class D Scrub	Flat/Upslope	13	BAL – 29
2	Class A - Forest	Flat/Upslope	48.2	BAL – 12.5
3	Class A - Forest	Flat/Upslope	53.1	BAL – 12.5
4	Class A - Forest	Flat/Upslope	50.3	BAL – 12.5
5	Excludable – Clause 2.2.3.2(a)	N/A	105.8	BAL – LOW
6	Excludable - 2.2.3.2 (e/f) Non-Vegetated Areas & Low Threat Vegetation	N/A	N/A	BAL – LOW

Indicative Bushfire Attack Level	BAL – 29

4 Bushfire Hazard Issues

Crown land to the west/northwest of the subject lot and adjoining lots boasts dense forest vegetation, with shrubland and grasses in between. The vegetation interconnects across neighbouring developed lots, with just 250 m separating the subject structure from the undeveloped vegetated lands. Firebreaks are limited and isolated, with no verification of their management or effectiveness, which could increase the bushfire risk. The most significant bushfire risk to the proposed development is the potential for ember attack.

5 Assessment against the Bushfire Protection Criteria

An assessment against the bushfire protection criteria (Appendix Four of the guidelines) is required to be undertaken for any strategic planning proposal, subdivision and development application for a site that has or will, on completion, have a bushfire hazard level above 'Low' or a BAL rating above BAL LOW. The following section details the measure to be taken so that this proposal complies with these.

Element 1: Location

Not Applicable

Element 2: Siting and design of development

A.2.1a: Siting and design

The building can achieve BAL 29 as demonstrated within the potential bushfire impacts section of this report and A2.2 below.

A2.1b Siting in an area with a radiant heat impact exceeding 29 kW/m² (BAL-40 or BAL-FZ)

N/A

A2.2 Asset Protection Zone (APZ)

Element 2.2 will be satisfied using an Asset Protection Zone (APZ) which will allow a radiant heat impact not exceeding 29 kW/m² (BAL-29).

The APZ required for this proposal is detailed in the following table, and visually depicted below.

APZ Requirement from:	Measurement (from any external wall or supporting post or column of the proposed building/s)
All directions	13 m

For further information, see Appendix A: Spatial Representation of proposed risk management measures of this report. The APZ is to be managed as per Table 9 of the guidelines, extract shown below.

A2.3 Clearing of native vegetation

The proposal does not require the clearing of native vegetation by ensuring all proposed development lies in the northern half of the subject lot, avoiding the native vegetation zone.

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A2.4 Storage of hazardous, flammable and/or combustible materials

The proposal is unlikely to include the storage of hazardous, flammable, and/or combustible materials. However, if the future use of the building will include the storage of such materials as part of its ongoing day-to-day operations, the materials are to be stored in an area that:

- is subject to a radiant heat impact not exceeding 29 kW/m2 (BAL-29);
- is non-combustible and shields the materials to reduce their exposure to radiant heat from the bushfire to levels significantly lower than
- 29 kW/m2 and prevents the entry of debris and embers; and
- limits to the degree necessary and practical, the escape of sources of ignition from the stored materials into bushfire prone vegetation.

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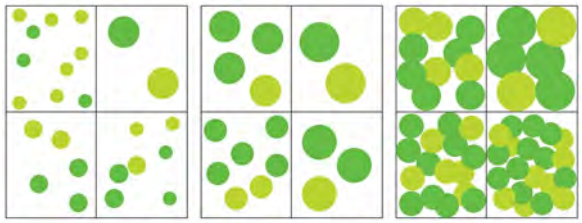
Extract from *Table 9: Asset Protection Zone (APZ) technical requirements* (WAPC 2024).

Object	Requirement
Fences within the APZ	Should be constructed from non-combustible materials (for example, iron, brick, limestone, metal post and wire, or bushfire-resisting timber referenced in Appendix F of AS 3959).
Fine fuel load (combustible, dead vegetation matter less than 6 mm in thickness)	• Should be managed and removed on a regular basis to be maintained as low threat vegetation • Should be maintained at less than two tonnes per hectare (on average) • Mulches should be non-combustible such as stone, gravel, shells, rock or crushed mineral earth or wood mulch more than five millimetres in thickness.
Trees* (more than 6 metres in height)	• Trunks at maturity should be a minimum distance of six metres from all elevations of the building • Branches at maturity should not touch or overhang a building or powerline • Lower branches and loose bark should be removed to a height of two metres above the ground and/or surface vegetation. • Canopy cover within the APZ should be less than 15 per cent of the total APZ area • Tree canopies at maturity should be at least 5 m apart to avoid forming a continuous canopy. Stands of existing mature trees with interlocking canopies may be treated as an individual canopy provided the total canopy cover within the APZ does not exceed 15 per cent and is not connected to the tree canopy outside the APZ. Tree canopy cover – ranging from 15 to 70 per cent at maturity 
Shrub* and scrub* (0.5 metres to 6 m in height). Shrub and scrub more than 6 m in height are to be treated as trees.	• Should not be located under trees or within three metres of buildings. • Should not be planted in clumps more than 5 square metres in area. • Clumps should be separated from each other and any exposed window or door by at least 10 metres.
Ground covers* (<0.5 m in height. Ground covers more than 0.5 metres in height are to be treated as shrub)	• Can be planted under trees but must be maintained to remove dead plant material, as prescribed in 'Fine fuel load' above. • Can be located within two metres of a structure, but three metres from windows or doors if more than 100 millimetres in height.
Grass	• Grass should be maintained at a height of 100 mm or less, at all times. • Wherever possible, perennial grasses should be used and well-hydrated with regular application of wetting agents and efficient irrigation
Defendable space	Within three metres of each wall or supporting post of a habitable building, the area is kept free from vegetation, but can include ground covers, grass and non-combustible mulches as prescribed above.
LP Gas Cylinders	• Should be located on the side of a building furthest from the likely direction of a bushfire or on the side of a building where surrounding classified vegetation is upslope, at least one metre from vulnerable parts of a building. • The pressure relief valve should point away from the house. • No flammable material within six metres from the front of the valve. • Must sit on a firm, level and non-combustible base and be secured to a solid structure.

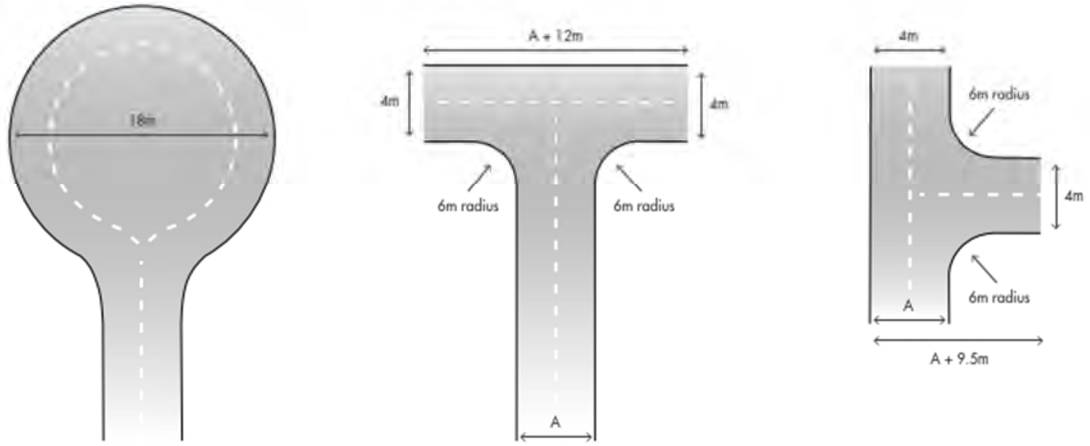
Element 3: Vehicular Access

A3.1 Private Driveways

Private driveways must meet the following requirements:

- Technical Requirements:
  - Minimum horizontal clearance: 6 metres
  - Minimum vertical clearance: 4.5 metres
  - Minimum weight capacity: 15 tonnes
  - Maximum unsealed road grade: 1:10 (10% or 6°)
  - Maximum sealed road grade: 1:7 (14.3% or 8°)
  - Maximum average grade sealed road: 1:10 (10% or 6°)
  - Minimum inner radius of road curves: 8.5 metres
    (See Guidelines Appendix B.3 Table 10, column 5 for full details)
- The driveway is less than 200 metres, therefore passing pays are not required.
- Turn-around area (Figure 30) and within 30 metres of the habitable building (Figure 38). Suitable option is indicated consistent with current plans in Figure 6 - Spatial.

Figure 30: Design requirements for a turn-around area



Element 4: Water

A4.1 Water supply

Water supply is via a reticulated system with hydrant connections provided in accordance with Water Corporation's Design Standard DS 63: Design and Construction Requirements for Water Reticulation Systems up to DN250. The hydrant is located along Pinjarra Road, approximately 80 m from the proposed structure (and 110m as the crow flies to the most distal part of the building).

6 Implementation

The following tables set out the responsibilities of the developer(s), landowner(s) and local government for the initial implementation and ongoing maintenance associated with this proposal.

Management Action	Timing
Proponent/Landowner	
Establish the Asset Protection Zone (APZ) to the dimensions and standard stated in this BMP	Prior to construction
Establish driveway to the required surface condition and clearances	Prior to occupancy
Occupants	
Maintain driveway to the required surface condition and clearances	Ongoing
Maintain the Asset Protection Zone (APZ) to the dimensions and standard stated in this BMP	Ongoing
Ongoing compliance with the local government's firebreak notice.	Ongoing

6.1 Acknowledgement - Proponent

The proponent acknowledges the responsibilities as listed above and the requirement to ensure that should the land transfer to a new owner, that the new owner is aware of the BMP and their ongoing responsibility.

7 General References

Office of Bushfire Risk Management (OBRM). (2020). *Bushfire risk management (BRM) plan guidelines*. Retrieved October 2020.

Standards Australia. (2024). *AS 3959-2018 construction of buildings in bushfire-prone areas*. Sydney.

WA Department of Planning. (2016). *Visual guide for bushfire risk assessment in Western Australia*.

Water Corporation. (2018). *Design standard DS 63: Water reticulation standard design and construction requirements for water reticulation systems up to DN250 (Version 3, Revision 14)*. Water Corporation.

Western Australian Planning Commission. (2024). *State planning policy 3.7 Bushfire*. State of Western Australia.

Western Australian Planning Commission. (2024). *Planning for bushfire guidelines*. State of Western Australia.

8 Online references

Landgate. (2024). Map Viewer Plus. Government of Western Australia. Retrieved from https://map-viewer-plus.app.landgate.wa.gov.au/index.html

Office of Bushfire Risk Management (OBRM). (2024). Map of Bush Fire Prone Areas. Retrieved from https://maps.slip.wa.gov.au/landgate/bushfireprone/

WA Local Government Association (WALGA). Environmental Planning Tool. Retrieved from https://pbp.walga.asn.au/Tools/EnvironmentalPlanningTool.html

9 Acknowledgement of Country

We acknowledge the traditional custodians of the land on which we operate, the Noongar people. We pay our respects to their elders, past, present, and emerging, and recognise their enduring connection to the land and environment. As we conduct our bushfire management and reporting, we honour their legacy and their stewardship of our natural landscapes.

10 Appendices

Appendix A: Spatial Representation of proposed risk management measures (Next Page)

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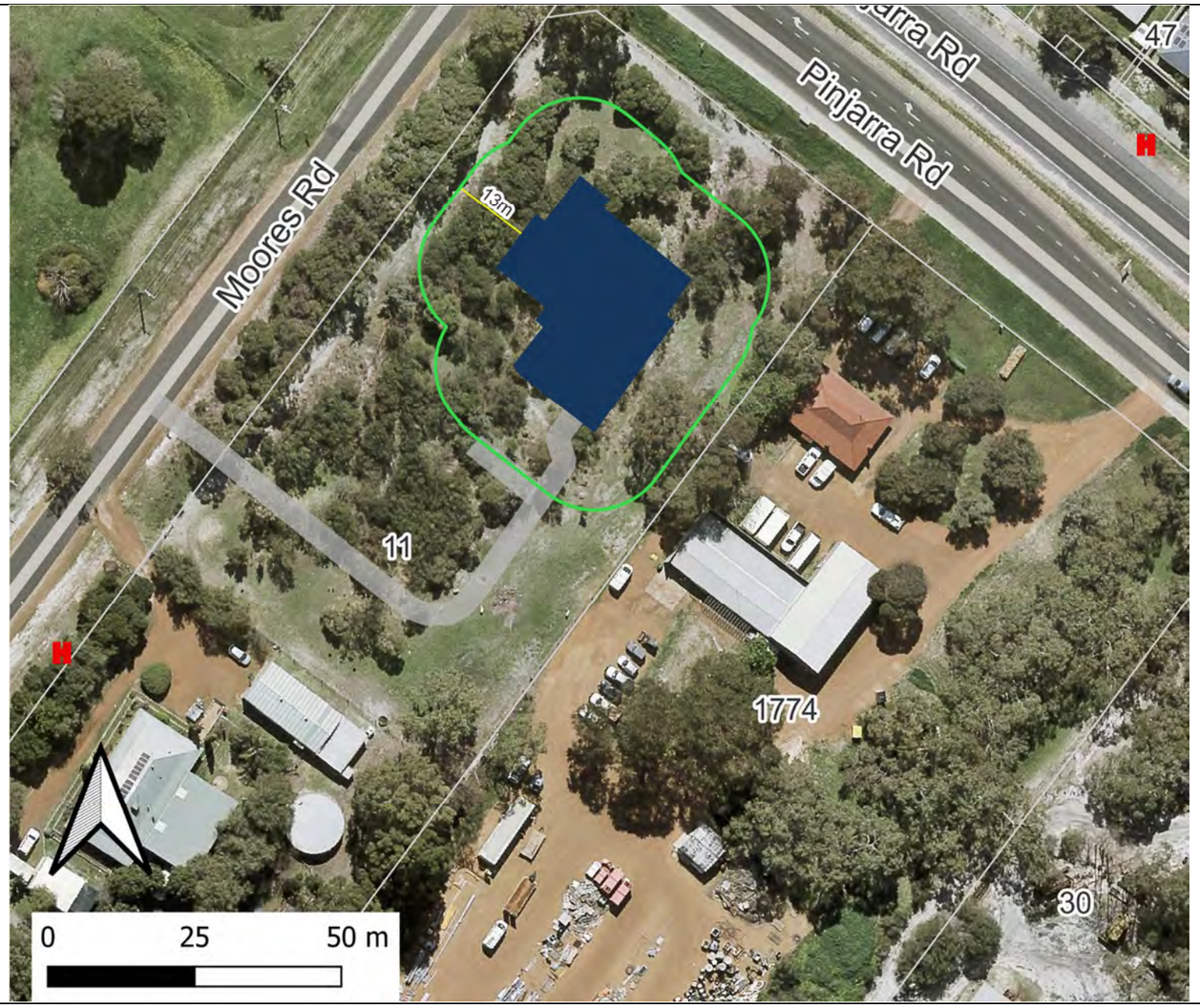

Figure: 6 *Spatial Representation of proposed risk management measures*

Legend

	Subject Lot		
	Indicative Building		Indicative Driveway with suitable turn-around bay
	13 m APZ	H	Hydrant

NOTES

Asset Protection Zone (APZ)

APZ requirements: 13 m in all directions.

The minimum width for the APZ is the distance required to meet the BAL-29 setback. The land between the development and the classified vegetation is to be maintained as an APZ (see *Appendix B: APZ technical requirements* for full details).

- Trees, shrub & scrub >6m in height are to be setback a minimum of 6m for the building with no branches overhanging
- Shrub & scrub <6m in height are to be setback a minimum of 3 m from the building and not planted in clumps greater than 5m2.
- Grass is to be maintained less than 100 mm in height

Water Supply

Water supply will be through reticulated water with hydrant connections provided in accordance with Water Corporation's No. 63 Water Reticulation Standard.

Access

The driveway access shall be suitable for a fire truck with a minimal 4m trafficable surface. A turn around will be provided within 30m of the structure. Refer to Figure 30 of the Guidelines for design requirements.

If an access gate is going to be installed along the driveway, then the gate shall have a minimum width of 3.6m.

The power dome is to be kept clear of vegetation.

Installation and upkeep of the asset protection zone, firebreaks, water supply and the driveway are the responsibility of the landowner. The measures listed above shall be implemented prior to the occupation of the proposal and shall continue to be maintained in perpetuity.

Lot 89 (#11) Moores Road, Pinjarra

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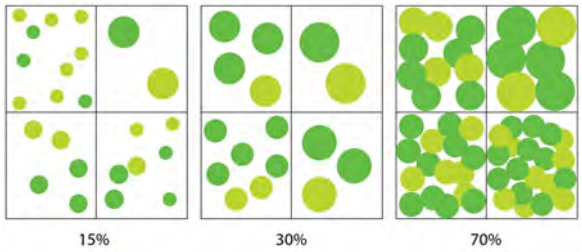
Appendix B: APZ technical requirements

The APZ is to be managed as per the extract from *Table 9: Asset Protection Zone (APZ) technical requirements* (WAPC 2024).

Object	Requirement
Fences within the APZ	Should be constructed from non-combustible materials (for example, iron, brick, limestone, metal post and wire, or bushfire-resisting timber referenced in Appendix F of AS 3959).
Fine fuel load (combustible, dead vegetation matter less than 6 mm in thickness)	• Should be managed and removed on a regular basis to be maintained as low threat vegetation • Should be maintained at less than two tonnes per hectare (on average) • Mulches should be non-combustible such as stone, gravel, shells, rock or crushed mineral earth or wood mulch more than five millimetres in thickness.
Trees* (more than 6 metres in height)	• Trunks at maturity should be a minimum distance of six metres from all elevations of the building • Branches at maturity should not touch or overhang a building or powerline • Lower branches and loose bark should be removed to a height of two metres above the ground and/or surface vegetation. • Canopy cover within the APZ should be less than 15 per cent of the total APZ area • Tree canopies at maturity should be at least 5 m apart to avoid forming a continuous canopy. Stands of existing mature trees with interlocking canopies may be treated as an individual canopy provided the total canopy cover within the APZ does not exceed 15 per cent and is not connected to the tree canopy outside the APZ. Tree canopy cover – ranging from 15 to 70 per cent at maturity 
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	• No flammable material within six metres from the front of the valve. • Must sit on a firm, level and non-combustible base and be secured to a solid structure.

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Shire of Murray

Schedule of Submissions
Proposed Veterinary Centre – Lot 89 (11) Moores Road, Pinjarra

No.	Submitter	Submission	Email Address	Record No.	Comment
1	[redacted]	My daughter and I live with 2 dogs. I meet a lot of other dog owners, while walking ours, and everyone is mentioning we are long overdue for a fenced in, off lead dog park. I strongly believe the park and veterinary centre would be very welcomed.	[redacted]	D25/23095	Support Noted.

Appendix 3 - Government Agency Submissions

3.1 - Main Roads WA

OFFICIAL

HI Eric,

I refer to your email of 22 May 2024 regarding the proposed development application and advise that Main Roads has no objections in principle, subject to the below comments:

Existing Planning Landscape

- Under the Peel Region Scheme the lot is zoned "Urban deferred"
- Under the Pinjarra Local Planning Scheme the lot is zoned "Rural"
- Under the Draft Pinjarra Precinct Structure Plan the lot is flagged as
    - a potential primary school location
    - within a Local Structure Plan (I cannot find it on the website, and the LPS table doesn't line up with the mapped areas)

Application Package

- **6.7 – Entry Statement**
  Main Roads has preliminary plans for the upgrade of the intersection of Moores/Sutton/Pinjarra intersection. As the proposal includes the creation of a community space on the southeastern side of the intersection, the applicant is advised that this area may be impacted by the modification of the intersection or land acquisition, should this be required in the future.
- **6.9 – Signage**
  Network Operations South West has no objection in principle to the proposed signage as detailed within the submitted DA subject to the following conditions:
    - Static signage displaying only the name, phone number or logo, of the on-premises businesses.
    - The type of signs, size, content and location must comply with all relevant by-laws and planning schemes made by Council.
    - The signs and sign structures are to be placed on private property and shall not overhang or encroach upon the road reserve.
    - A display area no greater than as described in the Application.
    - Static content related to on-premises business.
    - The signs shall not be in digital format.
    - The device shall not contain fluorescent, reflective or retro reflective colours or materials.
    - For the signs that are illuminated, it must **not** flash, pulsate or chase during all hours.
    - Luminance level is less than

Environmental zone*	Description	Day cd/m2	Dawn/ Dusk cd/m2	Night cd/m2
A4	Town and city centres and other commercial areas with generally high off-street ambient lighting e.g., major shopping/commercial centres	6000	600	350
A3	Suburban areas in towns and cities with generally medium off-street ambient lighting e.g., shopping/café strips	6000	600	250

- No other unauthorized signing is to be displayed.
- Vegetation within the road reserve shall not be removed or trimmed to improve the visibility of the proposed advertising devices.
- Main Roads agreement is to be obtained prior to any future modifications.
- Shall be designed and constructed in such a manner that the composite construction of the sign panel, supports and fixings will not cause injury or major damage if struck by a vehicle, cyclist or pedestrian, or becomes dislodged for any reason.

Please Note: If in the future there is any changes to our road network/infrastructure then a reassessment would be required.

- **Appendix E – TIA**
  - A site visit was stated as being undertaken on 6 February 2025. Suggest another is undertaken, given the following errors in the speed zoning:
    - Stated Pinjarra Road speed limit is 110 km/hr past the site. This is incorrect, the maximum speed limit was reduced to 80 km/hr in November 2021.
    - Stated approach to SWH (George St) is 60 km/hr. This is also incorrect; this was reduced to 50 km/hr on the approach to the Roe St intersection in 2023.
    - Stated speed limit for Moores Road is 50 km/hr BUA. This is incorrect; this was changed to an Area 70 km/hr speed zone in 2021.
  - Traffic volumes do not match with data on Traffic Map – report states 12,700vpd, whilst TM shows 11,483vpd.
  - No forecast data has been used and so no growth rate has been stated.
  - There is a mismatch in the staffing details for the Veterinary Clinic.
    - Section 1.1 states "development of a veterinary clinic with a **maximum of two (2) consultants and seven (7) support staff** operating at the facility at any one time." (i.e. Total 9 staff)
    - Whilst section 3.1 states "A **maximum of 5 Veterinarians and 10 support staff, with 2 administrative staff** at any given time" (i.e. Total 17 staff)
  - 4.1 – Trip Generation
    - Staff trips appear to not have been included in the assessment. Theoretically this would be 15 trips, twice a day, assuming that approx. 2 persons would utilise non-vehicular transport methods (~10% staff).
    - The theoretical maximum customer trips would be 5 (assuming that one consult room is not occupied at any given time), twice per hour (as appointments were stated as being booked in 30 minute intervals). The operating hours are 8am-6pm (Mon-Fri) and 8am-1pm (Sat), assuming a 1 hour lunch break each day, there is the potential for 10(5x2) = 100 trips per day (M-F) and 4(5x2) = 40 trips per day (Sat). This assumes that all clients will access the site via car. So, an average of 90 trips per day for clients only.
    - Using the TIA Guidelines for trip rates of Commercial premises as shown in Table 1 below the trip rates would be:
      90 clients + 15 staff = 105 trips per day
      When broken down over the average 9 operating hours per day = 12 trips per hour?
      Then converted to **AM Peak In** = 1.6x12 = **19.2 trips**; and **AM Peak Out** = 0.4x12 = **4.8 trips**

and **PM Peak In** = 0.4x12 = **4.8 trips**; and **PM Peak Out** = 1.6x12 = **19.2 trips**

Table 1: Typical land use vehicle trip rates

LAND USE	UNIT	AM peak hour trip rate			PM peak hour trip rate		
		In	Out	Total	In	Out	Total
Residential	Dwellings	0.2	0.6	0.8	0.5	0.3	0.8
School	Pupils	0.5	0.5	1.0	0.5	0.5	1.0
Commercial	100m² GFA	1.6	0.4	2.0	0.4	1.6	2.0
Retail (Food) [ab]	100m² GFA	2.0	0.5	2.5	5.0	5.0	10.0
Retail (Non-food) [b]	100m² GFA	1.0	0.25	1.25	2.0	2.0	4.0
Industrial	100m² GFA	0.8	0.2	1.0	0.2	0.8	1.0

- Dispersal/distribution of traffic I would assume would be more likely to be 50% Pinjarra (eastbound), 40% Pinjarra (westbound), 10% Moores (southbound), rather than the 45/45/10 proposed by the consultant. This is given the proximity to the Pinjarra townsite, and that this is the only vet within a 15km radius on the eastern side of the freeway.
- Impacts to the road network have only been assessed in terms of the impact to the carrying capacity of the network, with no consideration to the requirements for turn treatments. There is currently only dedicated right and left turn lanes for Sutton Street leg at the intersection. Right turns onto Moores Road for eastbound vehicles are completed from the right through lane, with storage for 1 vehicle within the median island space (available space is ~9.6m). Left turns for westbound vehicles are completed from the left turn lane, with the right lane available to manoeuvre around turning vehicles.

- 5.2 Crash History
  - IRIS data shows for the 100m either side of the intersection a total of 3 crashes for the 5 year period 2020-2024. All were PDO Major severity taking place in daylight hours, consisting of 1 rear-end (turning out of Moores Road onto Pinjarra Road), 1 right angle (wet conditions – vehicle exiting Sutton St has pulled out in front of another vehicle on Pinjarra Road), and 1 right turn-thru (sun glare a factor). 1 crash occurred during wet conditions. Report states for period 2019-2023 there was a total of 5 crashes in the intersection area. No crashes are reported on Moores Road outside of the intersection area.

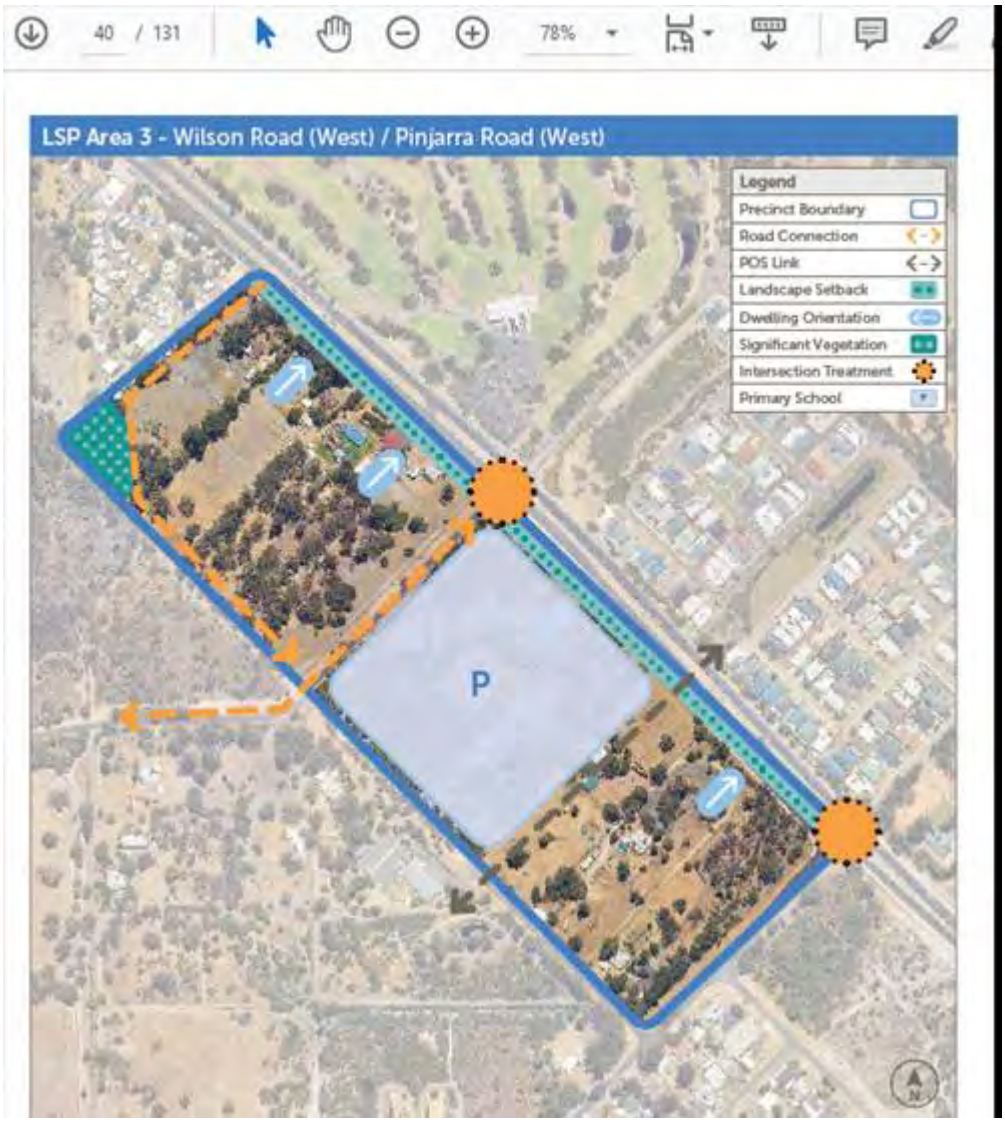
3.2 - Department of Education 1

Hi Greg,

Further to your request below, given that the Department of Education has indicated that the 'LSP Area 3 – Wilson Road (West) / Pinjarra Road (West)' future public primary school site would not be suitable due to the road hierarchy and safety concerns, could you please advise if the Shire has earmarked an alternative potential PS site option?

The Department may/or may not have any concerns with the proposed Vet DA, depending on the future PS location in this vicinity.

Unfortunately I did not download the plans in time. However, is the proposal compliant with your town planning scheme?



3.3 Department of Education 2

Your ref: -
Our ref: D25/0601811
Enquiries

Department of
Education

GOVERNMENT OF
WESTERN AUSTRALIA

Mr Greg Delahunty
Manager Planning and Environment Services
Shire of Murray

Dear Greg

Proposed Vet DAP application - Lot 89 (11) Moores Road, Pinjarra

Thank you for your email dated 22 May 2025 providing the Department of Education (the Department) with the opportunity to comment on the development application (DA) for a Veterinary at Lot 89 (No. 11) Moores Road, Pinjarra (subject site).

The Department notes that the subject site is located within the vicinity identified for a future public primary school site as per the Shire of Murray's draft Pinjarra Planning Framework (Framework) including the draft District Structure Plan. The Department provided its response on the draft Framework previously (our reference: D25/0484026).

Given that the subject site appears to conflict with the earmarked primary school site and strategic planning intent for future educational infrastructure delivery in the area, the Department does not support the proposal at this stage.

Should you have any queries on the above, please contact Sharnie Stuart, Senior Consultant – Land Planning on (08) 9264 4046, or by email at sharnie.stuart@education.wa.edu.au.

Yours sincerely

Ikmal Ahmad
A/Manager Land and Planning

16 July 2025

3.4 Department of Planning Lands and Heritage

OFFICIAL

Hi Eric,

Thank you for providing us with an opportunity to provide comments on the development application for a proposed veterinary centre on part of Lot 89 (No. 11) Moores Rd, Pinjarra.

The following comments are provided on this development application.

It is noted that:

- the site is currently zoned Urban Deferred under the Peel Region Scheme and Rural in the *Shire of Murray Local Planning Scheme No. 4* (LPS4);
- a veterinary centre is an 'AA' use in the Rural in LPS4, which the Council has discretion to approve provided it is satisfied that the use is not contrary to the orderly and proper planning of the area; and
- the Shire recently advertised Amendment 322 to LPS4 which, amongst other changes, proposes to update the permissibility of land uses for the various zones in LPS4. In this respect, it proposes to make 'Veterinary Centre' a D use in the Rural zone, which is not significantly different to the currently land use permissibility for this use in the Rural zone.

It is also noted that in the draft Pinjarra District Structure Plan (the draft Pinjarra DSP) identifies:

- the site as a proposed primary school site;
- Moores Road and Pinjarra Road as proposed integrator arterial roads; and
- that the width of Moores Road will need to be increased from 30m to 38m.

However, it is noted that *Operational Policy 2.4: Planning for School Sites* (OP 2.4) and *Liveable Neighbourhoods* recommend that primary school sites be provided with three road frontages, including frontages to a neighbourhood connector road and a wider access street. The primary school site is not likely to be consistent with the recommendations of these policies as it has frontages to two integrator arterial roads, which are not likely to achieve the road safety outcomes sought by these policies. As such, it is noted that there may be a need to change the location of the proposed primary school site in the draft Pinjarra DSP in order to achieve consistency with the recommendations of OP 2.4 and *Liveable Neighbourhoods*.

It is recommended that consideration be given to the abovementioned recommendations of the draft Pinjarra DSP, OP 2.4 and Liveable Neighbourhoods and the above comments in the assessment of the development application.

Please feel free to contact me should you wish to discuss these comments further.

Kind Regards

Moores Road and Sutton Street

Figure 8: Moores Road and Sutton Street Cross Section

Pollard Street / Wilson Street / Hampton Road Lovegrove Street and Alderson Street

Figure 9: Pollard Street / Wilson Street / Hampton Road Lovegrove Street and Alderson Street Cross Section

1.6.7 Community Infrastructure

The DSP makes provision for the larger scale community infrastructure sites.

Schools

One government high school, two government primary schools and a non-government primary school already exist within the DSP area. To cater for the planned population growth, an additional five new government primary schools and one new government high school are proposed. The high school site will be 10 hectares in area and primary schools four hectares in area. These may be reduced in area to eight hectares and 3.5 hectares respectively where the DSP shows co-location of the school sites with Neighbourhood Sport and Recreation Precincts.

A non-government primary school has also been established in Pinjarra and a new combined non-government primary and high school site is proposed in the structure plan for the Murray River Country Estate to the west of the DSP area.

The detailed location of school sites will be refined at the local structure planning stage and are to be consistent with Liveable Neighbourhoods.

Active Recreation

The Sir Ross McLarty Sports Precinct is the district sport and recreation precinct serving the Pinjarra and surrounding district, this will be further developed over time in line with the masterplan for the precinct. To provide for the sporting and recreation needs of the forecast population the DSP proposes to supplement this will two new Neighbourhood Sport and Recreation Precincts in the northern portion of the DSP area, one on either side of the railway line. These precincts will accommodate two multiple purpose playing fields, with a clubroom, associated facilities and passive recreation space, consistent with the Shire's Sport and Recreation Plan. Each new precinct will be a minimum of 10 hectares in area and regular in shape. The detailed location of the precincts will be determined at the local structure plan stage, with the detailed size and shape to be confirmed through an indicative layout to ensure it is suitable for its purpose.

The new Neighbourhood Sport and Recreation Precinct on the western side of the railway is proposed to be co-located with the proposed school. The existing oval in extreme north of the DSP is poorly located and is insufficient to accommodate a second oval that is desirable for efficient infrastructure planning and sporting club sustainability. The oval is also currently underutilised and would be superfluous to need with the second new Neighbourhood Sport and Recreation Precinct. The DSP therefore proposes a land swap arrangement to secure enough space for the new Neighbourhood Sport and Recreation Precinct in a more central location co-located with a primary school with the preferred location subject to detailed planning being adjacent to the existing Carcoola Primary School.

A formal agreement will need to be entered into between the Shire of Murray and Department of Education regarding the provision of a long-term commitment for the sharing of recreation facilities.

Health Precinct

The DSP identifies a Health Precinct located on the Murray Districts Hospital land. The Health Precinct proposes a range of health and related support uses within a landscaped setting.

A masterplan is to be prepared over the Health Precinct to guide the orderly development of the site. The masterplan will include preferred land uses, built form controls and public realm outcomes. The DSP also proposes the design of LSP8- Bedingfeld Road responds accordingly to its proximity to the Health Precinct and the opportunities that will offer.

Community Facilities

Community facilities including a civic centre, district library, recreation and aquatic centre, and community centres will be located within the Pinjarra Activity Centre to provide for co-location opportunities and community accessibility.

The location of the existing and proposed community facilities are shown on Figure 12 below.

Community Facilities Plan

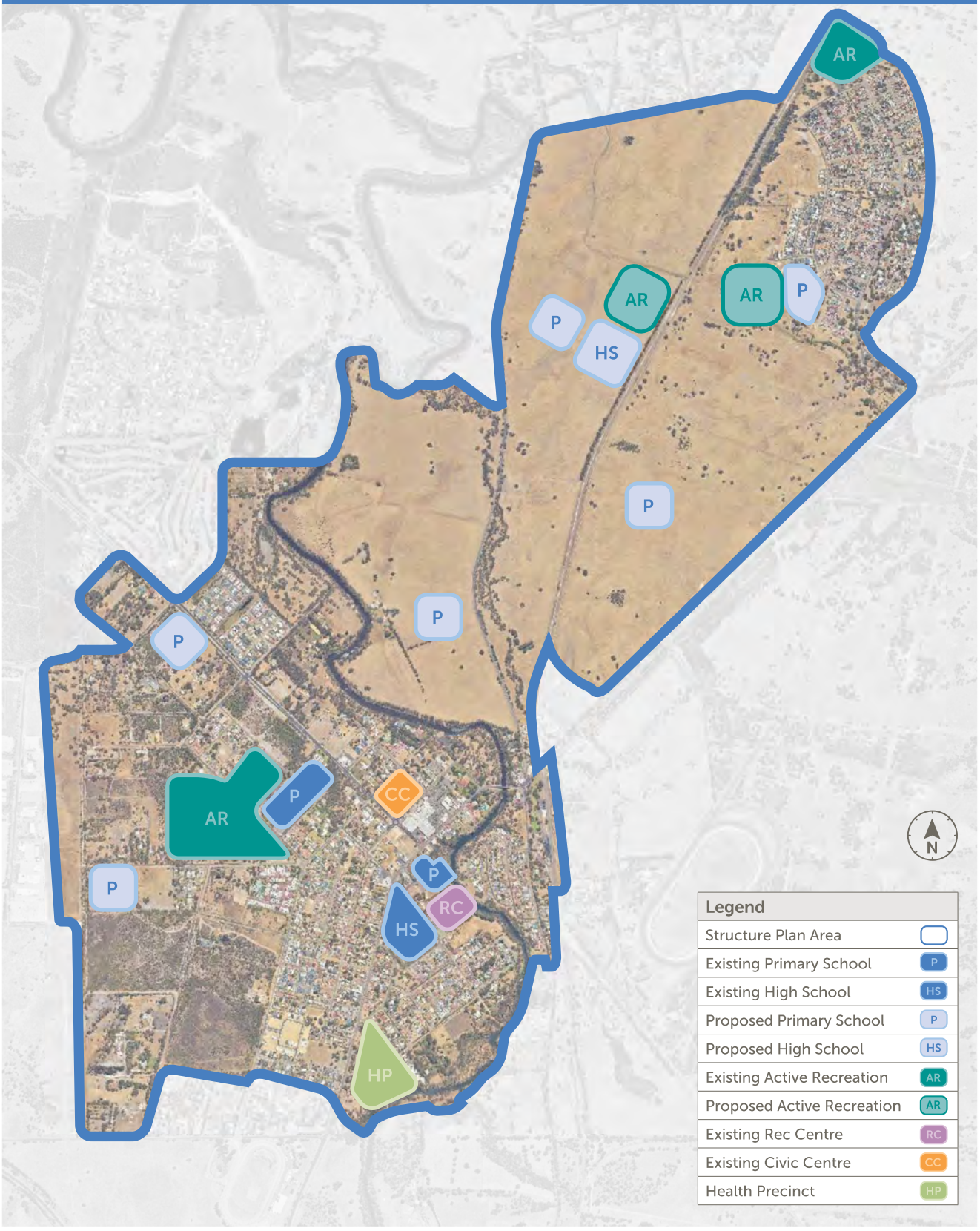


Figure 12: Community Facilities Plan

1.7 Structure Plans

1.7.1 Structure Plan Areas

A key means of implementing the DSP will be through the preparation of local structure plans, a precinct structure plan for the Pinjarra Activity Centre and local development plans.

There are 14 areas, including three Urban Expansion Areas that require either a local structure plan or precinct structure plan prior to applications for subdivision or development being considered. These areas are shown on Figure 13.

Structure Plan Areas

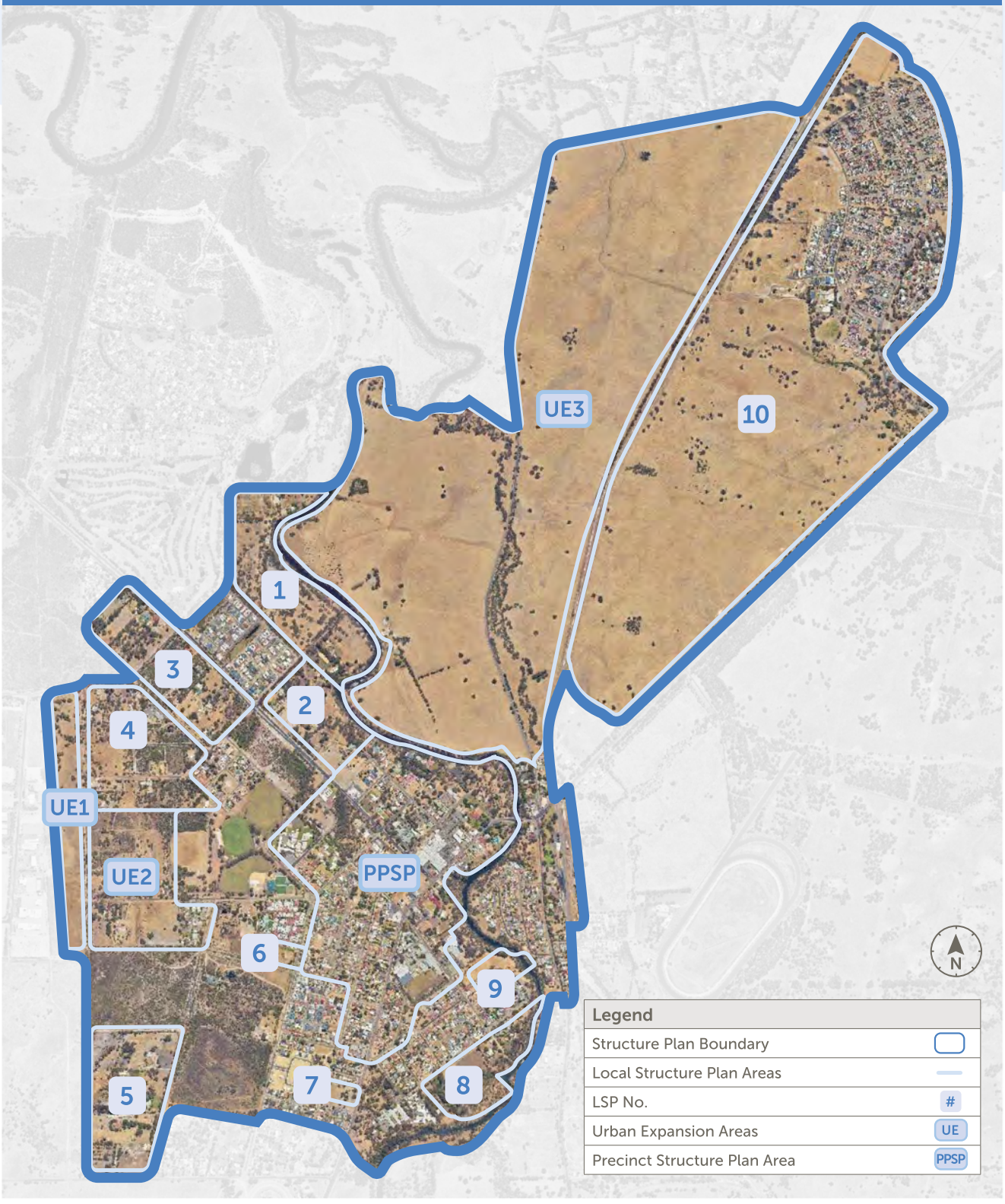


Figure 13: Structure Plan Areas

A local structure plan should be prepared for the entirety of each of Areas 1 - 10 and UE1 - UE3. A precinct structure plan should be prepared for the entirety of the Pinjarra Activity Centre.

Minor development may be permitted prior to the preparation and approval of a local structure plan or precinct structure plan provided it can be demonstrated that the development will not prejudice the implementation of this DSP.

1.7.2 Existing Structure Plans

There are number of existing local structure plans for land within the DSP area. These are set out on Table 4.

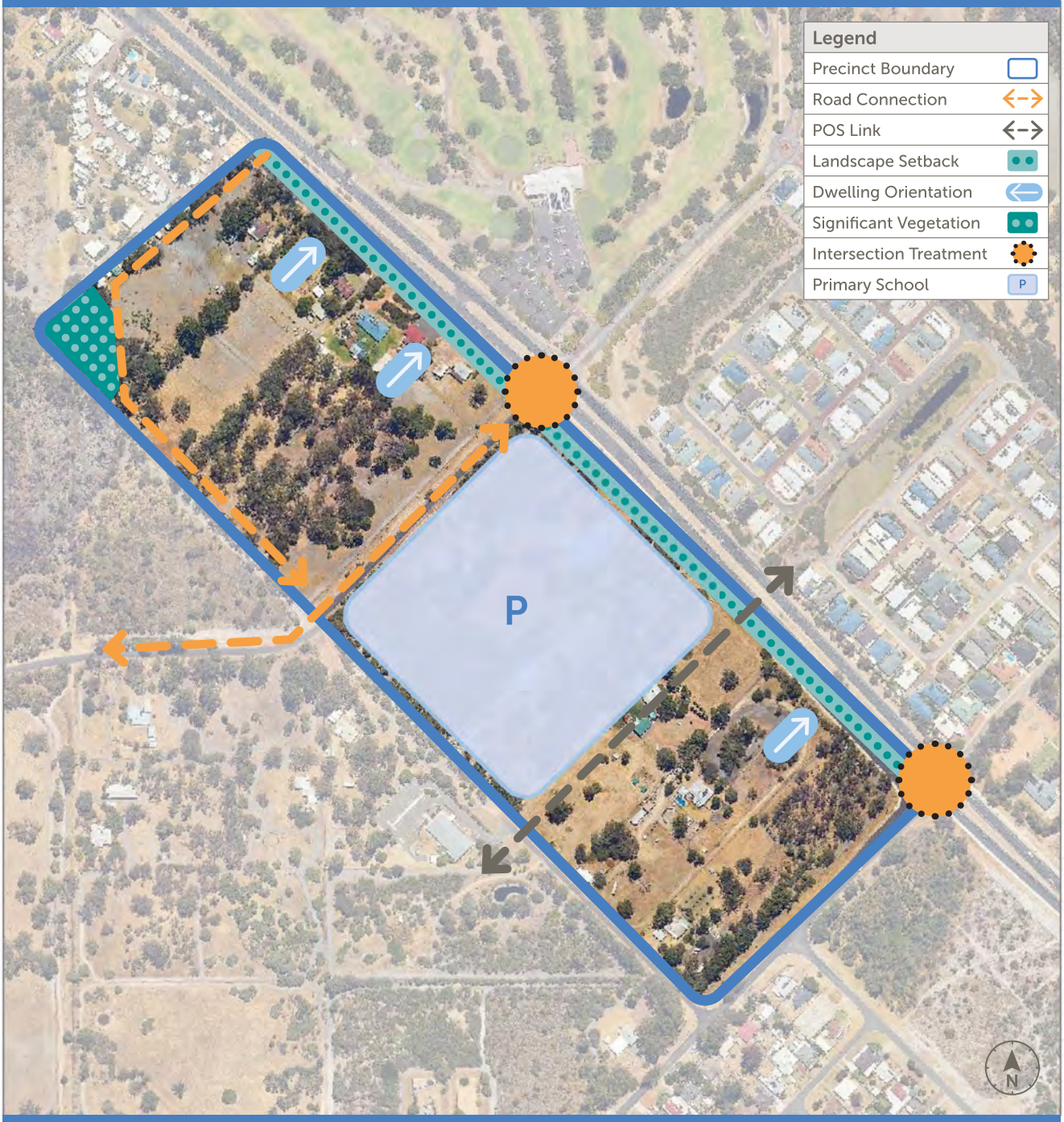
Area	Structure Plan Name	Status	Expiry
1	Thomas Street	Approved	April 2029
2	Lot 51 McLarty Road	Approved	September 2033
3	Kwel Road	Approved	August 2030
4	Bedingfeld Road	Approved	October 2025
5	North Pinjarra	Approved	October 2025
6	Lot 9500 Wisteria Crescent & Lot 304 Redgum Road, Pinjarra	Approved	October 2025
7	Lots 38 and 39 Hampton Road	Implemented	
8	Pinjarra Meadows	Implemented	
9	Lot 9001 and 401 Hampton Road	Implemented	
10	Lot 42 Hampton Road	Implemented	
11	Padbury Glades	Implemented	

Table 4: Existing Structure Plans

Existing approved local structure plans, may continue to be implemented until their expiry date. Any new local structure plans must be consistent with this DSP.

A number of existing approved local structure plans have already been implemented. It is proposed that these local structure plans be revoked and the local planning scheme be amended to introduce zones, reserves, and residential density codes consistent with those local structure plans.

LSP Area 3 - Wilson Road (West) / Pinjarra Road (West)



03 | Key Outcomes

- Provide for the widening and upgrade of Moores Road to an Integrator A Town Centre Road with a 38m reserve.
- Provide for a suitable intersection control treatment at the intersection of Pinjarra Road and Moores Road.Provide for a suitable intersection control treatment at the intersection of Pinjarra Road and Wilson Road.
- Provide for a road interface along Reserve 6132.
- No vehicular access including new intersections to Pinjarra Road.
- Provide an 8m wide recreation reserve along the frontage of Pinjarra Road.
- Provide for a linear parkland to connect Pinjarra Road and Tuckey Street through Lot 86.
- Retain and protect the Swan Bioplan Regionally Significant Vegetation.
- Provide for a 4 ha Primary School site as shown on the Structure Plan.
- Development on lots fronting Pinjarra Road to orientate towards and address Pinjarra Road.
- Provide a uniform style of visually permeable fencing along the boundary of lots facing Pinjarra Road.
- Underground above ground powerlines.
- Retain mature trees, wherever reasonably practical.
- Development Contribution Plan for equitable sharing of infrastructure costs.

Figure 16: LSP3

PART C – OTHER BUSINESS

1. State Administrative Tribunal Applications and Supreme Court Appeals

2. Meeting Closure