



# Lot 51 McLarty Road, Pinjarra Structure Plan

Prepared for  
Kumar Development Pty Ltd

July 2023

## Document Information

Prepared for Kumar Development Pty Ltd  
 Project Name Lot 51 McLarty Road, Pinjarra Structure Plan  
 Date July 2023

## Document Control

Version	Date	Description of Revision	Prepared By	Prepared (Signature)	Reviewed By	Reviewed (Signature)
1	29/4/2022	Final	LVE		LVE	
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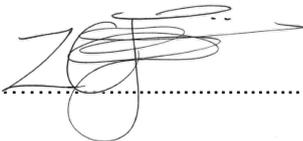
**ENDORSEMENT**

This Structure Plan is prepared under the provision of the Shire of Murray Local Planning Scheme No. 3

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

**08 September 2023**

Signed for and on behalf of the Western Australian Planning Commission



An officer of the Commission duly authorised by the Commission pursuant to section 24 of the *Planning and Development Act 2005* for that purpose, in the presence of:



..... Witness

..... 11 September 2023 ..... Date

..... 11 September 2033 ..... Date of Expiry

**TABLE OF AMENDMENTS**

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

## Executive Summary

Lot 51 McLarty Road, Pinjarra Structure Plan is prepared to facilitate and guide the subdivision and development of the site for residential purposes. The site is currently vacant and mostly cleared. It is located approximately 2km south of the Pinjarra Town Centre. The Structure Plan has been designed to be permeable and integrate with existing urban development to the north and south of the site. The proposed development is summarised in **Table 1** below. This Structure Plan does not overlap, supersede or consolidate an approved Structure Plan.

**Table 1. Structure Plan Summary Table**

Item	Data	Section number referenced within the Structure Plan report (Part Two)
Total area covered by the structure plan	2.04 ha	1
Area of each land use proposed:		2 and 3
▪ Residential (including local access roads)	1.9396 ha	
▪ Drainage	0.1025 ha	
Estimated lot yield	Approximately 35 single residential lots and 1 grouped housing lot	3
Estimated number of dwellings	Approximately 40	3
Estimated residential density	R20 to R40 Approximately 20 dwellings per gross hectare (including drainage area)	3
Estimated population	100 (based on 2.5 persons per dwelling)	3
Number of high schools	None	NA
Number of primary schools	None	NA
Estimated Commercial Floor Space	None	NA
Public Open Space	None	3
Estimated Percentage of natural area	None	NA

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## PART ONE – IMPLEMENTATION SECTION

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**Lorraine Elliott**  
PLANNING SERVICES

## 1.0 Structure Plan Area

This Structure Plan shall apply to Lot 51 on Deposited Plan 223049, 61 McLarty Road, Pinjarra, being the land contained within the inner edge of the line denoting the structure plan boundary on the Structure Plan Map.

This Structure Plan is identified as the Lot 51 McLarty Road, Pinjarra Structure Plan.

## 2.0 Structure Plan Content

The Structure Plan comprises:

- a. Part One – Implementation Section. This section contains the Structure Plan Map and statutory planning provisions and requirements.
- b. Part Two – Explanatory Section (Non-Statutory). This section provides the planning and environmental context and justification for the Structure Plan Map and the provisions, standards or requirements contained in Part One of the Structure Plan. Part Two is to be used as a reference to guide interpretation and implementation of Part One.
- c. Part Three – Appendices, includes all specialist technical reports and plans used in the preparation of and to support the Structure Plan.

## 3.0 Interpretation and Relationship with Local Planning Scheme No. 4

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 provisions applicable within the Structure Plan area.

## 4.0 Operation

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

## 5.0 Staging

The construction of the subdivision within the Structure Plan area will likely occur as one stage given the relatively small size of the subdivision.

## 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

Residential densities applicable to the Structure Plan Area shall be those residential densities shown on the Structure Plan Map.

## 6.3 Public Open Space

10% of the gross subdivisible area to be given up as public open space to be provided in the form of a cash-in-lieu payment.

## 6.4 Indigenous Heritage

The Structure Plan is supported by a site identification heritage assessment included in **Appendix G**. In respect of applications for the subdivision of land the Shire shall recommend to the Western Australian Planning Commission that conditions/advice notes be imposed on the subdivision approval related to:

- a) The subdivider to implement a ground penetrating radar survey, which is required to be undertaken prior to any subdivisional works, to identify potential unmarked graves in the Structure Plan Area.
- b) Use a Noongar name for the east-west unnamed road and laneway within the Structure Plan Area.
- c) Gnaala Karla Booja monitors must be present during the clearing of the Structure Plan Area and any geotechnical works, to prevent disturbance to any potential sub-surface cultural material.

## 6.5 Bushfire Management

The Structure Plan is supported by a Bushfire Management Plan included in **Appendix B**, which has determined that all proposed lots within the Structure Plan area are able to achieve separation for BAL-29 development, regardless of whether land to the west of the Structure Plan is developed. Once the land to the west is developed all lots should be able to achieve BAL-LOW. Ultimately, future dwellings will be constructed in accordance with the BAL rating determined at the time of building licence and construction if the Structure Plan Area is still located in a bushfire prone area.

The Bushfire Management Plan will need to be updated in accordance with the Department of Fire and Emergency Services requirements and to reflect that land to the west has been cleared of vegetation, as part of any subsequent subdivision application.

## 6.6 Acoustic Assessment and Noise Management Area

The Structure Plan is supported by an acoustic assessment (Noise Management Plan) included in **Appendix C**. In respect of applications for the subdivision of land the Shire shall recommend to the Western Australian Planning Commission that conditions/advice notes be imposed on the subdivision approval related to requirements for noise mitigation for lots adjoining McLarty Road.

## 6.7 Urban Water Management Plan

The Structure Plan is supported by a Local Water Management Strategy included in **Appendix D**. In respect of applications for the subdivision of land the Shire shall recommend to the Western Australian Planning Commission that conditions/advice notes be imposed on the subdivision approval related to the preparation and implementation of an urban water management plan.

### 6.8 Uniform Fencing

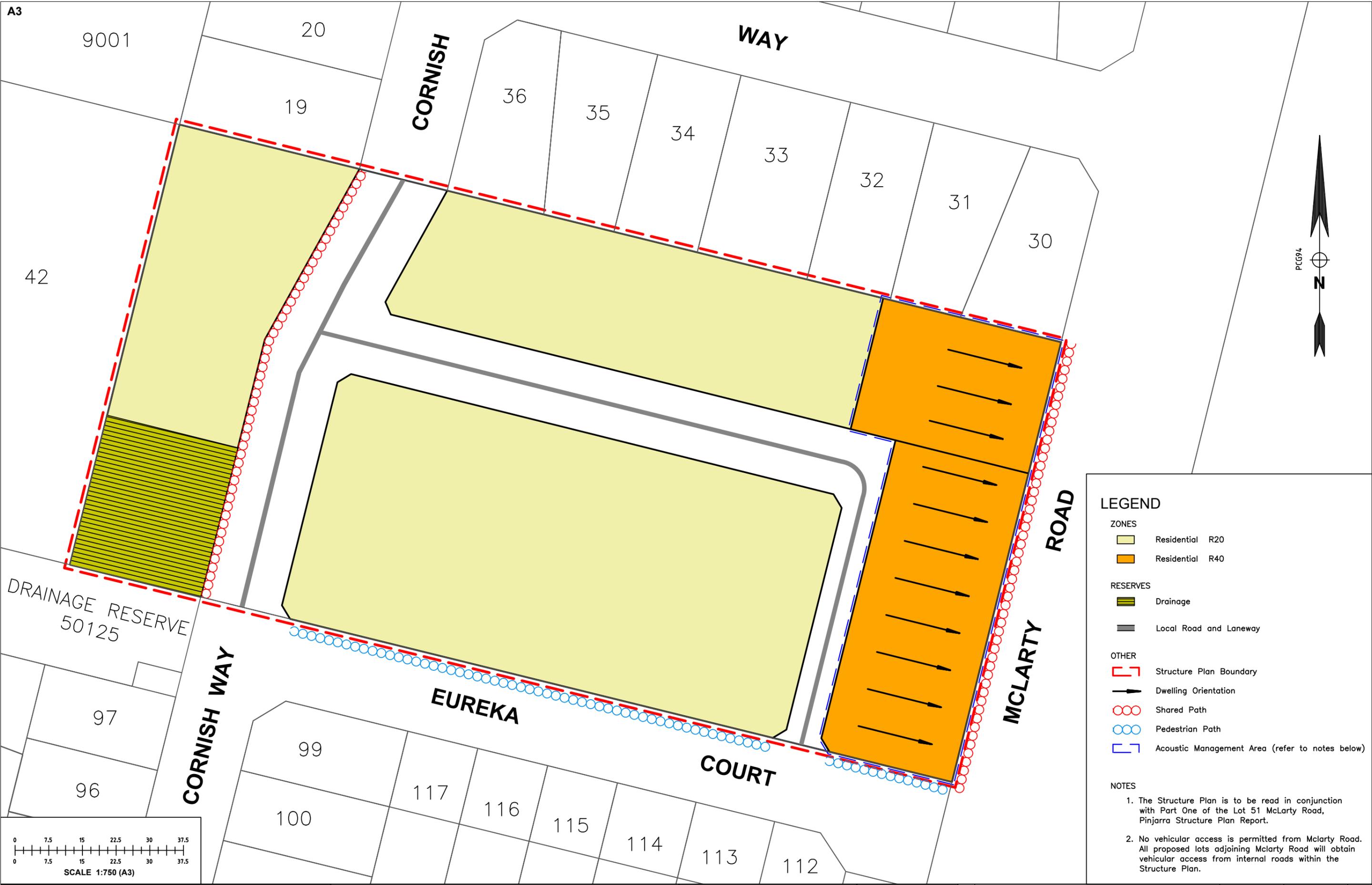
In respect of applications for the subdivision of land the Shire shall recommend to the Western Australian Planning Commission that conditions/advice notes be imposed on the subdivision approval related to uniform fencing for all lots fronting McLarty Road.

### 7.0 Local Development Plan

In respect of applications for the subdivision of land the Shire shall recommend to the Western Australian Planning Commission that conditions/advice notes be imposed on the subdivision approval related to a Local Development Plan (LDP) for all lots fronting McLarty Road. The LDP shall address a range of design principles including (but not limited to) dwelling orientation, vehicle access, fencing and acoustic requirements.

### 8.0 Other Requirements

<b>Additional Information</b>	<b>Approval Stage</b>	<b>Consultation Required</b>
Local Development Plan	Subdivision Approval Condition	Shire of Murray
Urban Water Management Plan	Subdivision Approval Condition	Department of Water and Shire of Murray
Bushfire Management Plan	Subdivision Application	DFES and Shire of Murray
Cash-in-lieu Contribution for Public Open Space	Subdivision Approval Condition	Shire of Murray
Waste Management Plan for grouped dwelling site	Development Approval Condition	Shire of Murray
Fauna Relocation Management Plan	Subdivision Approval Condition	Shire of Murray
Crossovers for grouped dwelling site shall be constructed at subdivision stage	Subdivision Approval Condition	Shire of Murray
Street Tree Landscaping Plan	Subdivision Approval Condition	Shire of Murray



**LEGEND**

**ZONES**

- Residential R20
- Residential R40

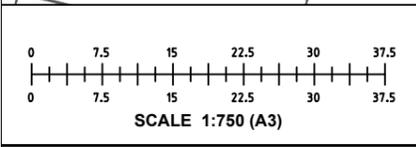
**RESERVES**

- Drainage
- Local Road and Laneway

**OTHER**

- Structure Plan Boundary
- Dwelling Orientation
- Shared Path
- Pedestrian Path
- Acoustic Management Area (refer to notes below)

- NOTES**
- The Structure Plan is to be read in conjunction with Part One of the Lot 51 McLarty Road, Pinjarra Structure Plan Report.
  - No vehicular access is permitted from McLarty Road. All proposed lots adjoining McLarty Road will obtain vehicular access from internal roads within the Structure Plan.



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CLIENT	KUMAR DEVELOPMENT PTY LTD
TITLE	Lot 51 McLarty Road, Pinjarra Structure Plan

LOCAL AUTHORITY:	SHIRE OF MURRAY		
12d FILE:	MCLARTY RD N61 - PLAN		
JOB No.	PLAN TYPE	DWG#	REV
21:1321	- SP	- 001	- C

HORIZONTAL DATUM	PCG94
DERIVED FROM SSM PIN265	VERTICAL DATUM
N/A	N/A
CONTOUR INT	SHEET #
N/A	1 OF 1

C	LEGEND & MAP UPDATES + WIDEN CORNISH WAY	N/A	JL 6/7/23	JAL
B	AMENDED LEGEND & PATHS	N/A	BC 19/4/22	JAL
A	INITIAL ISSUE	JAL 7/10/21	CB 8/4/22	JAL
REV.	DESCRIPTION	SURVEY BY/DATE	DRAWN BY/DATE	CHECK

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## PART TWO – EXPLANATORY SECTION

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**Lorraine Elliott**  
P L A N N I N G   S E R V I C E S

# 1 Planning Background

## 1.1 Introduction and Purpose

This following report provides justification for a Structure Plan (SP) for land described as Lot 51 (61) McLarty Road, Pinjarra (referred to as the site). It is lodged in accordance with Clause 6.5 of the Shire of Murray Town Planning Scheme No. 4 (referred to as the Scheme) and provides the guidance for the future subdivision and development of the site. The Structure Plan has been prepared in accordance with the WAPC Structure Plan Framework and the Planning and Development (Town Planning Scheme) Regulations.

The Structure Plan Map and planning requirements are included in Part One of the Structure Plan documentation (ie. Implementation Section).

The Explanatory Section (Part Two) supports the Structure Plan by providing the background and explanatory information used to prepare the Structure Plan. The following report includes a review of the current planning framework, environmental investigations, bushfire management, servicing analysis and design rationale for the SP.

The technical reports in the Appendices Section (ie. Part 3) demonstrate that the site is suitable for residential subdivision and compatible with adjoining urban development and provide technical guidance for the future subdivision.

## 1.2 Land Description

### 1.2.1 Location

The Structure Plan area (also referred to as the site) is located approximately 2kms south of Pinjarra Town Centre. The site is bounded by 85 Hampton Road (a future subdivision) to the west, Cornish Way and existing residential lots to the north, Eureka Court and residential lots to the south and McLarty Road to the east. The site is situated wholly within the Shire of Murray (refer to **Figure 1**).

Figure 1 – Site Location Plan



## 1.2.2 Area and Land Use

The site has a total land area of 2.04 hectares and is rectangular in shape. The site is currently vacant and mostly cleared other than a few remaining native and non native trees and other vegetation (refer to **Figure 2**). The site has historically been used for rural residential purposes and was cleared of most vegetation prior to aerial photography being available (before 1979). A single residential dwelling fronting McLarty Road was present between 1979 and 2015. The building was demolished in 2015.

Figure 2 – Aerial Plan



## 1.2.3 Legal Description and Ownership

The site comprises Lot 51 on Deposited Plan 223049, Volume 54 and Folio 185A. The site is owned by Kumar Development Pty Ltd. A copy of the certificate of title for the site is included in **Appendix A**.

## 1.3 Planning Framework

### 1.3.1 Zoning and Reservations

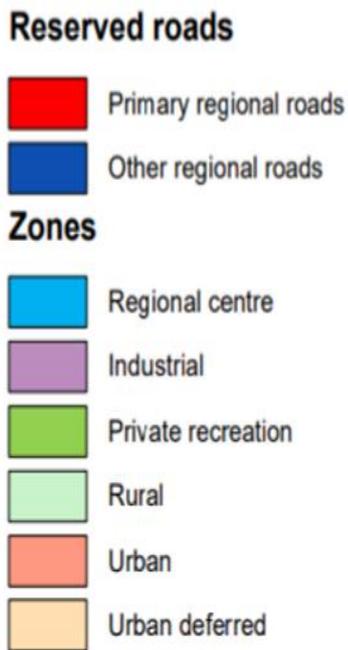
#### 1.3.1.1 Peel Region Scheme

The site is zoned Urban under the Peel Region Scheme (PRS) and McLarty Road is reserved as Primary Regional Roads, which restricts access (refer to **Figure 3**). Surrounding land is also zoned Urban and land directly opposite McLarty Road is reserved for Public Purposes – Hospital.

There is no road widening along McLarty Road according to the zoning map and Main Roads WA advice.

Under the PRS, the site is not located in any special control areas. The site is not located in the floodway or fringe on the PRS Floodplain Management Policy Map.

Figure 3 – Peel Region Scheme Zoning Map



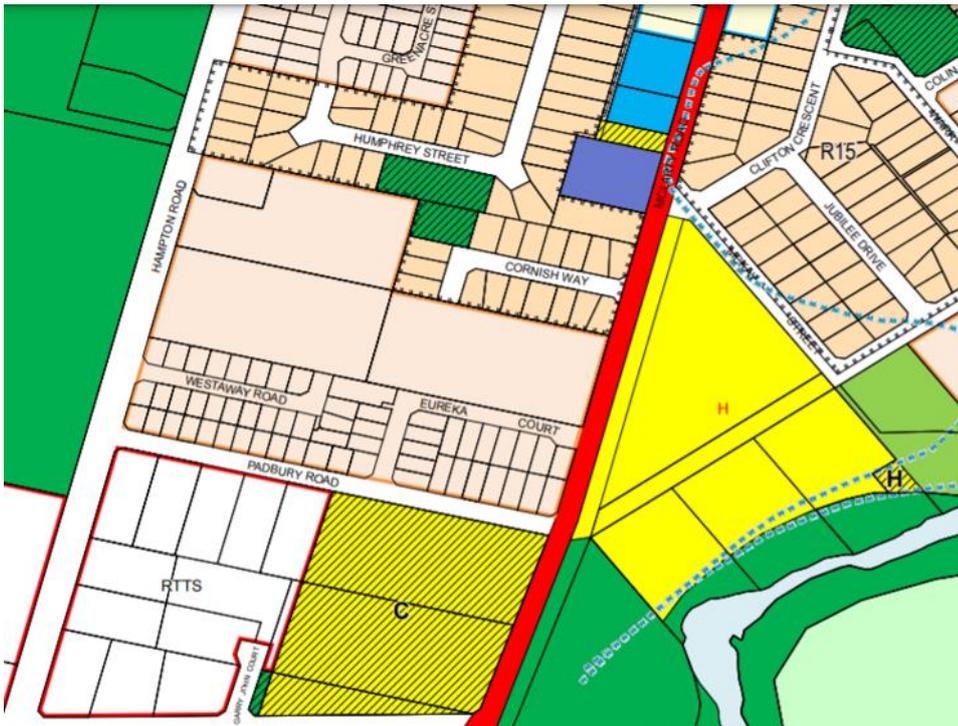
**1.3.1.2 Shire of Murray Town Planning Scheme (TPS) No. 4**

Under TPS No. 4, the site is zoned Residential Development (refer to **Figure 4**). All surrounding land is zoned Residential Development except for land to the north on Cornish Way, which is zoned Residential R15. There is no adopted Local Planning Strategy for the Shire.

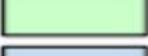
According to the zoning map, the site is not located in a floodprone area (100 year flood). The site is located in the Peel-Harvey Coastal Catchment Area as shown on the zoning map but it's not affected by a Development Contribution Area or Development Area. Council advice confirms the site is not affected by any draft or existing development contributions.

Under the Scheme, the Residential Development Zone requires the preparation and approval of a structure plan prior to subdivision and development.

Figure 4 – Shire of Murray Town Planning Scheme No. 4 Zoning Map



## LOCAL SCHEME ZONES

	Canal Development
	Commercial
	Farmlet
	Hills Landscape Protection
	Hotel / Motel
	Industry
	Ocean
	Private Clubs and Institutions
	Residential
	Residential Development
	Rural
	Service Commercial
	Special Residential

### **1.3.2 Regional and Sub-Regional Planning Frameworks**

#### **1.3.2.1 *Southern Metropolitan Peel Sub-regional Planning Framework***

As part of the Perth and Peel @ 3.5 Million, the South Metropolitan Peel Sub-regional Planning Framework was released. It designates the site as Urban. The Sub-regional Planning Framework was adopted in March 2018 with the aim to establish an integrated planning framework for land use and infrastructure to guide future urban growth. More specifically, the framework aims to achieve a more consolidated urban form and limit greenfield areas with a focus on urban infill, meeting long-term housing requirements (dwelling targets) and strengthening key activity centres such as Pinjarra (identified as a Secondary Centre). The framework also focuses on other elements such as employment, transport and service infrastructure and the environment.

The Framework recognises that infill development within established urban areas has the potential to contribute to housing diversity and respond to ongoing changing demographics and community aspirations. It is expected that infill development will also contribute to maximising the use of existing infrastructure and economies of scale for the provision of transport and service infrastructure. These objectives are achieved with the subdivision of the site by linking to existing road infrastructure and connecting to existing services (ie. water and sewer etc).

The Framework identifies 10 principles for urban consolidation, including housing by providing well-designed higher-density housing that considers local context, siting, form, amenity and the natural environment, with diverse dwelling types to meet the needs of changing demographics. Residential density, consideration of the local area and integration with the surrounding urban area are further analysed in Section 3.1 of the report.

The implementation of the Framework for existing urban land includes undertaking structure planning, which is now being progressed for the site. This will enable the site to be subdivided and developed with more housing within the existing Pinjarra townsite.

### **1.3.3 Planning Strategies**

There is no adopted Local Planning Strategy for the Shire, although the Shire has just commenced preparation of a draft Local Planning Strategy and Town Planning Scheme Review.

The Shire of Murray prepared the Pinjarra Revitalisation Strategy and associated Activity Centre Plan in 2017, which has been advertised but timing for endorsement of a final strategy is unknown. The site is located in the Residential Precinct with a density of R60 and is located opposite the Health Precinct. The site is not affected by the greenspace network. In December 2018, the WAPC deferred the Revitalisation Strategy and Activity Centre Plan and determined that the activity centre should only relate to more central areas of Pinjarra and resolved to prepare a District Structure Plan (DSP) for the broader area of Pinjarra. The site is located in the DSP area. The WAPC determined that mandatory minimum densities should be identified in the DSP and it should give regard to relevant WAPC policies, the local context and implementation issues. The DSP has not yet been prepared or advertised, although technical studies are in the process of being prepared.

The draft R60 density for the site was based on Pinjarra's identification as a Secondary Centre and the dwelling targets for sites within an 800m walkable catchment of such centres identified in the draft State Planning Policy (SPP) 4.2 - Activity Centres. The draft policy sets a target of 40 dwellings per gross hectare within 800m of a secondary centre. However, the dwelling targets in draft SPP4.2 are a guide and Pinjarra is a relatively small Secondary Centre, although future growth is expected.

Whilst the objectives of draft SPP 4.2 and the Revitalisation Strategy for higher densities to support secondary centres and to achieve better utilisation of existing and future services, compact urban form and proximity to future public transport and the health precinct are acknowledged, the density needs to be balanced with the local context. The site is located on the outer edge of the Pinjarra townsite and R60 is too high for the site. Instead, R20 would be a more appropriate density as well as a R40 grouped dwelling site (to provide density and built form diversity) and some R40 cottage lots, as it would be more consistent with the density of surrounding properties and the density (dwelling) targets set by Liveable Neighbourhoods and South Metropolitan Peel Sub-regional Planning Framework. The proposed densities would still be slightly higher than adjoining properties but not incompatible, which are R15-R20. DPLH's advice on the appropriate density (dwelling) targets for the site are included in Section 3 of the report.

### **1.3.4 State Planning Policies**

The Structure Plan needs to consider all relevant state planning policies. The 3 key state planning policies and guidelines relevant to the site are SPP 3.7 – Planning in Bushfire Prone Areas, SPP 5.4 – Road and Rail Noise and Liveable Neighbourhoods.

The bushfire prone map shows approximately half of the site (even though it is cleared) in a bushfire prone area. This is mostly due to the bushfire hazard created by vegetation to the west, although this land has now been cleared. In accordance with SPP 3.7- Planning in Bushfire Prone Areas and associated Guidelines, a Bushfire Management Plan has been prepared (refer to **Appendix B**). The recommendations from the BMP are considered in Section 2 of the report.

SPP 5.4 shows McLarty Road as Other Significant Freight/Traffic Route, triggering the need for an acoustic assessment for the site given the proposed dwellings are noise sensitive land uses. The acoustic assessment is included in **Appendix C** and the findings and recommendations are considered in Section 2 of the report.

Liveable Neighbourhoods is considered in the next section of the report.

There are also development control (DC) policies that are relevant to the subdivision of the site (as detailed below).

DC Policy 1.1 – Subdivision of Land - General Principles guides the subdivision of land and requires the integration of the site with surrounding development/subdivisions, which is achieved through the Structure Plan design (refer to Section 3). The policy requires avoidance of major earthworks, a responsive site design and a detailed assessment of the site and immediate surrounds (ie. physical characteristics, vegetation, drainage etc), which is achieved through the technical reports in Part 3 and Sections 2 and 3 of this report. Also, the policy requires that subdivision and subsequent development should not compromise the safety and function of existing regional roads like McLarty Road (refer to DC Policy 5.1 below).

DC Policy 2.2 – Residential Subdivision provides general guidance for residential subdivisions, including adherence to minimum and average site areas for different densities as per the WAPC Residential Design Codes (R-Codes) (refer to Section 3.1 for further discussion on density). Under this policy, the WAPC requires a subdivision design to consider the potential retention of significant trees and mature vegetation, which is further addressed in Sections 2 and 3 of the report. The creation of lots having dual street access and frontage is generally not favoured, although traffic requirements of abutting streets like McLarty Road are considered (refer to Section 3.1).

According to the current and draft DC Policy 5.1 – Regional Roads (Vehicular Access), regional roads like McLarty Road (South Western Highway) are required mainly for through traffic movement and as such there should be no direct vehicular access to or from abutting lots. Direct access is not compatible with the requirements of safe vehicular movement. The capacity of regional roads to carry traffic, traffic safety and traffic flow are all related to access - the fewer the number of driveways and intersections, the smoother the traffic flow and safer the road.

Therefore, the Policy seeks to rationalise existing access arrangements and minimise the creation of new driveways on regional roads. Instead, vehicular access is to be obtained from side or rear streets. Initial advice from Main Roads WA is consistent with this policy and as such the Structure Plan does not propose any direct vehicular access to McLarty Road and all proposed roads will link to existing roads to the north and south of the site (refer to Section 3).

#### **1.3.4.1 Liveable Neighbourhoods**

The Structure Plan has been designed generally in accordance with the provisions and principles of Liveable Neighbourhoods (where applicable), particularly the road design and residential density. Liveable Neighbourhoods encourages street networks that have a high level of internal connectivity and good external linkages (ie. interconnectivity). Given the small nature of the Structure Plan, only residential and drainage uses are proposed on the site. However, the site is located in proximity to a variety of commercial and health land uses to the north and east, respectively.

Liveable Neighbourhoods require structure plans to specify residential densities and encourages diversity in residential densities and dwelling types, thereby providing more choice for changing household structures.

Residential densities proposed for the site and Liveable Neighbourhoods density (dwelling) targets are addressed in Section 3.1 of the report.

According to Liveable Neighbourhoods it is important for the Structure Plan design to respond to the site context and local characteristics, such as drainage, McLarty Road (noise and access implications) and existing local road connections. This is also important in terms of achieving the Liveable Neighbourhoods objective of an urban structure that achieves a balanced outcome between urban and environmental sustainability. Environmental considerations are addressed in Section 2 of the report.

### **1.3.5 Local Planning Policies**

There are a number of local planning policies, which have been considered in the preparation of the Structure Plan.

The Natural Landscape in Urban Areas Local Planning Policy addresses existing trees on sites with a general presumption against the clearing of significant native trees and vegetation where reasonably avoidable. Where land contains significant tree(s), preparation of the structure plan should be informed by a survey. As detailed in Section 2 and **Appendices E and F**, flora and vegetation and fauna surveys have been carried out, confirming there are no environmental requirements to retain any of the trees. Due to the site's relatively small size, the location of the trees and drainage area in the south-west corner and required fill over the site, it is not feasible to retain the trees. The policy also proposes street tree planting at the subdivision stage, which will be addressed through a subdivision condition as it's considered important for the site to provide shade and a cooling treatment given the size of proposed lots. Also, the drainage area will be landscaped.

Under the Footpath/Shared Use Paths Policy, footpaths are required to be constructed to a minimum of 1.5m wide in access streets with a 2m wide path on higher order roads. Where a footpath is placed adjacent to a kerb an additional width of 0.5 m is to be added. The location of pedestrian and shared paths is shown on the Structure Plan and discussed in the traffic impact statement (refer to **Appendix I**) and the movement network in Section 3.

According to Council's Guidelines for Subdivisional Development, road standards included in the Guidelines are taken from Liveable Neighbourhoods (refer to the previous section and the movement network in Section 3).

The Water Sensitive Urban Design Policy outlines various principles and strategies for the management of water throughout the site, which is consistent with numerous overarching documents such as Stormwater Management Manual for WA, WAPC Better Urban Water Management, SPP 2.1 - Peel-Harvey Coastal Plain Catchment Policy and SPP 2.9 - Water Resources. The water planning policies are addressed through the preparation of the Local Water Management Strategy (LWMS) for the site (refer to **Appendix D**).

### **1.3.6 Other Approvals and Decisions**

At the date of lodgement of the Structure Plan, no other approvals or decisions have been identified, which are considered relevant to the proposed Structure Plan.

### **1.3.7 Pre Lodgement 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 particular, a meeting was held with Shire planning officers to discuss the proposed Structure Plan design, density and other planning issues. As part of the preparation of technical reports, consultation by phone and emails was undertaken with DPLH's Aboriginal Heritage section, Council engineers regarding approved drainage plans on the adjacent site and drainage objectives and assumptions for the area, DWER regarding groundwater information and Main Roads WA for traffic volumes along McLarty Road/South Western Highway. Consultation with Traditional Owners was also undertaken as part of the preparation of the Site Identification Heritage Assessment (refer to **Appendix G**).

## 2 Site Conditions and Constraints

Emerge Associates has undertaken an investigation of the site to determine the environmental values of the site. This included, but was not restricted to, a review of regional environmental investigations and federal, state and local-level databases and mapping.

### 2.1 Biodiversity and Natural Area Assets

#### 2.1.1 Flora and Vegetation

The site has been subject to disturbance and has been mostly cleared of native vegetation, likely for agricultural or grazing purposes. Non-native grasses occur across most of the site, with some scattered native and non-native trees and shrubs in the central and eastern portions. Emerge Associates (2022c) conducted a flora and vegetation assessment and identified three native and 17 non-native (weed) species within the site (refer to **Appendix E**). No threatened or priority plants were recorded and none are considered likely to occur due to lack of suitable habitat.

Two broad plant communities were identified (refer to **Figure 5** for plant communities), namely:

- CcEm (scattered trees and shrubs *Agonis flexuosa*, *Corymbia calophylla*, *Eucalyptus marginata*, and non-native trees over *Ehrharta calycina*); and
- non-native (cleared area - heavily disturbed comprising predominantly *Ehrharta calycina*).

The small patches of CcEm vegetation on the site (0.1ha in total) consists of scattered native trees over non-native grass. This vegetation condition was classified as 'degraded' as it lacks understorey structure and has very low native species diversity, likely due to past disturbance such as clearing.

The vegetation condition of the remaining 1.94ha of the site was classified as 'completely degraded' since it consists of non-native species such as pasture grasses, planted trees and shrubs. Sandy tracks within the site were also classified as 'completely degraded' (refer to **Figure 5**).

There are no specific spatial considerations on the Structure Plan as a result of the flora and vegetation assessment. Also, there are no specific approval or management considerations required for flora and vegetation.

#### 2.1.2 Wetlands

Wetlands of national or international significance may be afforded special protection under Commonwealth or international agreements. The Ramsar List of Wetlands of International Importance (DBCA 2017) and a Directory of Important Wetlands in Australia (DBCA 2018) were investigated. No Ramsar or listed 'important wetlands' are located within or near the site. Also, examination of the Department of Water and Environmental Regulation (DWER) hydrography dataset (DWER 2018) shows no water related features within the site.

The Department of Biodiversity, Conservation and Attractions (DBCA) has developed the Geomorphic Wetlands of the Swan Coastal Plain dataset (DBCA 2021) that maps geomorphic wetland features and classifies them based on their landform shape and water permanence. This dataset indicates that multiple use wetland (MUW) (palusplain wetland feature with unique feature identifier 15802) occurs within the eastern portion of the site and extends to the north and south (refer to **Figure 6**). The portion of the site mapped as MUW was historically cleared of standing vegetation and is now characterised by regrowth and introduced grasses, which do not represent significant wetland values. MUWs are not required to be accommodated spatially within the Structure Plan and as such no specific setback/buffer is required from the MUWs.

Also, the presence of a MUW does not preclude development within the site. These wetlands do not require any specific protection. Areas identified as a MUW are likely to have groundwater close to the surface, particularly during winter/spring. This will be a relevant consideration when determining (but not limited to) the requirement for fill and/or sub-soil drainage.

### 2.1.3 Fauna

Emerge Associates (2022a) conducted a basic fauna and targeted Black Cockatoo assessment and found that the majority of the site (approximately 87%) supports highly disturbed cleared area habitat, which provides limited value to fauna species of conservation significance and is likely to be primarily used by common and widespread native and non-native fauna with non-specific habitat requirements (refer to **Appendix F**).

The highest fauna habitat values are associated with the scattered trees and shrubs habitat, which occurs over the remaining 13% of the site. A total of eight native fauna species were recorded within the site, including one species of conservation significance, the forest red-tailed black cockatoo. Forest red-tailed black cockatoo is listed as vulnerable under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) and the Biodiversity Conservation Act 2016. While not recorded during the field survey, Carnaby's cockatoo and Baudin's cockatoo (listed as endangered under the EPBC Act) are likely to occur within the site. No conservation significant fauna species were directly observed within the site. However, evidence of foraging (chewed marri fruits) attributed to the forest red-tailed black cockatoo was recorded within the eastern portion of the site.

Also, five other species of conservation significance may possibly occur in the site: Australian masked owl, pacific swift, peregrine falcon and south-western brush-tailed phascogale. Any occurrence of pacific swift would likely be independent from terrestrial habitat and be in the air space above the site.

The site is located within the distribution range and modelled breeding range of Carnaby's cockatoo and Baudin's cockatoo and is within the distribution range of forest red-tailed black cockatoo. During a site visit, a total of 0.13ha of foraging habitat for Carnaby's cockatoo, 0.11ha for Baudin's cockatoo and 0.11ha for forest red-tailed black cockatoo were recorded (Emerge Associates 2022a) as shown in **Figure 7**. Eight black cockatoo habitat trees were recorded within the site. An internal hollow inspection was undertaken for two habitat trees that were determined to potentially contain suitable hollows based on the initial inspection from ground level. Neither of these trees contain hollows suitable for breeding by black cockatoos. The remaining trees contained no suitable hollows for breeding by black cockatoos (Emerge Associates 2022a). Also, no roosts or evidence of roosting were observed within the site (Emerge Associates 2022a) (refer to **Appendix F**).

Based on the above investigations, no specific spatial considerations are required for the Structure Plan and no specific approval is needed. However, a Fauna Relocation Management Plan will be prepared as a condition of subdivision approval.

## 2.2 Landform, Soils and Topography

### 2.2.1 Topography

Topography across the site is flat with an elevation of 11m Australian height datum (mAHD) on the eastern side and remains relatively flat across the remainder of the site (refer to **Figure 8**).

### 2.2.2 Landform and Soil

Environmental geology for the site has been mapped as Bassendean Sand (Gozzard 2011). The Bassendean sands are typically very light grey at the surface, yellow at depth, fine to medium-grained, sub-rounded quartz, and moderately well sorted of eolian origin (Purdie *et al.* 2004). Regional geology is shown in **Figure 9**.

A site-specific geotechnical investigation was undertaken by Brown Geotechnical (2022) and confirms that the site is underlain by medium grained, grey sand to at least 2m (refer to **Appendix B** in the LWMS). The sand is covered by a thin layer of silty sand topsoil up to a depth of 0.15m to 0.2m.

Soils are free draining with good drainage characteristics. Permeability testing found the permeability approximately 43.2m per day. Therefore, the site is suitable for on-site infiltration in soakwells and basins.

## 2.3 Acid Sulfate Soils

Regional acid sulfate soil (ASS) risk mapping identifies the entire site as having a 'moderate to low' risk of ASS occurring within 3m of the natural soil surface (DWER 2021). Regional ASS mapping is shown in **Figure 10**.

No soils indicative of high risk ASS (such as organic soils) were noted on the surface or in the test holes during the geotechnical investigation (Brown Geotechnical 2022). Therefore, no specific spatial considerations are required for the Structure Plan.

## 2.4 Groundwater and Surface Water

### 2.4.1 Groundwater

The Water Register (DWER 2021b) indicates that groundwater beneath the site is a multi-layered system comprised of the following:

- Superficial Swan unconfined aquifer;
- Lower Leederville confined aquifer;
- Upper Leederville confined aquifer; and
- Cattamarra Coal confined aquifer.

Groundwater contours have been provided by DWER and show that groundwater levels across the site range from approximately 9.5m AHD to 8m AHD and flow in a south-easterly direction. Depth to groundwater across the site is therefore approximately from 1.5 to 3m BGL (refer to **Figure 11**). The geotechnical investigation (Brown Geotechnical 2022) found depth to groundwater to be >2m for most of the site (refer to **Appendix B** in the LWMS). Depth to groundwater for two locations (in the south-eastern corner of the site and in the west of the site) were 1.9m BGL, confirming the groundwater levels supplied by DWER.

In terms of groundwater, there is no specific spatial considerations for the Structure Plan, however it may influence inverts of drainage infrastructure.

Advice from DWER indicates that site specific groundwater level or quality monitoring will not be required (J Sturgess [DWER] 2021, pers. comm., 28 September).

Management of nutrients as part of the future use of the site can be addressed through the preparation of the relevant water management planning documents and by implementing water sensitive urban design principles (refer to LWMS in **Appendix D**).

Appropriate separation between habitable floor levels and groundwater will need to be achieved and will need to be based on requirements of DWER and the Shire. This is a detailed design consideration and can be addressed through water and engineering planning for the site as part of the typical subdivision process.

### 2.4.2 Surface Water

Hydrological characteristics of the site are dominated by the flat topography and high infiltration capacity of the in-situ soils, which leads to local infiltration and little to no surface runoff except following extreme rainfall events.

Therefore, the site is suitable for on-site infiltration via soakwells and basins.

### 2.4.3 Stormwater Management

An existing drainage basin to the south-west of the site (west of Eureka Court) treats and retains runoff from surrounding developments. The basin will be upgraded to accommodate runoff from the adjacent development on Lots 42 and 9001 Hampton Road and from the site. Engineering designs for this upgrade have been approved by the Shire. The Shire proposed that the approved basin designs be upgraded to also treat and retain stormwater runoff from the site. Ultimately, the basin will be shaped into a single drainage basin.

Stormwater from the site needs to be routed and treated within the south-western corner of the site. The basin will need to be developed to a size to accommodate stormwater runoff. Management of surface water features and stormwater can be addressed through the preparation of relevant water management documentation, such as the Local Water Management Strategy (LWMS) prepared to support the Structure Plan (refer to **Appendix D**). The LWMS details the water management approach to support the development of the site and complies with the requirements of the Murray Drainage and Water Management Plan (Shire of Murray 2018b), Better Urban Water Management (WAPC 2008), and addresses the expectations of DWER and the Shire.

The design objectives for the LWMS seek to deliver best practice outcomes using a water sensitive urban design (WSUD) approach, including detailed management approaches for:

- water supply and conservation;
- surface water management; and
- groundwater management.

The approach to water management at the site takes an ‘at-source’ management approach for many of the proposed lots, which seeks to address water management as high in the catchment as possible by retaining runoff within the site and mimicking the existing hydrological regime. The design criteria and the manner in which the detailed designs achieve compliance with these are provided in Table E1 in the LWMS. A modelling assumption report outlining the drainage basin land area and other specifications is also included in the LWMS. However, the modelling will be adjusted in the UWMP in accordance with the Shire and WAPC requirements for direct lot connection to the stormwater system for certain lots (refer below) and the latest subdivision design, which includes less lots than the original subdivision concept plan that was modelled in the LWMS. The required drainage area of 1025m<sup>2</sup> is reflected on the Structure Plan.

Notwithstanding the above, proposed lots along the northern boundary of the site and lots directly adjoining McLarty Road will be serviced by direct lot connection to the stormwater system with sub-surface drainage provided. The LWMS also includes a commitment to investigate reducing the amount of fill and how it impacts on existing lots along the northern boundary of the site.

A detailed review of the proposed drainage network, specifically relating to the drainage basin augmentation will need to be completed by the proponent and approved by the Shire. An UWMP will be required at the subdivision stage, which will be guided by the LWMS.

## 2.5 Bushfire Hazard

Approximately half of the site is located within a ‘bushfire prone area’ under the state-wide Map of Bush Fire Prone Areas prepared by the Office of Bushfire Risk Management (OBRM 2021). The identification of a site within an area declared as bushfire prone necessitates further assessment of the determined bushfire risk affecting the site in accordance with the Australian Standard 3959:2018 Construction of Buildings in Bushfire Prone Areas (AS 3959) and the satisfactory compliance of the Structure Plan with policy measures described in SPP 3.7 - Planning in Bushfire Prone Areas (WAPC 2015) and the Guidelines for Planning in Bushfire Prone Areas Version 1.4 (the Guidelines) (DPLH & WAPC 2021).

Based on the above, a Bushfire Management Plan (BMP) was completed for the site (Emerge Associates 2022b) (refer to **Appendix B**). The BMP assessed the bushfire hazards, both within and near to the site and identified the management strategies required to ensure the site’s subdivision and development is consistent with the intent of SPP 3.7 which is “to preserve life and reduce the impact of bushfire on property and infrastructure”. **Figure 12** shows a spatial representation of the bushfire management strategies.

As part of assessing the long-term bushfire risk to the site, vegetation classifications have been detailed for the post-development scenario (in accordance with AS 3959), in order to inform a bushfire attack level (BAL) assessment. The long-term bushfire risk to the site should be negligible if the subdivisions to the west are completed. Once the land to the west is converted to a low threat/non-vegetated condition, there will be no classified vegetation within 100m of the site. The timing of this development is not known, although based on advice from consultants for the subdivision, vegetation clearance is expected to commence in April, 2022 (clearance has occurred since preparation of the BMP). A conservative approach was adopted that identifies the following temporary hazards increasing the BAL ratings within the site:

- forest vegetation to the west associated with small areas of dense vegetation including trees of 5-10m;
- scrub vegetation to the west including large areas of native shrubby vegetation with an average height of 4m;
- shrubland vegetation to the west including areas of shrubs between 1-2m in height; and
- grassland vegetation to the west associated with previously cleared land that has revegetated and not been maintained.

The outcomes of the BMP demonstrated that as development progresses, it will be possible for an acceptable solution to be adopted for each of the applicable bushfire protection criteria outlined in the Guidelines, including:

- Location: All lots are able to achieve separation for BAL-29 development, regardless of whether the land to the west is developed. Once the land to the west is developed all lots should be able to achieve BAL-LOW.
- Siting and Design: all future habitable buildings can be sited within the proposed development so that BAL-29 or less can be achieved based on the subdivision concept plan, which is consistent with the Structure Plan. Asset Protection Zones are achieved for all lots through management of residential lots, non-vegetated areas and low threat vegetation in the subdivision design, including roadways and the drainage area.
- Vehicular Access: the subdivision concept plan and Structure Plan layout provides for a road network within the site that will connect to the existing public road network, specifically Cornish Way to the north and south, providing egress to McLarty Road to the east and Hampton Road to the west via Padbury Road. The proposed roads have a minimum road reserve width of 8m and can achieve the minimum technical requirements to be provided in detailed design.
- Water: the development will be provided with a permanent and reticulated water supply to support on-site firefighting requirements.

Based on the above outcomes, there are no specific bushfire spatial considerations for the Structure Plan.

No future habitable buildings are proposed in areas likely to exceed BAL-29 and therefore no additional planning or development approvals will be required to address bushfire considerations. Following BAL certification, the ratings determined can be used to support future building applications.

In addition, the Bushfire Management Plan will be updated in accordance with the Department of Fire and Emergency Services requirements and to reflect the clearance of vegetation to the west as part of any subsequent subdivision application. Also, the Structure Plan and subdivision plan included in the BMP will be updated.

## 2.6 Heritage

### 2.6.1 Indigenous Heritage

A site identification heritage assessment was completed to identify Aboriginal sites as defined under Section 5 of the Aboriginal Heritage Act 1972 (WA), and document heritage values to determine the site's importance and significance under Section 5 and Section 39 of the Act (Terra Rosa Consulting 2022) (refer to **Appendix G**). The assessment found:

- two DPLH registered sites (DPLH IDs 3684 and 3786) affect the site;
- no lodged or stored DPLH other heritage places located within the site; and
- no heritage places or isolated artefacts were identified.

The following recommendations were made based on the survey and consultation with Traditional Owners:

- undertake ground penetrating radar survey (as a condition of subdivision approval) to identify potential unmarked graves;
- request integration of the larger, mature trees in the final design, where possible (refer to Section 3.1 for further discussion);
- consider a Noongar name for the proposed road and laneway;
- monitors to be present during clearing and geotechnical works (this has already occurred when the preliminary geotechnical work was undertaken on-site);
- remove rubbish from the eastern end of the site from a previous dwelling;
- request the public open space cash-in-lieu contribution be invested in the nearby local park; and
- ongoing liaison with DPLH regarding requirements for any Section 18 consent prior to ground disturbing works.

The recommendations for ground penetrating radar survey, Noongar road and laneway names, the presence of monitors and POS cash-in-lieu contribution have been included in Part One. However, the request to retain trees and removal of rubbish from the eastern end of the site have not been included in Part one as the former cannot be satisfied for the reasons discussed in Section 3.1 and the latter will be satisfied as part of standard subdivisional site works. The last recommendation regarding ongoing liaison with DPLH regarding any potential Section 18 consent will occur as part of the subdivision approval processes and therefore has not been included in Part One.

## 2.6.2 Non-Indigenous Heritage

No registered non-indigenous heritage sites were identified within or nearby to the site.

## 2.7 **Context and Other Land Use Constraints and Opportunities**

No land uses have been identified within at least 1000m of the site that are likely to impact on future residential land uses or require separation distances to be accommodated to mitigate potential impacts on health and/or amenity (such as any industrial land uses identified in Environmental Protection Authority Guidance Statement No. 3 – Separation Distances between Industrial and Sensitive Land Uses) (EPA 2005).

Therefore, there are no specific spatial considerations on the Structure Plan.

## 2.8 **Potential Site Contamination**

A review of the DWER Contaminated Sites database (DWER 2021a) did not identify any registered contaminated sites within or in close proximity to the site. It is unlikely that current or historical land uses within the site would have the potential for contamination.

Therefore, there are no specific spatial considerations for the Structure Plan.

No specific approval considerations are likely to apply, and if contamination is present, it is likely to be small scale in nature and can be managed through the typical subdivision process.

## 2.9 **Acoustic**

### 2.9.1 McLarty Road

McLarty Road is located directly adjacent to the eastern boundary of the site. The potential noise impacts from McLarty Road have been considered in the context of the State Planning Policy 5.4 Road and Rail Noise with the preparation of an acoustic assessment (Noise Management Plan) (refer to **Appendix C**). As required by the Shire and WAPC, the acoustic assessment has been modified to also consider the impact of traffic noise on a second storey of a dwelling and the use of visually permeable fencing.

To comply with the Policy, the following requirement has been recommended:

- Quiet House Design Package B and Notification on Titles for Lots 1 to 8 (R40 lots) and Lot 44 (now Lot 36 on the latest subdivision concept plan) on both ground and upper levels.

It is noted in the report that the recommended noise mitigation is not dependent on any type of fencing and as such visually permeable fencing would be acceptable.

At the subdivision and development stages, conditions/advice notes will be imposed on the subdivision and development approvals requiring noise mitigation for lots adjoining McLarty Road as per the above recommendation. It will also apply to the additional R40 lot on McLarty Road as shown on the latest subdivision concept plan (ie. Lot 9) and any subsequent titles when the grouped housing lot is further subdivided.

## 2.10 **Conclusion**

In summary, potential impacts on environmental features identified within or near to the site can be managed through the design and the typical subdivision and development processes.

Key management considerations include:

- A more detailed review of the proposed drainage network, specifically relating to the basin augmentation will need to be completed by the proponent. At the subdivision stage and prior to construction, a drainage basin design will need to be submitted and approved by the Shire. An investigation into reducing fill across the site will be required and direct lot connection to the stormwater system will be required for lots adjoining McLarty Road and along the northern boundary (together with sub-surface drainage).

- Indigenous heritage management actions (recommendations) are required to be carried out at the subdivision stage.
- The Bushfire Management Plan is to be updated as part of the subdivision application to address Department of Fire and Emergency Services requirements and to reflect the clearance of vegetation to the west. The BMP will include the updated Structure Plan and subdivision plan.

## 3 Structure Plan and Subdivision Requirements

The Structure Plan will enable the subdivision and development of the site for residential purposes, based on a design that will integrate and be compatible with surrounding residential areas. The summary table for the Structure Plan is provided in the executive summary. Critical components of the Structure Plan are discussed in the following sections.

### 3.1 Residential and Structure Plan Design Principles

Lot 51 represents an important infill site in the Pinjarra townsite and as such the Structure Plan performs the function of consolidating the existing urban area. The Structure Plan (SP) supports Pinjarra as a Secondary Centre, maximises utilisation of existing services and achieves an urban form that balances the proposed residential density with the surrounding local context. The Structure Plan Map is provided in Part One. Also, the Explanatory Section is supported by a subdivision concept plan that shows a potential lot layout (refer to **Appendix H**).

The SP design responds to the site context and local characteristics, such as an integrated drainage design with adjoining land, McLarty Road (noise and access implications), integration with the surrounding residential area and the existing local road connections. Given the small nature of the SP, only residential and drainage uses are proposed. The proposed densities address concerns raised by the community during public advertising of the SP.

Liveable Neighbourhoods encourages street networks that have a high level of internal connectivity and good external linkages (ie. interconnectivity). The SP design proposes a road layout that integrates with surrounding residential development to the north and south by providing an important link for Cornish Way, leading to good legibility throughout the development. No road connection is proposed to the west due to previous structure plan and subdivision approvals, but it will be connected through a consolidated drainage area.

In accordance with the South Metropolitan Peel Sub-regional Planning Framework, infill development within established urban areas contributes to housing diversity and maximises the use of existing services. On this basis and for flexibility, the Structure Plan proposes 2 different densities; R20 and R40. Higher density in the form of a grouped housing site and small rear loaded (cottage) lots are located near McLarty Road, closer to the health precinct. However, it should also be recognised that the site is located on the outer edge of the Pinjarra townsite. The proposed R20 density is generally consistent with surrounding development with a predominantly single dwelling built form.

In terms of density (dwelling) targets, DPLH advised that in the absence of a WAPC endorsed strategic plan for the Shire of Murray (the District Structure Plan has not yet been approved) and having regard to the location of the site which is approximately 2kms from the current Pinjarra Town Centre, it is appropriate to refer to dwelling targets outlined in Liveable Neighbourhoods (where urban densities of at least 15 dwellings per urban hectare and an average of 22 dwellings per site hectare should be achieved) and the South Metropolitan Peel Sub-regional Planning Framework (where a target of 15 dwelling units per gross hectare of Urban zoned land and a residential site density target of 26 dwellings per residential site hectare should be achieved). Based on the updated subdivision concept plan that allows for 40 dwellings (35 lots), the development of the 2 hectare site will achieve the gross targets for Urban zoned land according to Liveable Neighbourhoods and the South Metropolitan Peel Sub-regional Planning Framework, however the net residential targets in both documents will not be achieved. The density over the central portion of the site was reduced to R20 in response to consultation with the community and the Shire of Murray. The R20 density is generally consistent with surrounding residential areas. In contrast, the density of the cottage lots along McLarty Road were increased to R40, which allows for an additional lot.

McLarty Road is reserved as a Primary Regional Road, which restricts access. This forms the basis of the design rationale for proposed lots adjoining McLarty Road on the subdivision concept plan and Structure Plan. The restriction is consistent with DC Policy 5.1 Regional Roads (Vehicular Access) and advice from Main Roads stating that if a subdivision application is submitted for the site, Main Roads would typically not support a direct vehicular access point from this property to South Western Highway (McLarty Road). Instead, access to the site would be facilitated through adjacent local roads, which is consistent with the Structure Plan design. Also, the Structure Plan requires R40 cottage lots and the R40 grouped dwelling site to address McLarty Road

by orientating future houses to front the road and a local development plan to address design issues in greater detail (refer to Part One). Also, Part One includes a requirement for uniform fencing for all lots fronting McLarty Road at the subdivision stage to ensure consistency and provision of visually permeable fencing.

Flora and vegetation and fauna surveys have been carried out, confirming there is no environmental requirement to retain any of the trees. Due to the relatively small size of the site and proposed lots (with a density of either R20 or R40), the requirement for fill across the site, road design and the drainage area being restricted to the south-west corner, the retention of the trees is not feasible. Whilst Traditional Owners identified the retention of trees (where possible), it was a request rather than a requirement. This issue has also been discussed with the community and Council officers as part of pre and post lodgement consultation. It was agreed that street tree planting and the landscaping of the drainage area will be undertaken at the subdivision stage.

### 3.2 Public Open Space

Given the small size of the site and the proximity of other existing and proposed public open space (POS), it's not practical to provide the full 10% public open space (POS) as a land contribution. Table 1 provides an outline of the POS contribution in land area, which will be provided in the form of a cash-in-lieu contribution payment as required by Part One of the Structure Plan. The POS land area contribution in Table 1 is an estimate only as it will depend on the final drainage area, which will be deducted from the total site area to determine the final gross subdivisible area. The final drainage area will be determined as part of the Urban Water Management Plan, which will be a condition of subdivision approval as required by Part One of the Structure Plan.

**Table 1: Public Open Space Schedule**

Public Open Space Schedule		
Total Site Area		2.0421ha
Deductions		
Drainage Area	0.1025ha	
Gross Subdivisible Area		1.9396ha
Public Open Space @ 10 per cent		0.1939ha
Public Open Space Contribution (land area)		0.1939ha

### 3.3 Movement Network

The Traffic Impact Statement (TIS) was prepared by Cardno for the site (refer to **Appendix I**).

The report focused on the following key transport issues:

- road hierarchy including appropriate road widths in terms of Liveable Neighbourhoods;
- existing road network including traffic volumes for McLarty Road and access arrangements;
- public transport;
- pedestrian and share paths;
- intersection truncation requirements; and
- traffic generation.

A Traffic Technical Note has been prepared by Porter Consulting Engineers as an addendum to the Cardno TIS to address a number of WAPC modifications relating to pedestrian and share paths, Cornish Way road width and access and waste management for the grouped dwelling site (refer to **Appendix I**).

The recommendations in the TIS and Technical Note in relation to road widths and intersection truncations have been incorporated into the Structure Plan design. Liveable Neighbourhoods (2009 and draft 2015) and

the existing road width of Cornish Way have been considered in the context of the proposed road network, particularly roads widths and truncations. In terms of the proposed east-west road (Road B in the TIS), a 15 road width (6m carriageway and 4.5m verges) is considered to be adequate. Finally, the proposed laneway at 8m wide exceeds the 6m minimum requirement in Liveable Neighbourhoods. This additional space will be used for a pedestrian connection to Eureka Court and waste collection and vehicular access. Given the relatively small nature of the proposed subdivision with less than 100 trips per hour to be generated and no direct access to McLarty Road, it was concluded that the Structure Plan would have no material impact on traffic operations and safety on the surrounding road network and residential amenity.

Part One of the Structure Plan requires that the crossover to the grouped dwelling site be constructed as a condition of subdivision approval, which is addressed in the technical note. The final crossover width will be determined in accordance with the R-Codes and Council crossover requirements at the time of detailed subdivision (engineering) design. Waste management services for the grouped dwelling site is also discussed in the Traffic Technical Note and Section 3.4.

### **3.4 Infrastructure Co-ordination, Servicing and Staging**

As demonstrated in the following sections, all infrastructure services are available to service the proposed subdivision.

#### **3.4.1 Sewerage**

According to Water Corporation plans, there is an existing 150mm diameter uPVC sewer main at an approximate depth of 1.3m along the northern boundary of the site. The sewer is currently diverted between two existing properties on Cornish Way and flows north towards the Pinjarra Town Centre. The gravity sewer discharge point is located at a sewer pump station near Birmingham Way.

There are no capacity constraints or potential issues with Water Corporation's existing sewer catchment based on the subdivision concept plan. The existing sewer at the rear of proposed lots along the northern boundary will require a 3m easement, located centrally over the existing service for future Water Corporation access, when required.

#### **3.4.2 Water Supply**

There are no existing water mains within the site, however the site is bounded by existing water mains on the northern, eastern and southern boundaries. In terms of capacity, Water Corporation has modelled the subdivision concept plan into their existing scheme and concluded that there are no capacity issues and no requirements for upgrades.

#### **3.4.3 Gas**

There is an existing medium pressure gas main at the north boundary of the site within the Cornish Way road reserve. Gas is typically supplied at no cost by the supplier if common trenching is provided with the water main.

#### **3.4.4 Power**

There is an existing high voltage (HV) substation located to the south-east of the site. The site is clear of existing power infrastructure. Due to the number of proposed lots, it is likely that one transformer may be required, although this is subject to detailed design at the subdivision stage. Initial engineering investigations indicate there is adequate capacity for future power connection to the site. There are existing overhead power services along McLarty Road and a separation distance of 3m will be required from this service to any building. No undergrounding of this service is proposed given there is no vehicular access to the lots from McLarty Road.

#### **3.4.5 Telecommunications**

The site is clear of communication infrastructure. There are existing in-ground communication services to the north and south of the site for servicing the proposed subdivision.

### **3.4.6 Staging and Earthwork Strategy**

It is anticipated that the subdivision will be constructed within one stage due to the small size of the subdivision. In terms of the general earthworks strategy, due to sandy clay ground conditions within the site and to match in with the residential development to the south, it is proposed that an average of 1m of fill across the site will be imported to lift lot levels slightly above existing road levels (Eureka Court), although where possible the amount of fill will be minimised in consideration of existing lots to the north of the site. A low-level retaining wall (0.5m-1m in height) will be required along the northern and eastern boundaries to tie into existing ground levels. Also, minor clearing works involving the removal of some existing trees is required to prepare the site for works. Limestone steps from McLarty Road into proposed lots (refer to the subdivision concept plan in **Appendix H**) will be constructed to allow for pedestrian access.

### **3.5 Waste Management Services for the Grouped Dwelling Site**

Part One of the Structure Plan requires the preparation of a waste management plan for the grouped dwelling site at the development application stage. Based on the site area and R40 density, there will be approximately 5 grouped dwellings. The Traffic Technical Note also addresses waste management services for the grouped dwelling site, including potential options for waste collection (refer to **Appendix I**). The preferred option can be determined at the development application stage and after the construction of the crossover.

## 4 Conclusion

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As demonstrated throughout this report, the environmental, bushfire management, Indigenous heritage, acoustic, planning (planning framework, residential density and POS assessment), servicing and transport assessments and the LWMS all support the Structure Plan. There are no constraints restricting the subdivision of the site.

The Structure Plan design is consistent with the previous designs for the site and integrates with existing residential areas to the north and south.

The statutory provisions guiding the subdivision of the site are included in Part One of the Structure Plan documentation.

In summary, it is considered that the Structure Plan document (Parts 1, 2 and 3) and the Structure Plan Map provide an appropriate framework to guide the future subdivision and development of the site.

## 5 References

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- Brown Geotechnical 2022, *Preliminary Geotechnical Investigation - 61 McLarty Road, Pinjarra*.
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## 6 Technical Appendices Index

Appendix no.	Document title	Nature of document	Referral/approval agency	Summary of document modifications
A	Certificate of title	Property information (supporting document only)	N/A	N/A
B	Bushfire Management Plan	Bushfire management and assessment	Referred to DFES as part of the SP approval process	To be modified at the subdivision stage.
C	Acoustic Assessment (Noise Management Plan)	Acoustic assessment and management	Shire of Murray and DPLH/WAPC as part of the SP approval process	Updated to address a second storey and remove reliance on any type of fencing, thereby allowing the use of visually permeable fencing.
D	Local Water Management Strategy	Water management assessment	Shire of Murray and referred to DWER as part of the SP approval process	Updated to address direct lot connection to the stormwater system for northern lots and McLarty Road lots and a commitment to investigating the management of excess drainage from existing lots along the northern boundary and the reduction of fill.
E	Flora and Vegetation Assessment	Flora and Vegetation Assessment	Referred to DWER as part of the SP approval process	N/A
F	Basic Fauna and Targeted Black Cockatoo Assessment	Fauna assessment	Referred to DWER as part of the SP approval process	N/A
G	Site Identification Heritage Assessment	Indigenous Heritage assessment	DPLH as part of the SP approval process	N/A
H	Subdivision Concept Plan	Conceptual subdivision design (to support the structure plan)	Shire of Murray and DPLH/WAPC as part of the SP approval process	Updated in accordance with the modifications to the residential densities and wider road reserve for Cornish Way.
I	Traffic Impact Statement	Traffic technical note and report	Shire of Murray and Main Roads WA as part of the SP approval process	A traffic technical note prepared to address access and waste management services for the grouped dwelling site and changes to the pedestrian and shared paths.

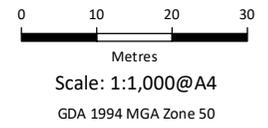
FIGURES



**Figure 5: Plant Communities and Vegetation Condition**

**Project:** Environmental Review  
61 McLarty Road, Pinjarra  
**Client:** Kumar Development Pty Ltd

**Plan Number:**  
EP21-109(01)-F27  
**Drawn:** GAR  
**Date:** 04/04/2022  
**Checked:** JB  
**Approved:** DPC  
**Date:** 07/04/2022



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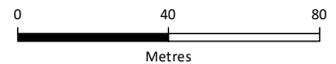




**Figure 7: Cockatoo Foraging Habitat**

**Project:** Environmental Review  
 61 McLarty Road, Pinjarra  
**Client:** Kumar Development Pty Ltd

**Plan Number:**  
 EP21-109(01)-F29  
**Drawn:** GAR  
**Date:** 04/04/2022  
**Checked:** JB  
**Approved:** DPC  
**Date:** 07/04/2022



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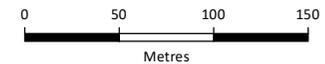
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**Figure 8: Topographic Contours**

**Project:** Environmental Review  
61 McLarty Road, Pinjarra  
**Client:** Kumar Development Pty Ltd

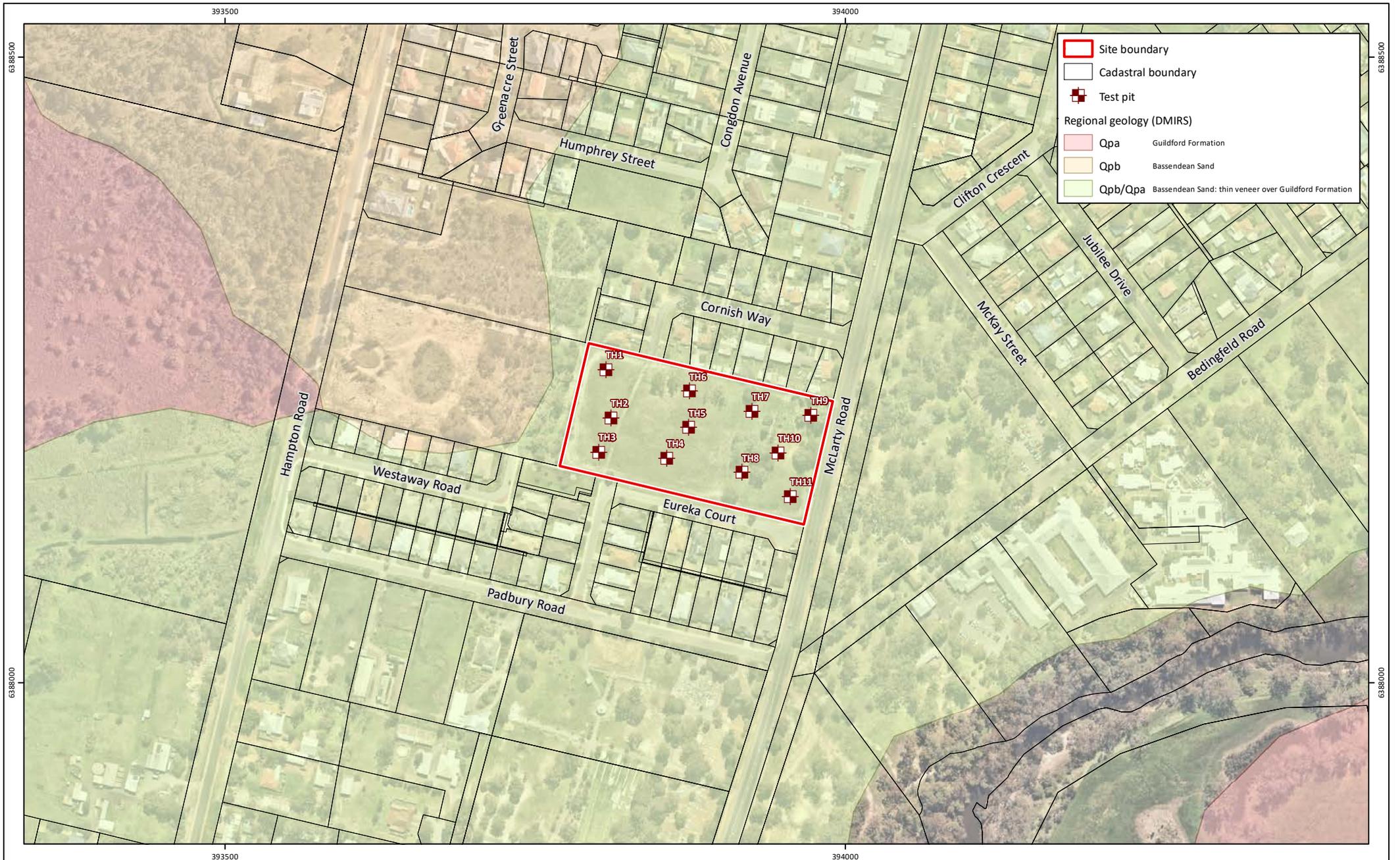
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**Approved:** DPC  
**Date:** 07/04/2022



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GDA 1994 MGA Zone 50



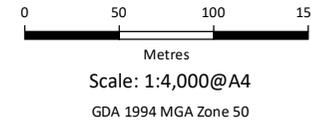
While Emerge Associates makes every attempt to ensure the accuracy and completeness of data, Emerge accepts no responsibility for externally sourced data used ©Landgate (2021). Nearmap Imagery date: 07/09/2021



**Figure 9: Landforms and Soils**

**Project:** Environmental Review  
61 Mclarty Road, Pinjarra  
**Client:** Kumar Development Pty Ltd

**Plan Number:**  
EP21-109(01)-F25  
**Drawn:** GAR  
**Date:** 04/04/2022  
**Checked:** JB  
**Approved:** DPC  
**Date:** 07/04/2022

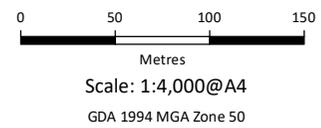




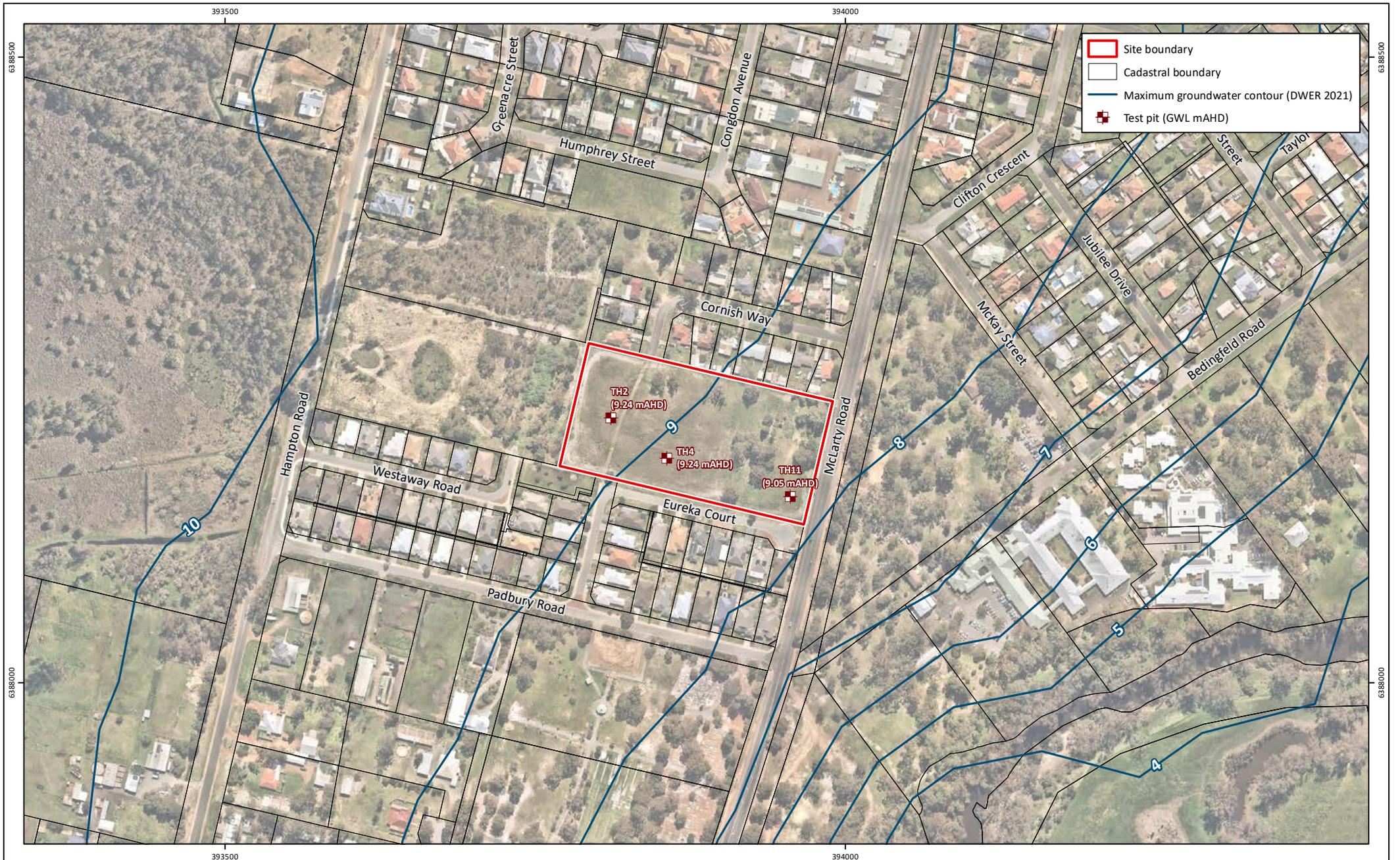
**Figure 10: Acid Sulfate Soils**

**Project:** Environmental Review  
61 Mclarty Road, Pinjarra  
**Client:** Kumar Development Pty Ltd

**Plan Number:**  
EP21-109[01]-F28  
**Drawn:** GAR  
**Date:** 04/04/2022  
**Checked:** JB  
**Approved:** DPC  
**Date:** 07/04/2022



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**Figure 11: Groundwater Levels**

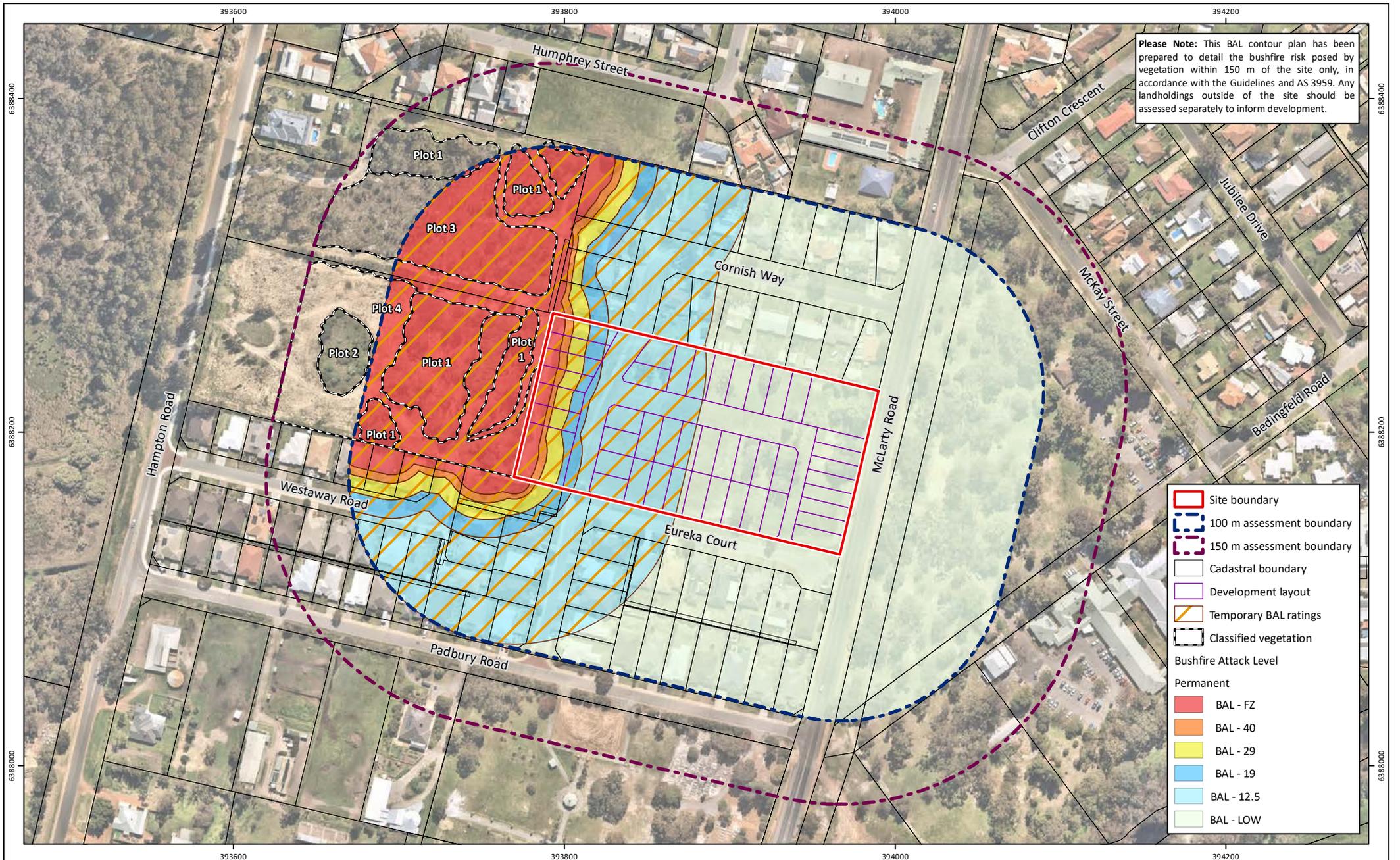
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61 McLarty Road, Pinjarra  
**Client:** Kumar Development Pty Ltd

**Plan Number:**  
EP21-109(01)-F39  
**Drawn:** GAR  
**Date:** 21/04/2022  
**Checked:** JB  
**Approved:** DPC  
**Date:** 21/04/2022



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Scale: 1:4,000@A4  
GDA 1994 MGA Zone 50





**Figure 12: Bushfire Attack Level Contour Plan**

**Project:** Environmental Review  
61 McLarty Road, Pinjarra  
**Client:** Kumar Development Pty Ltd

**Plan Number:**  
EP21-109(01)-F40  
**Drawn:** GAR  
**Date:** 21/04/2022  
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**Approved:** DPC  
**Date:** 21/04/2022



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GDA 1994 MGA Zone 50

