



**THOMAS STREET
STRUCTURE PLAN
PINJARRA
(Structure Plan Number:
SPN/2097)**



Title: Thomas Street Structure Plan

Project Thomas and Tuckey Streets, Pinjarra

Prepared for: Tuckey Road Developments P/L

Reference: R17A

Date of release: August 2016

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Approved by: S. Kerr

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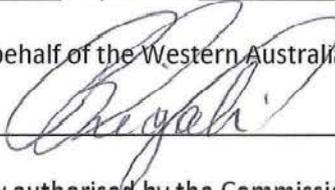
ENDORSEMENT PAGE

This Structure Plan is prepared under the provisions of the Shire of Murray Local Planning Scheme No.4.

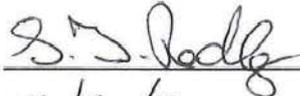
IT IS CERTIFIED THAT THIS STRUCTURE PLAN WAS APPROVED BY RESOLUTION OF THE WESTERN AUSTRALIAN PLANNING COMMISSION ON:

_____ 5 April 2019 _____

Signed for and on behalf of the Western Australian Planning Commission:

_____  _____

an officer of the Commission duly authorised by the Commission pursuant to section 16 of the Planning and Development Act 2005 for that purpose, in the presence of:

 _____ Witness

5/4/2019 _____ Date

_____ 5 April 2029 _____ Date of Expiry

TABLE OF AMENDMENTS

Amendment No.	Summary of the Amendment	Amendment type	Date Approved by WAPC

EXECUTIVE SUMMARY

The Thomas Street Structure Plan (“Structure Plan”) is prepared to facilitate and guide the subdivision and development for residential purposes of the Structure Plan area generally comprising the area bounded by Moore Street to the north, Tuckey Street, Wilson and Longo Roads to the east, abutting Shire of Murray Reserve to the south and Pollard Street to the west.

It comprises an area of 28.8 hectares and is currently severed into two parts by Thomas Street. The Structure Plan area is located approximately 800m north-west of the Pinjarra Town centre. The subject land has traditionally been used for semi rural/rural residential purposes but is proposed for urban residential use and development in the Structure Plan. It does not overlap, supersede or consolidate any other structure plan.

The Structure Plan has been designed to support State Government residential density targets and to carefully integrate within its surrounding context. It acknowledges wider strategic planning imperatives including allocating land for the future widening of Moores Road. Provision is also recognised for the upgrading of existing roads as appropriate where required.

The Structure Plan provides for a variety of residential product and is designed to be permeable and to achieve best sustainable design practice where possible, including application of better urban water management, maximised solar orientation, and relevant tree retention and vegetation revitalisation.

A range of medium residential densities are proposed supporting provision of a variety of dwelling types.

The key statistics and planning outcomes of the Structure Plan are outlined in the following summary table.

Item	Data	Structure plan Ref. (Section No.)
Total Area Covered by Structure Plan	28.8 hectares	1.0
Area of each land use proposed: <ul style="list-style-type: none"> • Residential Zone • Commercial Zone • Industrial Zone • Rural Residential Zone 	21.17 hectares NA NA NA	Part 2: 3.0
Total Estimated Lot Yield	328 Lots	Part 2: 3.1
Total Estimated Number of Dwellings	338 Dwellings	Part 2: 3.1
Estimated Residential Density	25 dwellings per site / hectare	Part 2: 3.1
Estimated Population	845	Part 2: 3.1
Number of High Schools	NA	NA
Number of Primary Schools	NA	NA
Estimated Commercial Floor Space	NA	NA
Estimated area and percentage of public open space given over to: <ul style="list-style-type: none"> • Regional open space • District open space • Neighbourhood parks • Local parks 	NA NA 1.405 hectares 0.6450 hectares	Part 2: 3.2
Estimated percentage of natural area	NA	NA

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2. Local Water Management Strategy
3. Environmental Review
4. Targeted Flora Report
5. Targeted Flora Report – Lot 128
6. Tree Assessment Report
7. Geo-Tech Report
8. Engineering Infrastructure Report
9. Aboriginal Heritage Site Search
10. Traffic Impact Assessment Report
11. Bushfire Management Plan
12. Environment Protection and Biodiversity Conservation Act 1999 – Referral Decision Advice



PART ONE

IMPLEMENTATION



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1.0 Structure Plan Area

This Structure Plan shall apply to the area located at Tuckey Street, Longo Avenue, Moores Road, Pollard Street and Thomas Street, Pinjarra, being the land contained within the inner edge of the line denoting the structure plan boundary of the Structure Plan Map.

2.0 Structure Plan Content

This Structure Plan comprises:

- a. Part One – Implementation section - This section contains the Structure Plan Map and statutory planning provisions and requirements.
- b. Part Two – Non-statutory (Explanatory) section. This section to be used as a reference guide to interpret and justify the implementation of Part One.
- c. Appendices – Technical reports and supporting plans and maps.

3.0 Interpretation and Relationship with the Scheme

Unless otherwise specified in this part, the words and expressions used in this Structure Plan shall have the respective meanings given to them in the Shire of Murray Local Planning Scheme No.4 (“the Scheme”) including any amendments gazetted thereto.

The Structure Plan Map outlines land use, zones and reserves applicable within the Structure Plan area.

4.0 Operation

This Structure Plan shall come into effect on the date it is approved by the Western Australian Planning Commission (“WAPC”).

5.0 Staging

Development of the Structure Plan area will occur progressively commencing in the northern part of the Structure Plan area and progressing southwards based upon demand, extension of services and infrastructure provision. The proposed staging is identified by Figure 10 within Part Two of the Structure Plan; however, landowners may develop their site independently to the proposed staging subject to the suitable provision of infrastructure.

6.0 Land Use, Subdivision and Development Requirements

Subdivision and development of the Structure Plan area shall generally be in accordance with the Structure Plan map.

6.1 Land Use Permissibility

Land use permissibility within the Structure Plan area shall be in accordance with the corresponding zone or reserve under the Scheme.

6.2 Residential Density

In accordance with the Structure Plan Map and agreed density targets the base density code is R20 and for grouped dwelling sites R40. For future corner lots identified as R30-Infill, the objective is to facilitate additional development at an appropriate time as per the objectives of Liveable Neighbourhoods.

R30-Infill lots will be subject to a Local Development Plan which will identify development controls that support future infill development and which will apply to R30-Infill lots throughout the Structure Plan area.

6.3 Hazard Separation

The Structure Plan is subject to a Bushfire Management Plan attached as Appendix I I. Any land falling within a bushfire hazard identified in the Bushfire Management Plan is designated as a Bushfire Prone Area for the purpose of Building Code of Australia. The Bushfire Management Plan identifies that the Structure Plan area can be developed for the purposes of the future land use.

Given the evolving nature of bushfire management policy and requirements it is proposed to provide an updated Bushfire Management Plan at lodgement of a subdivision application for the land within the Structure Plan area subject to that application.

6.4 Public Open Space

Public Open Space ("POS") requirements are subject to further planning. POS is to be provided generally in accordance with the Structure Plan Map and in accordance with the requirements of the Local Water Management Strategy. The POS contribution for each applicable landholding is outlined in the following table.

Street Number	Lot Number	Street	Register Proprietors	10% POS in hectares	Proposed provision	Provision in hectares
2	127	Longo Avenue	Veraat	0.0203	Cash in Lieu	0.0203
2	127	Longo Avenue	TRD	0.2242	On Site	0.2242
31	1	Moores Road	TRD	0.3050	On Site	0.3050
29	20	Moores Road	Jackson	0.0649	Cash in Lieu	0.0649
51	135	Moores Road	TRD	0.1430	On Site	0.1430
45	136	Moores Road	TRD	0.1520	On Site	0.1520
6	1	Thomas Street	TRD	0.0100	On Site	0.0100
8	2	Thomas Street	Walley	0.0100	Cash in Lieu	0.0100
29	3	Thomas Street	TRD	0.2128	On Site	0.2128
N/A	128	Thomas Street	Shire of Murray	0.1699	On Site	0.1699
33	2	Thomas	Henneberry/	0.0243	Cash in	0.0243

		Street	Reilly (Part)		Lieu	
11	132	Thomas Street	Elliot (Part)	0.0340	Cash in Lieu	0.0340
28	133	Thomas Street	TRD	0.3075	On Site	0.3075
33	2	Thomas Street	TRD (Part)	0.0566	On Site	0.0566
11	132	Thomas Street	TRD (Part)	0.1472	On Site	0.1472
19	129	Tuckey Street	TRD	0.2351	On Site	0.2351

6.5 Environmental Considerations

Where required by Policy or identified by environmental mapping development is to be supported by a relevant report prepared by an appropriately qualified environmental consultant.

In addition to the reports identified in Section 8.0 – Additional Information, which applies to the whole of the Structure Plan, the landowner of Lot 128 Thomas Street (“Lot 128”) is required to undertake/prepare environmental and technical reports to support the development of Lot 128.

6.6 Intersection Upgrades

The traffic modelling for the Structure Plan, as at December 2018, forecasts that the following intersections require upgrading in the future based on the proposed staging plan and associated increased residential traffic generated from within the bounds of the Structure Plan area:

- (1) Pinjarra Road and Moores Road – channelised right turn (“CHR”) treatment heading south required at Stage 3 or on creation of approximately 110 lots whichever milestone occurs first;
- (2) Pinjarra Road and Moores Road – axillary left turn (“AUL”) or channelised left turn (“CHR”) heading north upgrading required at Stage 5 or on the creation of approximately 172 lots whichever milestone occurs first;
- (3) Pinjarra Road and Wilson Street – AUL or CHL treatment heading north required at Stage 4 or on the creation of approximately 148 lots whichever milestone occurs first.

7.0 Local Development Plans

7.1 Local Development Plans are required to be prepared for lots comprising one or more of the following site attributes:

- (i) Lots proposed as Infill Corner Lots.
- (ii) Lots abutting Public Open Space B.
- (iii) Residential lots impacted by noise buffers under State Planning Policy 5.4.

(iv) The residential lots fronting Moores Road which are provided with secondary access from an internal subdivisional road.

7.2 (i) In regard to 7.1(i) the Local Development Plan shall specifically address design principles for development of infill lots including setbacks, dwelling orientation, vehicle access, dwelling site area.

(ii) In regard to 7.1(ii) the Local Development Plan shall specifically address the interface between the proposed development and the directly abutting Public Open Space.

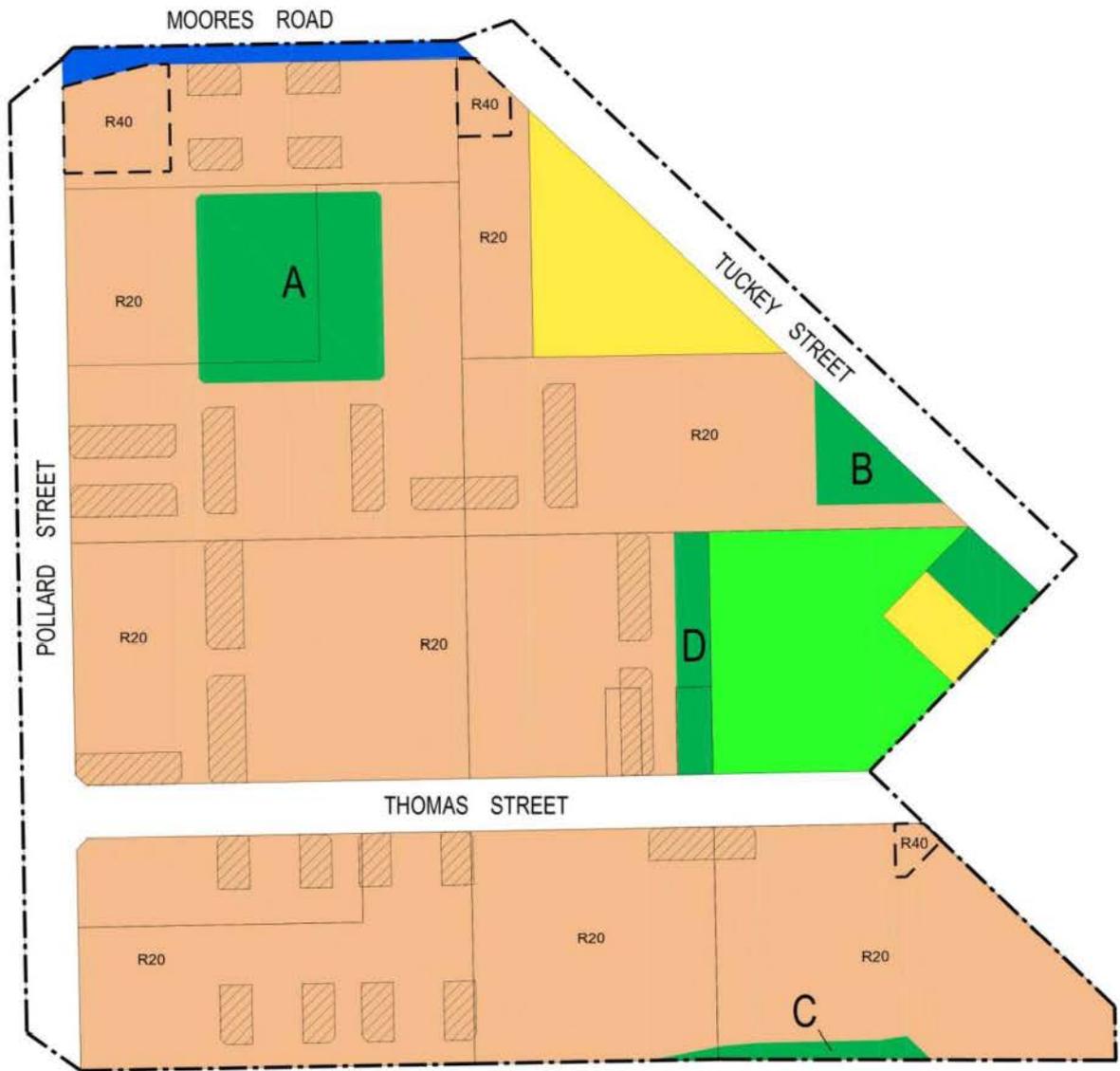
(iii) In regard to 7.1(iii) the Local Development Plan shall address design requirements in response to noise impacts if required.

(iv) In regard to 7.1(iv) the Local Development Plan shall address fencing treatments to Moores Road and Pollard Street/Tuckey Street (as applicable).

8.0 Additional Information

As part of any subdivision application(s) for any landholding or portion thereof within the Structure Plan area, the following additional information is to be provided:

Additional Information	Approval Stage	Consultation Required
Updated Bushfire Hazard and Attack Level Assessment and Fire Management Plan	Subdivision	Relevant Agencies
Acid Sulphates Soils Report/Management Plan	Subdivision	Relevant Agencies
Geotechnical Report	Subdivision	Relevant Agencies
Acoustic Report	Subdivision	Relevant Agencies
Urban Water Management Plan	Subdivision	Relevant Agencies
Environmental Impact Report	Subdivision	Relevant Agencies
Tree and Vegetation Survey overlaid with the subdivision and landscaping plan	Subdivision - each stage of subdivision	Relevant Agencies



STRUCTURE PLAN MAP

Thomas Street Structure Plan MURR/2016/
Pinjarra - Shire of Murray

- Structure Plan Boundary
- R30 - Infill Lots
- R Code Boundary
- Residential
- Conservation
- Parks and Recreation
- Community Facilities - Church
- District Distributor - Road Widening



date 26.03.12 | scale at A3 1:2500 | ref R17A STR01 | revised 25.02.19 | www.masterplanwa.com

DISCLAIMER: AREA SUBJECT TO APPLICATION. CARRIAGEWAYS DIAGRAMMATIC ONLY. ALL AREAS AND DIMENSIONS ARE APPROXIMATE ONLY AND ARE SUBJECT TO FURTHER SURVEY ENGINEERING AND DETAIL DESIGN.

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PART TWO

**EXPLANATORY
REPORT**



1.0 Planning Background

1.1 Introduction and Purpose

This Structure Plan has been prepared by Masterplan Consultants WA on behalf of the major landowner within the subject land, Tuckey Road Developments Pty Ltd (“TRD”).

It is submitted in accordance with clause 6.5 of the Scheme and provides the statutory planning framework to guide the future subdivision and development of the land contained within the Structure Plan boundary.

The Structure Plan has been prepared in accordance with the requirements of the Town Planning Regulations and the WAPC Structure Plan Framework.

It comprises three parts as follows:

Part 1 – Implementation contains the Structure Plan map and the statutory planning provisions and requirements applicable to future subdivision and development of the subject land.

Part 2 – Explanatory Section (this Part) provides an assessment of all relevant matters including the applicable planning framework, the site context and characteristics and provides an explanation of the proposed Structure Plan.

Part 3 – Technical appendices being those technical reports and supporting documentation as required.

1.2 Land Description

1.2.1 Location

The area subject to this Structure Plan (the subject land) is bounded by Moores Road, Tuckey Street, Wilson Road, Longo Avenue, Shire Reserve 6131 and Pollard Street in Pinjarra. At its closest it is approximately 800m north west of the Pinjarra Town Centre. Refer Figure 1.

1.2.2 Area and Land Use

The Structure Plan area comprises a total of 28.8 hectares. Of this, 4.7 hectares comprise the existing Thomas and Tuckey Street road reservations and a portion of the existing Pollard Street reserve. Two existing Shire of Murray reserves with an area of 1.82 hectares also form part of the Structure Plan area.

The balance of the subject land consists of private landholdings. Historically, the subject land has been utilised for special rural/rural residential purposes and as such is generally cleared or parkland cleared.

Pollard Street is unconstructed, although the Pollard Street drain is contained within the reserve. Tuckey Street is partially constructed while Thomas Street is fully constructed to rural road standard. Two existing church sites contain church related buildings and some of the remaining properties contain residences and associated outbuildings. The remaining properties are vacant.

1.2.3 Legal Description and Ownership

Legal Description and ownership is summarised in Table 1 following while cadastral boundaries are identified in Figure 2.

Table 1: Description and Ownership

Lot	Location	Ct Vol/Folio	Owner
136	Moores Road	1768 / 600	Tuckey Road Development Pty Ltd
135	Pollard Street	1261 / 462	Tuckey Road Development Pty Ltd
1 (175)	Pollard Street	1474 / 470	Tuckey Road Development Pty Ltd
2 (H8)	Thomas Street	1848 / 691	John Clarence Walley
3	Thomas Street	1723 / 480	Tuckey Road Development Pty Ltd
132	Thomas Street	1605 / 154	Christopher Elliott Elliott and Janine Elliott*
133	Thomas Street	1936 / 270	Tuckey Road Development Pty Ltd
128	Thomas Street	1848 / 692	Shire of Murray
1	Thomas Street	1848 / 690	Tuckey Road Development Pty Ltd
2	Thomas Street	1650 / 331	Keith Vincent Henneberry and Kay Reilly*
127	Longo Avenue	2600 / 756	Pauline Anne Veraart and Johannes Wilhelmus Veraart*
380	Wilson Road	LR 3015 / 759	State of WA
289	Wilson Road	2586 / 197	"The Bridge" Christian Fellowship Inc.
290	Wilson Road	LR3034 / 297	State of WA
129	Tuckey Street	1945 / 661	Tuckey Road Development Pty Ltd
130	Tuckey Street	1878 / 576	Jehovh's Witness Congregations
20	Tuckey Street	1878 / 575	Michael Anthony Jackson

*Properties under contract to Tuckey Road Development Pty Ltd

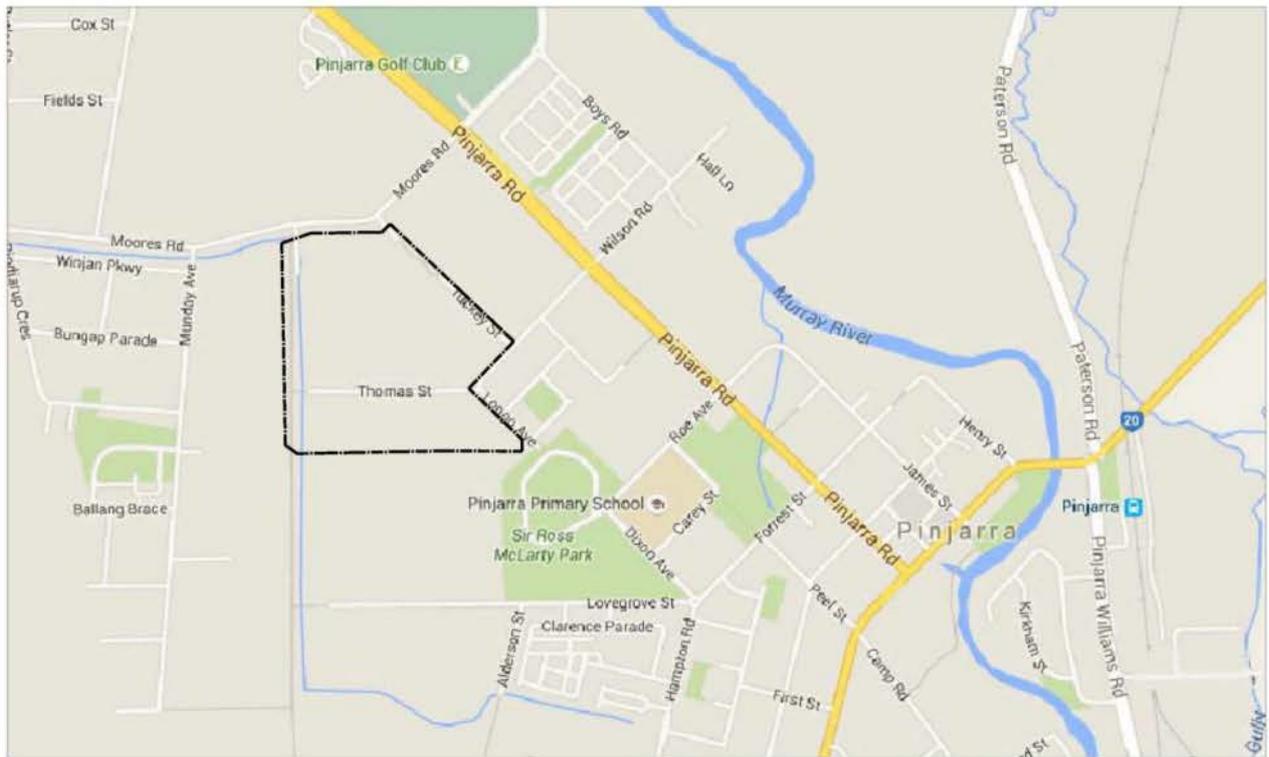


Figure I : Location

Figure I: Location Plan

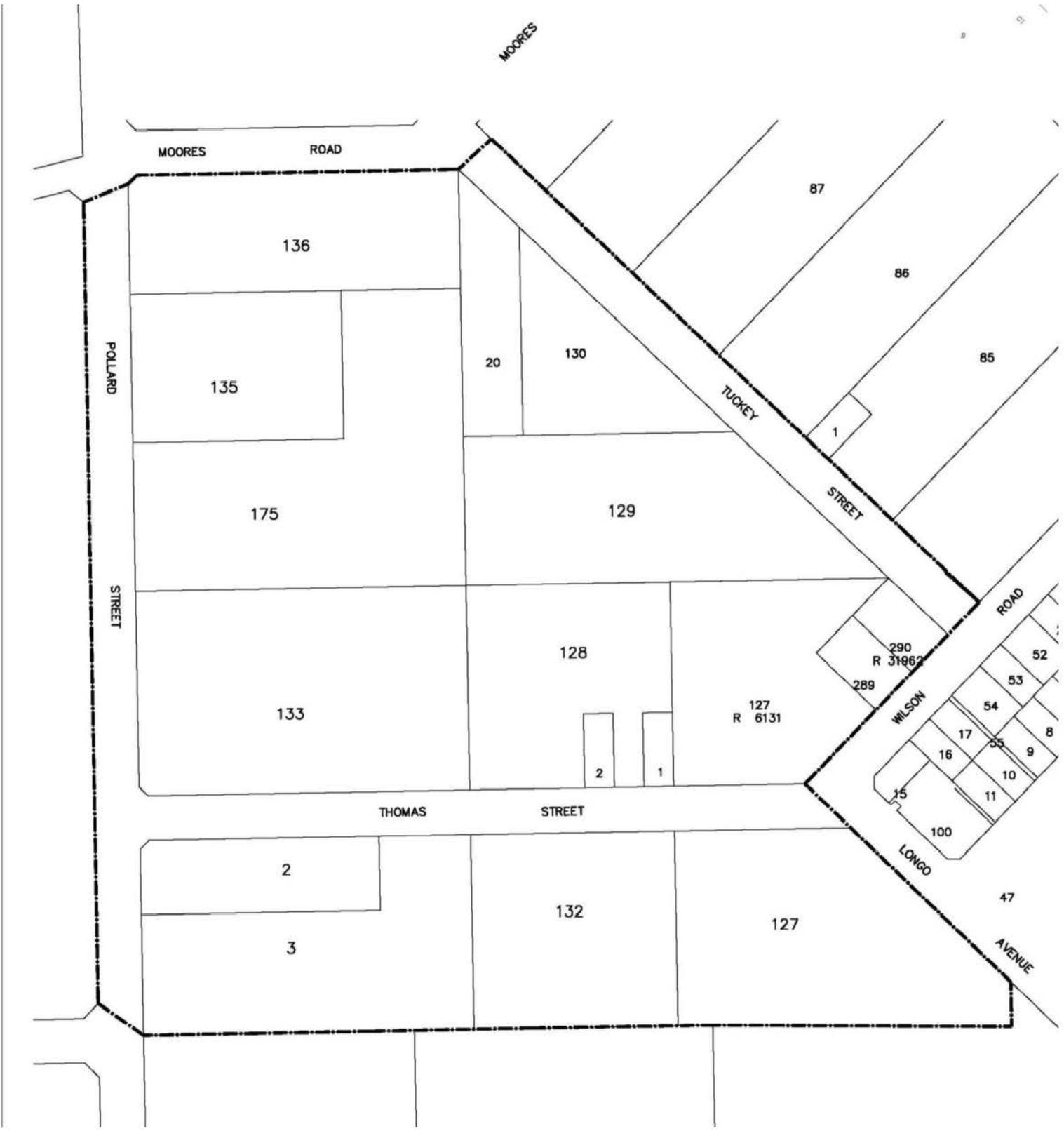


Figure 2: Cadastral Plan

1.3 Planning Framework

1.3.1 Zoning and reservations

The subject land is zoned 'Urban' and 'Urban Deferred' in the Peel Region Scheme. The Urban Deferred portion is along the frontage to Moores Road and is applicable to an area identified as required for the future potential widening of the Moores Road reservation. Refer Figure 3.



Figure 3: Peel Region Scheme

The subject land is zoned 'Residential Development' in the Scheme. The portion designated as 'Urban Deferred' in the Peel Region Scheme is zoned 'Rural'. Refer Figure 4.



Figure 4: Shire of Murray Local Planning Scheme No.4

1.3.2 Regional and Sub-Regional Structure Plans

The historic Inner Peel Region Structure Plan (December 1997) identifies the subject land as Future Urban Category B.

As part of the 'Perth and Peel @ 3.5 Million' suite of documents the South Metropolitan and Peel Sub-Regional Framework ("SMPSRF") designated the subject area as Urban.

The SMPSRF was adopted in March 2018.

1.3.3 Planning strategies

There are no directly relevant planning strategies in place which impact upon the proposed Structure Plan. The Shire of Murray has prepared the Pinajra Revitalisation Strategy and associated Activity Centre Plan which has been advertised but timing for endorsement of a final strategy is unknown. Where possible, objectives of this Strategy have been implemented.

1.3.4 Planning policies

The Structure Plan has been prepared within the context of the wider State and Local Planning Policy Framework including where relevant applicable State Planning Policy, in particular Liveable Neighbourhoods and Development Control Policies of the WAPC.

This includes further guidance and statements within the overall planning framework, including guidelines and relevant planning Bulletins.

Liveable Neighbourhoods is the WAPC operational policy guiding the design of structure plans. The objective of Liveable Neighbourhoods is the delivery of a high quality residential environment.

The Structure Plan responds to the requirements of Liveable Neighbourhoods by promoting an interconnected, safe and walkable neighbourhood, providing a variety of lot sizes and housing types, responding to the diverse housing needs of the community and maximising land efficiency. Further discussion regarding density targets is provided in part 3.1 of this report.

At a local level the Shire of Murray Policy Manual and in particular Local Planning Policies have been taken into consideration, including the Pinjarra Town Centre Precincts Policy (March 2016) and local planning policies addressing Water Sensitive Urban Design and Tree Retention.

The proposed Structure Plan is considered to appropriately reflect and conform to relevant policy expectations.

1.3.5 Other approvals and decisions

At the date of lodgement of the Structure Plan documentation no other approvals or decisions had been identified which were considered relevant to the proposed Structure Plan.

1.3.6 Pre-lodgment consultation

Pre lodgement consultation has been undertaken with a range of relevant stakeholders including officers from the Shire of Murray and the Department of Planning, Lands and Heritage (“DPLH”).

In addition, as part of preparation of technical reports pre-lodgement consultation has also been undertaken with servicing, environmental and heritage agencies including the Department of Water (“DoW”), Department of Parks and Wildlife (“DPAW”), Department of Indigenous Affairs (“DIA”) and relevant servicing agencies.

At a federal level the Department of Sustainability, Environment, Water, Population and Communities has also been consulted via the Federal approvals process.

2.0 Site Conditions and Constraints

2.1 Biodiversity and Natural Area Assets

The Structure Plan area is relatively unconstrained and it is considered that relevant environmental matters affecting the subject land including drainage, vegetation management and retention and bushfire management can be appropriately managed in accordance with best practice.

A range of environmental assessments have been completed for the subject area including an environmental review report, generic and specific targeted flora investigations, a tree assessment and geo-technical investigations. These are appended in Part 3 and essentially confirm appropriate development can be sustained with the Structure Plan area.

2.1.1 Flora and Vegetation

The majority of the Structure Plan area has been historically cleared and traditionally utilised for the pasture of stock. As a consequence there is over the majority of the subject land little understorey and while the area does accommodate a variety of mature trees in the main these are individual or at best small groups of individual trees rather than substantial stands of mature vegetation.

No flora species of conservation significance have been identified, either Declared Rare Flora, Priority Flora or Threatened Ecological Communities.

The tree assessment identified a range of trees across the subject area with a

diameter of greater than 500mm including two trees with a small tree hollow and one tree with a large tree hollow; these trees are retained in POS C.

The Structure Plan provides for the retention of significant identified trees either within POS where possible. If possible trees will be retained within wider road reservations.

2.1.2 Fauna

A comprehensive fauna assessment was undertaken. As the area has been extensively cleared and the limited remaining patches of possible habitat, small, degraded and isolated, the study area was considered to be of little ecological value to fauna species occurring in the region and unlikely to support any conservation significant species.

The existence of a variety of mature, albeit individual or isolated trees, including three with hollows was acknowledged including the possibility that Black Cockatoos might utilise the site for feeding purposes, however, it is considered unlikely they would depend on the SP area for survival or reproduction due to the lack of native habitat and suitable breeding hollows.

Due to the presence of foraging habitat, however, the proposal was referred to the Federal government for assessment. This assessment has confirmed the suitability of the subject area for urban development as proposed by the Structure Plan.



Figure 5: Site Conditions

2.2 Landform and soils

The existing characteristics inherent in the subject land are shown in Figure 5. The site terrain is essentially level with only minor variation and a height variation of 1m generally across the site from 9m to 10m AHD.

The subject site is located within the alluvial Pinjarra plain system and predominately comprises sandy clay, silty sands, clays and clayey sands of the Guildford formation. It is identified as having a moderate to low risk of 'Acid

Sulphate Soils' in the WAPC mapping for acid soil risk.

2.3 Groundwater and surface water

Water management and drainage is addressed in detail as part of the Local Water Management Strategy ("LWMS"). In summary there is no existing surface water on the subject land and groundwater can be appropriately managed.

Surface drainage generally comprises absorption at surface or, in heavy rain events, sheet flow following the topography of the subject land.

There are two constructed dams within the subject land but there are no identifiable water courses. While the subject area is generally level, two drainage catchments have been identified as per the approved LWMS.

Drainage in the northern catchment generally follows the lie of the land through culverts in Thomas Street, Tuckey Street and notably to the large open drain along Pollard Street to the west of the subject land.

The southern catchment generally drains to and through the Shire reserves south of the subject area.

2.4 Bushfire hazard

A detailed Bushfire hazard assessment and Fire Management Plan has been prepared and is attached as technical Appendix 11.

This has assessed the bushfire hazard and management implications inherent in the subject land and its surrounds with the main bushfire risk identified associated with areas of remnant vegetation adjoining the Structure Plan area, or portions of the

Structure Plan area itself where remnant vegetation will be potentially retained or which contain items of vegetation which could remain as part of existing activity (such as a church) in the interim, while ongoing development of the balance of the Structure Plan area proceeds.

The indicative development concept (Figure 8) reflects the requirements of the Bushfire Management Plan and relevant Bushfire Policy and demonstrates how development can proceed under the proposed Structure Plan that will meet these requirements via placement of roads etc to secure necessary separation distances.

2.5 Heritage

There are no sites, or items of European heritage identified on the subject land. A search of the DIA Register of Aboriginal Sites has identified the eastern part of the subject area as being within the generic registered aboriginal site classification number 3786 which incorporates most of the existing Pinjarra townsite.

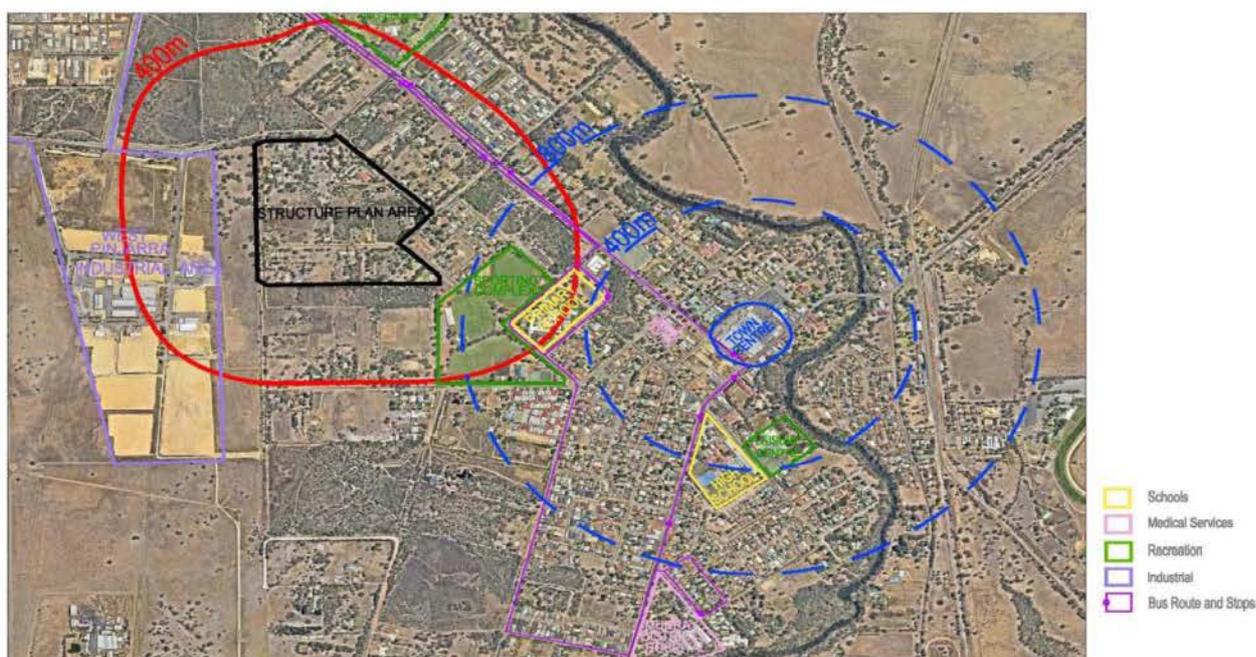


Figure 6: Site Context

A small portion of the subject area is also identified as part of an aboriginal heritage place (ID Number 3682), however, while this is identified as a heritage place it is not a registered site.

2.6 Context and other land use constraints and opportunities

The locational context of the subject land is illustrated in Figure 6. The subject land is located at the western edge of the existing Pinjarra urban area, some 800m north west of the Pinjarra Town Centre.

It is within 400m of a range of social, recreational and employment nodes including the Pinjarra primary school, the Ross McLarty Sports Complex, the Pinjarra Golf Course and West Pinjarra Industrial Park.

The main bus route between Mandurah and Pinjarra, along Pinjarra Road, is approximately 200m to 220m from the eastern boundary of the Structure Plan area with stops easily accessible from the subject land on Pinjarra Road via both Moores and Wilson Roads.

The Structure Plan area abutts existing single residential development to its east. An area of historic rural-residential activity separates it from Pinjarra Road to the north-east. The land immediately to the south comprises undeveloped Shire of Murray reserve which directly connects to the Ross McLarty Sports Complex.

Pollard Street forms the western edge of the Structure Plan area but is unconstructed although does contain the existing Pollard Street drain.

West of Pollard Street is a strip of rural zoned land ranging from 120m to 140m in

width. To the west of this rural land is a power line easement which is traversed north to south by 330Kv power lines. This area also acts as a buffer between the subject land and the West Pinjarra Industrial Area further to the west.

The northern edge of the subject land is formed by the existing Moores Road reservation and to its north a conservation reserve. Moores Road is currently developed to rural road standard but has been identified as a potential future district level road.

Consequently this will require the widening of Moores Road. Due to the abutting conservation reserve to the north, this widening is proposed on the southern side of Moores Road affecting the subject land. This is recognised in the applicable zoning as described in Section 1.3.1 above.

The subject land is therefore impacted by a number of constraints including:

- Moores Road widening;
- Unconstructed Pollard Street containing existing drain;
- Partially constructed Tuckey Street;
- Several trees containing potential hollows;
- Two existing dams;
- Adjoining areas containing remnant vegetation;
- Internal areas containing remnant vegetation; and
- Potential future increase in Moores Road and Pollard Street road functions and classification.

Site constraints are illustrated in Figure 7.

3.0 Proposed Structure Plan

The Structure Plan will facilitate development of the subject area for residential purposes. A predominately single residential estate designed around sustainability and affordability is envisaged to sit comfortably within its surrounds.

Relevant components of the Structure Plan are discussed following:

3.1 Residential

The proposed Structure Plan is intended to facilitate residential development. Other than public open space the only other landuses identified within the Structure Plan area are existing local places of worship reflecting two church sites within the subject land.

The requirement to achieve a minimum density of 15 dwellings per gross hectare of residential land as outlined in Directions 2031 and Beyond is acknowledged. This represents a target of in the order of 318 dwellings for the 21.1675 hectares of land available for residential development within the Structure Plan area.

While the majority of the Structure Plan area is under the ownership and control of TRD, a number of lots are under separate ownership including the church properties, Lot 20 Tuckey Street, Lot 2 Thomas Street and three future lots to be excised from the original titles and retained by the original owners (with the balance of the original titles transferred to the TRD).

The above target is an ultimate target and is based on the residential designated area in the Structure Plan.

The target for that portion of the Structure Plan area in TRD ownership/control is 270 dwellings. The difference in the overall dwelling target would be met by future development of the other landholdings and would be the responsibility of those landowners at such time as they may develop/redevelop their land. Future development of the subject area will be required to achieve this density target.

The Structure Plan is estimated to yield some 338 dwellings comprising 289 single dwellings, 36 infill dwellings and 13 grouped dwellings. Of this some 276 dwellings will be provided within land under TRD control and up to a further 62 dwellings from land within the Structure Plan area under the ownership of others.

On this basis the Structure Plan meets and exceeds the target yield for the overall Structure Plan area by some 20 dwellings while the target dwelling yield for the TRD component is potentially exceeded by up to 6 dwellings. Based on an average household size of 2.5 persons per dwelling an estimated future population of 845 persons is anticipated for the Structure Plan area.

The shape of the developable portion of the subject land is irregular as a consequence of the alignment of peripheral roads, the presence of an existing road traversing the site, the location of the existing church sites and the Shire reservations within the Structure Plan area. Nevertheless future detailed design, subdivision and development of the Structure Plan area will be based around

creation of street lots with either a north-south or east-west orientation allowing maximisation of sustainable solar design.

Development will predominately comprise single residential product, however, a range of lot sizes is anticipated to be provided. It is intended that the Structure Plan will ultimately facilitate three primary alternative residential products being single residential, infill corner lots and density sites. The location of these residential types is based upon development conceptualisation (Refer Figure 8) and is indicated on the Structure Plan by the R Code designation.

Three residential density codes are designated within the structure plan with the R20 coded area intended for single residential purposes, the R30 designated areas for infill corner lots and the R40 designated areas representing the density sites. The R20 coded areas will provide for single residential development in accordance with the R30 designation and/or RM-D codes should an appropriate planning instrument be available or is adopted by the Shire.

The infill corner lots provide flexibility and an opportunity for the implementation of increased density over time within the Structure Plan area while promoting diversity in housing stock. These sites are intended to enable the development of additional dwellings with the R40 density code specifically implemented to facilitate this.

It is envisaged that specific design principles will provide guidance for development on the corner infill lots at both the first and then subsequent infill dwelling stage and that design principles will be outlined via a Local Development

Plan implemented under clause 5.0 within Part I of the Structure Plan.

This will address items such as orientation of dwellings, vehicle access, dwelling site area etc to ensure the built form, both the first dwelling and then the subsequent infill dwelling positively contribute to the amenity of the wider locality and the immediate streetscape.

As noted above while TRD comprises the major landowner within the Structure Plan area, there remain a number of other private landowners including some original owners who retain their original properties in full, some original owners who will retain a portion of their original holding and institutional owners such as the church facility on Lot 130 (which is likely to continue to operate as is but which has the potential to be redeveloped in the future).

These other owners would be subject to progression of their own detailed subdivision/development initiatives; however, these would need to reflect the applicable density code as designated in the Structure Plan and where an applicable Local Development Plan(s) are required.

3.2 Public Open Space

The subject area currently contains two adjoining reserves 6131 and 31962 vested in the Shire. These are currently undeveloped and contain generally degraded remnant vegetation.

The existing Shire reservations will remain vested in the Shire, primarily serving a conservation function.

The Moores Road widening of almost 2,700m² combined with existing road reservations within the structure plan area comprises almost 4.8 hectares. After

subtracting the existing shire reserves, road widening and existing road reservations; a net site area of just under 22.17 hectares results.

On this basis a 10% open space requirement generates requirement for 2.216 hectares of Public Open Space (POS) within the Structure Plan area. The Structure Plan proposes provision of four new POS areas, designated POS A, B, C and D. in the northern portion of the Structure Plan.

POS A is sited centrally in the northern cell of the Structure Plan area north of Thomas Street. It is regular in shape with a proposed area of 1.1405 hectares. It will be the primary area of POS and is located to accommodate retention of stands of mature trees as well as enable open area to accommodate primarily active but also some passive use. In the order of 3,000m² within POS A will also be allocated to support drainage.

POS B is triangular in shape and is sited north of the existing Shire crown reserves, has extensive frontage to Tuckey Street and is 2,483m² in area. It is located to support the Green Link Network as identified in the draft Activity Centres Plan for Pinjarra. It will therefore primarily perform a passive function connecting the existing Shire crown reserve areas within the Structure Plan area with the Green Link Network proposed outside the Structure Plan area to the north east.

POS C is sited on the southern edge of the Structure Plan area abutting existing Shire reserve outside the Structure Plan to the south. It has been located specifically to support the retention and protection of a number of significant trees including trees identified as containing potential roosting

hollows for the endangered Carnaby's Cockatoo.

Preserving these trees within POS is the most effective means of ensuring their retention and while the area of POS C is relatively small at 1,220m², this is offset by combining it with the existing abutting Shire reserve. It will therefore perform a passive/conservation role. POS areas A, B and C are all within the TRD landholding.

POS D is provided along the western boundary of the existing Shire crown reserves within the Structure Plan north of Thomas Street. As noted while this existing reserve contains remnant vegetation of limited quality it is desirable to support its retention.

The existing crown reserves are, however, central to the wider proposed Green Link Network, therefore POS D is proposed directly abutting the western edge of the existing crown reserve to enable it to be integrated into the proposed green link while avoiding disturbing the existing remnant vegetation.

Portion of POS D will come from the TRD landholding and portion from land under other ownership. On this basis the total provision for POS D is 2,787m² and it will primarily be passive in its function.

In total the physical provision on site of POS will be 1.7787 hectares representing 84% of the 10% POS requirement.

It is proposed the balance of the POS requirement (16%) be provided as cash in lieu. The funds secured could be put towards improvements within the existing Shire reservations and also potentially the Shire controlled land abutting the Structure Plan area immediately to the south, which provides a direct link from the Structure Plan area through to the

McLarty sports and recreation area to the south east or towards implementation of the Green Link Network in the vicinity.

Allocation of a portion of the POS provision for the Structure Plan via cash in lieu to improving not only the reservations existing within the Structure Plan, but also establishing improved connectivity to the wider community will maximise wider community benefit from development of the site.

Proposed POS Areas A, B and C are located within the TRD landholding. The 10% POS requirement for the overall TRD landholding is 1.7934 hectares. The total physical provision for POS areas A, B and C is 1.6088 hectares representing almost 90% of the 10% requirement for the TRD land component. The balance of the required provision (representing 1,846m² or just under 10%) is proposed to be provided via cash-in-lieu as outlined above.

The total 10% POS requirement for other landowners is 3,234m² of which 1,699m² (or almost 53%) is to be physically provided leaving the equivalent of 1,534m² (or just over 47%) to be provided as cash in lieu.

Allocation of POS for drainage purposes is addressed as part of the endorsed Local Water Management Strategy. This indicates provision within proposed POS A of a detention basin of some 2,570m³ equating to an area in the order of 3,000m². Under Liveable Neighbourhoods 20% of the overall 10% requirement can be allocated as ‘Restricted Open Space’ enabling its use for a variety of purposes including for a detention basin.

20% of the overall 10% requirement represents an area of some 4,234m². As such the area of the proposed detention

basin of approximately 3,000m² comfortably falls within the area available for consideration as ‘Restricted Open Space.’

POS Provision is summarised in Table 2. A detailed breakdown of POS contribution by original lot is appended.

Table 2: Public Open Space Provision

POS REQUIRED (Hectares)	
Structure Plan Area	28.8
Less:	
Existing Pollard, Thomas and Tuckey Road Reserves	4.7365
Moores Road widening	0.2694
Existing Non Residential	<u>2.6266</u>
TOTAL	7.6325
Net Site Area	21.1675
Gross Subdivisible Area	21.1675
POS @ 10%	2.1168
POS PROVIDED (Hectares)	
POS Contribution may comprise	
80% Unrestricted POS	1.6934
20% Restricted POS	0.4234
Unrestricted POS - 1 Neighbourhood and 3 Local Parks	
POS A (Portion)	0.8405
POS B	0.2463
POS C	0.1220
POS D	<u>0.1767</u>
TOTAL	1.4855
Restricted POS	
POS A (Portion)	0.3000
TOTAL	1.7855
POS Physical Provision:	
POS A	1.1405
POS B	0.2463
POS C	0.1220
POS D	0.2767
POS Cash in Lieu Provision	0.3313
TOTAL	2.1168

3.3 Movement Network

The movement network within the proposed Structure Plan is guided by the existence and alignment of the current and future status of perimeter roads and existing road reservations within the Structure Plan area.

As noted in Section 3.1 above, the internal road pattern is intended to comprise local roads orientated either directly north-south or east-west to support solar design initiatives as illustrated in the Development Concept (Refer Figure 8).

The existing Thomas Street Reserve is maintained with improvements to maximise the opportunity inherent within the existing wide reservation and accommodate better urban water management practices as per the endorsed LWMS.

A main local connection east to west is maintained through the southern part of the Structure Plan along Thomas Street between Pollard Street and Wilson Road.

A modified grid layout is utilised to provide maximum connectivity throughout the Structure Plan area consequently also maximising solar sensitive design orientation.

Externally the Structure Plan makes allowance for allocation of approximately 10m to 20m adjacent to the existing Moores Road reservation to enable the ultimate development of Moores Road as a major district distributor road. This equates to some 2,694m².

The Structure Plan also acknowledges the potential future upgrading in status of Pollard Street. While Pollard Street is currently unconstructed, the reservation runs from Moores Road in the north to Greenlands Road in the south. As such Pollard Street has long term potential to become a major neighbourhood connecting road at the western edge of the existing Pinjarra residential area.

The western side of Pollard Street opposite the subject land comprises a rural buffer area separating the 'Residential'

zoned land to its east from 'Industrial' zoned land further to the west.

This area also accommodates 330Kv overhead power lines and associated easements which parallel the alignment of Pollard Street. Pollard Street is currently a reservation of 30m to accommodate an ultimate major neighbourhood collector role in the future this reservation could need to be widened.

The obvious location for additional widening of Pollard Street is the western side of the existing reserve, given that it is part of a buffer and that use of this land is predominantly rural. Any road widening to the east will impact the future yield of the Structure Plan as the widening will create an inefficient layout.

It is also noted that TRD have already accommodated future district road widening requirements by giving up a portion of the landholding adjacent to Moores Road.

Two bus routes operate along Pinjarra Road Monday to Friday connecting Pinjarra to Mandurah. Bus stops servicing these routes are located on Pinjarra Road, are easily accessible along Moores and Wilson Roads and are within an acceptable 400m walkable distance from the subject land.

There is currently limited pedestrian paths or off road cyclist provision within the subject area and its surrounds. With the development of the Structure Plan area provision of cyclist and pedestrian infrastructure would be provided in accordance with Liveable Neighbourhoods standards. Ultimately this will be able to connect with a wider district network which is anticipated will be implemented with the development of adjacent district

road links such as the upgrading of Moores Road and construction of Pollard Street.

In this regard it is proposed that a pedestrian path will be provided along one side of every street while a proposed Dual Use Path will be provided within the Thomas Street reserve.

Some of this infrastructure will support and connect with the proposed Green Link Network. (Refer Figure 9). All traffic and transport items are addressed in detail in Appendix 10.

3.4 Interface with Surrounds

Ultimately two major district roads will form the northern and western edge of the Structure Plan area, while the southern edge is established by the existing Shire reserves running between Pollard Street and Longo Avenue.

As such the Structure Plan area only directly interfaces with existing adjoining or potential future residential use on its eastern edge. In this instance the Structure Plan is designed so a compatible residential interface is provided to the existing residential areas to the east. This will be further facilitated via possible implementation of direct pedestrian and cyclist linkages as discussed in Section 3.3 above.

3.5 Staging

Potential staging of the development of the Structure Plan area is indicated in Figure 10 for the TRD land component of the Structure Plan which comprises the majority of the Structure Plan area. This generically indicates development commencing from the north and progressing in a south and easterly direction in six stages with the final stage

the western edge of the Structure Plan area.

As noted these stages are identified for the TRD landholdings. Two further areas are identified under separate ownership which are likely to form independent stages of development, however, the intentions of owners in these areas is unknown at this point. It is unlikely that development of the areas under separate ownership would proceed until the abutting TRD land has been developed as per the staging in Figure 10.

3.6 Traffic and Transport

The traffic modelling for the Structure Plan as at December 2018, identifies the following contributions be made towards intersection treatments referred to in Part I Section 6.6:

- (i) Pinjarra Road and Moores Road - CHR treatment (subject to detailed design) - Main Roads contribution 15% / Developer contribution 85%; and
- (ii) Pinjarra Road and Moores Road - AUL or CHL treatment (subject to detailed design) - Main Roads contribution 40% / Developer contribution 60%; and
- (iii) Pinjarra Road and Wilson Street - AUL or CHL treatment (subject to detailed design) - Main Roads contribution 45% / Developer contribution 55%.

The treatments identified in Part I Section 6.6 are based on an 80 kilometre speed threshold, should this change, a review of the treatments can be initiated by any landowner/subdivider within the bounds of the Structure Plan, or the Shire of Murray or Main Roads. The specification of the treatments identified in Part I Section 6.6 and timings may be superseded by the new modelling and accordingly corresponding

modifications to the Traffic Impact Assessment outcomes.

The transport and traffic analysis identifies that subdivisions submitted in accordance with the Structure Plan will trigger the need for progressive road and intersection upgrades. Contributions for the progressive upgrades are anticipated to be obtained via conditions of subdivision approval for 'suitable arrangements' being made for the upgrades in accordance with the Structure Plan.



Figure 8 - Development Concept



Thomas Street Local Structure Plan
Pinjarra - Shire of Murray

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Local Structure Plan Area

date 18.01.18 | scale at A3 1:2000 | ref 1274-SP101 | revised 02.02.18



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Figure 9 - Bicycle and Pedestrian Network

Thomas Street Local Structure Plan
 Pinjarra - Shire of Murray

DETAILED AREA SUBJECT TO APPLICATION. DIMENSIONS AND COORDINATES ONLY. ALL MEASUREMENTS IN METRES APPROXIMATE AND ARE SUBJECT TO FURTHER SURVEYING AND REVISIONS.

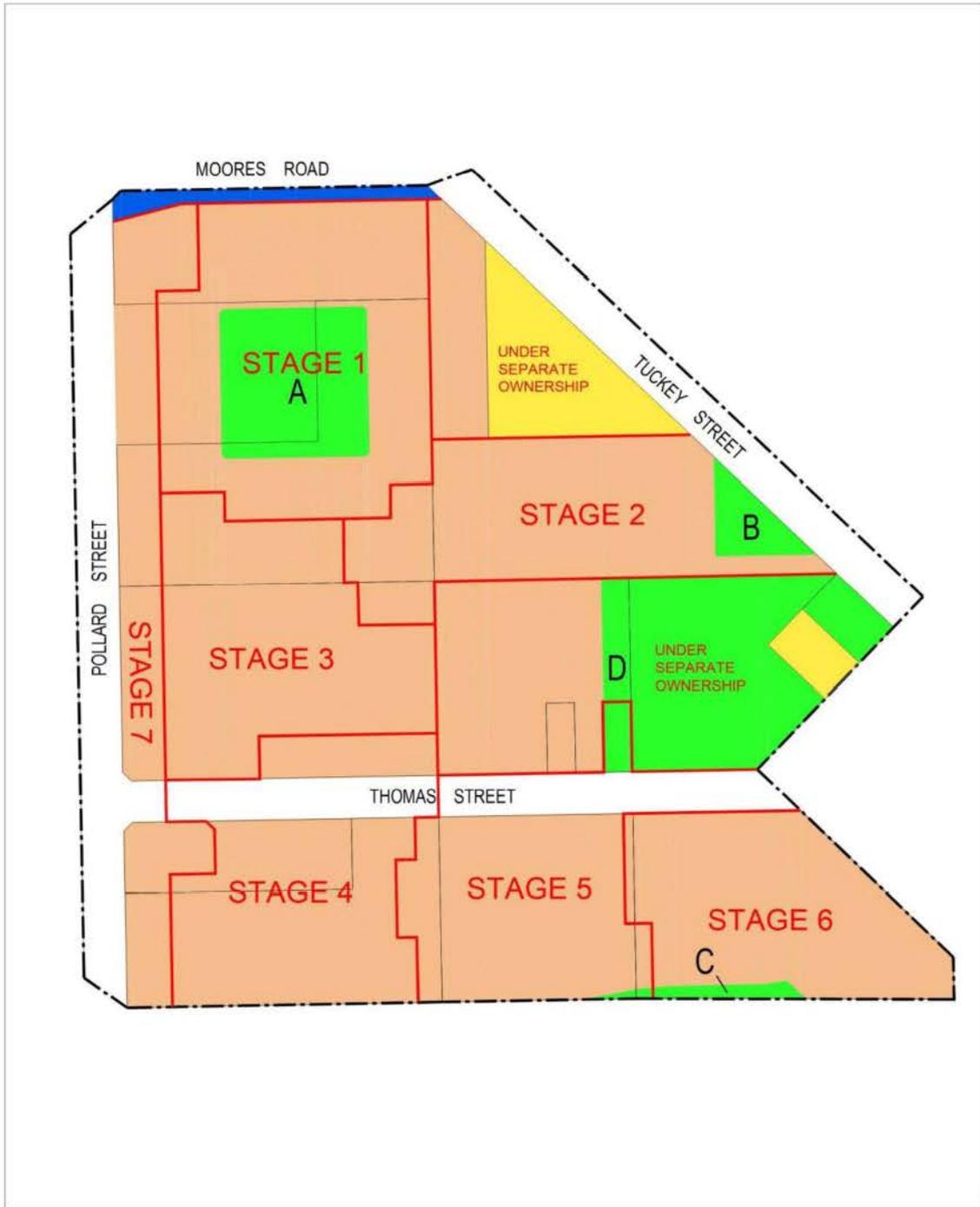
Local Structure Plan Area

date 10/10/16 | scale at A3 1:2500 | ref X17A-HP101 | issued 06/10/16



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Structure Plan Boundary

- Residential
- Community Facilities - Church
- Public Recreation / Conservation
- District Distributor - Road Widening



Figure 10 - Staging Plan



Thomas Street Structure Plan MURR/2016/
Pinjarra - Shire of Murray

date 02.10.16 | scale at A3 1:2500 | ref R17A STR01 | revised 22.02.19

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PART THREE

APPENDICES



Technical Appendices Index

Technical Document	Document Status		
	Supporting	Formal Approval	
		Assessing Agency	Approval Status
District Water Management Strategy	-	Department of Water	Approved
Local Water Management Strategy	-	Department of Water Shire of Murray	Approved Approved
Environmental Review	√		
Targeted Flora Report	√		
Targeted Flora Report (Lot 28)	√		
Tree Assessment Report	√		
Geo-Tech Report	√		
Engineering Infrastructure Report	√		
Aboriginal Heritage Site Search	√		
Traffic Impact Assessment Report	√		
Bushfire Management Plan	-	Department of Fire and Emergency Services and Shire of Murray	
EPBC Act Referral Decision	√	Department of Sustainability, Environment, Water, Population and Communities	Approved