



Town Planning Report

# Development Application

Reconfiguring a Lot and Material Change of Use  
Code Assessment

Phase I, Woodlinks Village, Collingwood Park

Prepared for:

**Canberra Estates No. 36 Pty Ltd**  
**A wholly owned subsidiary of**  
**The Village Building Company Ltd**

Date: May 2014

RPS Ref: PR113258

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2	May 14	Client Review	Steffii Miles	Emma Moller / Craig Harte	-
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# Contents

<b>1.</b>	<b>SUMMARY .....</b>	<b>1</b>
<b>2.</b>	<b>SITE DESCRIPTION .....</b>	<b>5</b>
2.1	Site Analysis .....	5
2.2	Surrounding Land Uses .....	6
<b>3.</b>	<b>BACKGROUND .....</b>	<b>7</b>
3.1	Previous Approvals .....	7
<b>4.</b>	<b>DEVELOPMENT DESCRIPTION .....</b>	<b>8</b>
4.1	General Description.....	8
4.2	Transport and Accessibility .....	12
4.3	Engineering and Infrastructure Provision .....	14
4.4	Environmental Management .....	16
4.5	Construction Management .....	16
4.6	Bushfire Management .....	16
4.7	Crawford Street .....	17
<b>5.</b>	<b>KEY CONSIDERATIONS.....</b>	<b>18</b>
5.1	Native Vegetation Clearing .....	18
5.2	Bushfire Hazard.....	19
5.3	Residential Design and Amenity .....	29
<b>6.</b>	<b>PLANNING ASSESSMENT .....</b>	<b>31</b>
6.1	State Planning Requirements .....	31
6.2	Local Planning Requirements .....	35
<b>7.</b>	<b>CONCLUSION .....</b>	<b>41</b>

## Figures

Figure 1 – Locality Plan

Figure 2 – Cadastral Plan

Figure 3 – Aerial Imagery

Figure 4 – SPP Bushfire Mapping

Figure 5 – Managed Fuel Zones and Bushfire Attack Level

Figure 6 – Slope and Vegetation Assessment

## Appendices

Appendix A IDAS Forms and Owner's Consent

Appendix B Searches

Appendix C Structure Plan, prepared by RPS

Appendix D Proposal Plans, prepared by RPS

Appendix E Landscape Concept Plan, prepared by Saunders Havill

Appendix F Traffic Report, prepared by PSA Consulting

Appendix G Civil Drawings, prepared by HDR DKS

Appendix H Water Supply & Sewerage Network Assessment, prepared by MWH

Appendix I Stormwater Management Plan, prepared by Storm

Appendix J Archaeological Physical Survey Report, prepared by RPS

Appendix K Erosion Potential Assessment, prepared by Soil Surveys

Appendix L Environmental Management Report, prepared by Saunders Havill

Appendix M Dispersive Soils Report, prepared by SGS

Appendix N Code Responses

Appendix O SARA Response on Vegetation

## I. Summary

Canberra Estates Consortium No.36 Pty Ltd (the Applicant) has engaged RPS to seek development approval for the creation of a residential estate at Collingwood Park, east of Ipswich. The estate is to be known as Woodlinks Village, and is proposed to be developed across two phases, phase 1 being the subject of this application and involving the first 14 stages (335 residential lots). A structure plan is included showing phase 2 of the development which will complete the overall Woodlinks Village project, yielding a maximum of approximately 914 lots. The structure plan has been provided to ensure master planning of the site and determination of key development parameters for future applications. The project servicing and infrastructure strategy considers this additional future development.

The subject land comprises one recently amalgamated parcel bounded by Collingwood Drive and Eagle, Mullins & Crawford Streets, Collingwood Park, formally described as Lot 1 on SP266990 (formerly described as Lot 1 on SP185145 and Lots 65-67 on RP225349). The location of the site is shown in **Figure 1**. The survey plan for the recently created (amalgamated) lot is located in **Appendix B**.

This Development Application seeks approval for the following aspects of development:

- Development Permit for a Reconfiguration of a Lot to subdivide 1 lot into 335 lots plus road, balance, open space / drainage and park land;
- Development Permit for Material Change of Use for single residential not complying with the Residential Code. This approval relates to lots both above and below 450m<sup>2</sup> (predominately smaller lots) to adopt alternative site layout provisions. This approach is common for master planned communities. This approval will apply to 214 of the 335 residential lots applied for. The 214 lots subject to the MCU fee above consist of:
  - 32 Villa Lots;
  - 75 Premium Villa; and
  - 107 Courtyard Lots. It is noted that 121 Courtyard lots are shown on the proposal plan, however 14 of these are included on the irregular lot plan, and these comply with the planning scheme.

Full details of the proposal, site and the relevant planning framework are set out in *Table 1 Development Summary*.

Approval is recommended subject to reasonable and relevant conditions.

Table 1 Development Summary

Site Details		
Address	Collingwood Drive & Mullins Street Collingwood Park	Refer to Figure 1
Description	Lot 1 on SP266990	Refer to Appendix B
Site Area	77.0078Ha	Refer to Appendix B
Owner	Canberra Estates Consortium No. 36 Pty Ltd ACN 156 442 312	Refer to Appendix A
Tenure	Freehold	Refer to Appendix B
Easements	Easement A RP116226 (Powerlines) Easement C RP883323 (Powerlines) Easement A RP116225 (Powerlines)	Refer to Appendix B
Local Government	Ipswich City Council	

### Application Details

#### Project Description

Phase 1 of the Woodlinks Village Residential Estates involving the creation of 335 new residential lots plus road, park and balance land. Structure plan for indicative layout and yield of development on balance land (Phase 2) and approval for building envelope and design provisions on small and irregular shaped lots.

#### Applicant

Applicant Canberra Estates Consortium No.36 Pty Ltd

#### Approval Sought Aspect of Development and Description

Planning Scheme Ipswich Planning Scheme 2006

Development Permit Reconfiguration of a Lot – 1 lot into 335 lots plus road, balance, open space/drainage and park land

Development Permit Material Change of Use – single residential not complying with the Residential Code for all lots less than 450m<sup>2</sup> and some lots greater than 450m<sup>2</sup>.

#### Assessment Details

Assessment Manager Ipswich City Council

Level of Assessment Code Assessment

Public Notification N/A

#### Pre-lodgement Consultation

##### Agency Meeting Date and Contact

Council Various meetings have been held with Council prior to lodgement. These have been held to resolve technical matters pre-lodgement. It is considered this has led to a comprehensive application dealing with Council's requirements for the site.

SARA A request for a pre-lodgement meeting was lodged with SARA and while a meeting hasn't been held pre-lodgement advice has been obtained (refer **Appendix O**).

Technical Agency Informal prelodgement discussions have been held with APA (gas) and Powerlink (electricity). A meeting is scheduled to occur with Powerlink shortly after lodgement. Further details are contained in Section 6.1.3.

#### Assessment Framework

Application Details				
Relevant Planning Instruments				
<b>State Planning Regulatory Provisions (SPRP)</b>	Adopted Charges SPRP		(July 2012)	
	South East Queensland Regional Plan SPRP		(July 2009)	
<b>Regional Plan</b>	South East Queensland Regional Plan			
<b>Regional Plan Land Use</b>	Urban Footprint			
<b>State Planning Policy (SPP)</b>	Healthy Waters Natural Hazards (Bushfire) Biodiversity			
<b>Planning Scheme</b>	Ipswich Planning Scheme 2006			
<b>Strategic Plan Land Use</b>	Urban			
<b>Zoning</b>	Low Density Residential & Recreation			
<b>Overlays</b>	Character Places OV00 – (Historic Miscellaneous Heritage Listing) Flooding & Urban Stormwater Flow Path Areas OV05 Defence (Control Area) Regulations and Obstruction Clearance Surfaces OV7A High Pressure Oil & Gas Pipeline OV11 High Voltage Electricity Transmission Line OV13 Refer to searches located at <b>Appendix B</b> .			
Referrals				
Sch 7 Ref.	Aspect	Involving	Role	SARA Technical Agency (unless otherwise noted)
Table 3 Item 2	ROL	State Transport Infrastructure – exceed threshold	Concurrency	DTMR
Table 2 Item 4	ROL	Clearing Vegetation Referral not required – refer <b>Appendix O</b>	Concurrence	DNRM
Table 2 Item 21	ROL	Electricity Infrastructure	Advice	Powerlink
Table 2 Item 35	ROL	Oil & Gas Infrastructure	Advice	APA
Table 2 Item 47	ROL	Distributor Retailer	Concurrence	QUU [devolved to ICC]
Other Information				
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**Application Details****Supporting Information**

<b>Document</b>	<b>Author</b>	<b>Date</b>
Town Planning Report and Bushfire Assessment	RPS	May 2014
IDAS forms 1, 5, 7, & 11	RPS	May 2014
Structure Plan and Proposal Plans	RPS	May 2014
Landscape Concept Plan	Saunders Havill	May 2014
Traffic Report	PSA Consulting	May 2014
Civil Drawings	HDR DKS	May 2014
Water Supply & Sewerage Network Assessment	MWH	May 2014
Archaeological Physical Survey Report	RPS	May 2014
Stormwater Management Plan	Storm	May 2014
Dispersive Soils Report	SGS	May 2014
Code Compliance Responses	RPS	May 2014
Erosion Potential Assessment	Soil Surveys	May 2014
SARA response on vegetation	SARA	May 2014



## 2. Site Description

### 2.1 Site Analysis

Key details of the subject site are as follows in **Table 2**. Figures 1 – 4 provide further detail of the site location and characteristics.

**Table 2 Site Analysis**

Site Analysis	
Description	
<b>Existing Development</b>	Vacant land (refer <b>Figure 3 – Aerial Photograph</b> )
<b>Access</b>	Collingwood Drive & Mullins Street – it is noted that the Structure Plan at <b>Appendix B</b> illustrates future access from Eagle Street.
<b>Topography</b>	The site has a rolling topography and is affected by hills and gullies, and will require earthworks to level. A slope analysis for the site is included in the civil drawing package at <b>Appendix G</b> .
<b>Waterways</b>	The eastern boundary of the site is delineated by Goodna Creek, and minor tributaries traverse the land.
<b>Vegetation</b>	The site contains remnant vegetation and has a PMAV over it. Vegetation mapped to occur over the site includes: Regional Ecosystems that are <i>a Least Concern</i> Regional Ecosystems that are <i>Of Concern</i> Regional Ecosystems that are <i>Endangered</i> <i>It is noted that Endangered Vegetation no longer exists on the site – refer Section 6.1.3.</i>
<b>Habitat</b>	Essential Habitat for the Koala ( <i>Phascolarctos cinereus</i> ) occurs over the site. A separate approval has been obtained from the Department of the Environment (Commonwealth) for this purpose in accordance with the <i>Environmental Protection and Biodiversity Conservation Act 1999</i> . Refer to <b>Appendix J</b> .
<b>Wetlands</b>	The site does not feature referable wetlands. Some of the riparian area associated with Goodna Creek is classified as 'Wetland Management Area', however this does not trigger referral.
<b>Contaminated Land</b>	The site is not registered on the EMR or CLR. <b>Refer Appendix B – Search Results</b>
<b>Notifiable Activities</b>	The site has not been used for a Notifiable Activity.
<b>Heritage Places</b>	Local heritage place – (Verrall Family Pioneer Graves, Cemetery) (Verrall Property Hoop Pine) It is noted that a GPR survey has been undertaken by an archaeologist to properly locate the former graves on the site which are located in the entry park and their location shown on the proposal plans at <b>Appendix D</b> . Discussions with the Verrall family will occur post lodgement in relation to the way in which the graves will be acknowledged on the site. A copy of the local heritage listing citation is included at <b>Appendix B</b> . It is noted while not relevant to the development application process, an aboriginal cultural heritage investigation has also been commissioned to ensure duty of care requirements under the <i>Aboriginal Cultural Heritage Act 2003</i> are met.

Infrastructure and Services	
<b>Road Frontages</b>	Lot 1 on SP266990 ~1,240m Collingwood Drive; ~875m Eagle Street; ~340m Crawford Street Refer to Survey Plan at <b>Appendix B</b> .
<b>Water Supply</b>	Town infrastructure connections will be made available to the development site, which presently remains unimproved by dwellings or structures.
<b>Sewerage</b>	Town infrastructure connections available via connection to existing trunk sewer on opposite side of Goodna Creek.
<b>Stormwater</b>	Natural drainage pattern
<b>Electricity, Gas and Telecommunications</b>	Town infrastructure connections available. Existing power infrastructure on the site.

## 2.2 Surrounding Land Uses

Collingwood Park is located 11km east of Ipswich and 30km south of the Brisbane CBD. The suburb is primarily a residential area, with the dominant form of land use as detached residential dwellings. The development site is located toward the southeast extent of the suburb, consisting of undeveloped vacant land. The Land's eastern boundary is delineated by Goodna Creek and associated reserve, beyond which lies existing traditional residential areas. The development site is adjoined by similarly sized vacant parcels to the north and south, which are expected to be sequentially developed in future. To the west the site is separated by Collingwood Drive from existing residential estates and the Woodlinks State School. As development is pre existing in all directions, the site is seen as an optimal location for 'infill' development.

## 3. Background

### 3.1 Previous Approvals

The subject site benefits from a preliminary approval to override the planning scheme (Council's Application Ref: 9609/07 and approved by Negotiated Decision Notice on 3/02/2009) under Section 3.1.6 of the repealed *Integrated Planning Act 1997* to facilitate the development of the site for predominately residential purpose, but also incorporating an area for mixed use retail and commercial shopping.

This approval remains current.

This development application does not rely on this preliminary approval. The development application instead relies on the existing planning scheme provisions.

A Development Permit for Operational Works for the clearing of site vegetation in 6 stages also remains current and was approved by Council on 21 June 2013 (2083/2013).

## 4. Development Description

### 4.1 General Description

This application seeks a Development Permit for a Reconfiguration of a Lot to facilitate the creation of a residential precinct, known as 'Woodlinks Village Estate', over land at Collingwood Drive, Collingwood Park.

We note that this application seeks to create three hundred and thirty five (335) allotments plus road and park, with the retention of a significant northern portion of the land as 'balance land'. The balance land will be subject to future development applications for subdivision, however the timing and delivery of this will be subject to market conditions and as such staging of release has yet to be determined.

The land is significantly fragmented by the presence of above ground electricity infrastructure (high voltage power lines) traversing the eastern portion of the development site. Owing to the presence of this infrastructure and the Goodna Creek riparian corridor beyond, the area of the power line easements, as well as that part of the land east of the easement, will be transferred to Council. This will involve the surrender of 7.745ha in Phase 1.

#### 4.1.1 Subdivision Details

##### Development Statistics

The general development statistics are set out below in the table below.

Development Statistics	
Reconfiguring a Lot Proposals	
Number of Existing Lots	1
Number of Proposed Lots	335 plus road, balance and park land
Parkland	7.745ha in linear park (in Phase 1) 1.146ha in drainage reserve/ stormwater conveyance 5,200m <sup>2</sup> in active open space
Easements	No easements are proposed

##### Lot Design

The Subdivision component seeks to allow for subdivision of a recently amalgamated 'parent' lot into varied residential allotments, including allotment types described as:

Residential Allotments	Typical Width	Typical Area	30m Lots	32m Lots	Total Dwellings	%
Villa	10m	375m <sup>2</sup>	20	12	32	10%
Premium Villa	12.5m	375 m <sup>2</sup>	48	27	75	22%
Courtyard	14m	420 m <sup>2</sup>	83	38	121	36%
Premium	16m	480 m <sup>2</sup>	43	19	62	19%

Residential Allotments	Typical Width	Typical Area	30m Lots	32m Lots	Total Dwellings	%
<b>Courtyard</b>						
<b>Traditional</b>	18m	540 m <sup>2</sup>	34	4	38	11%
<b>Premium Traditional</b>	20m	600m <sup>2</sup>	7	-	7	2%
<b>Total</b>	-	-	<b>235</b>	<b>100</b>	<b>335</b>	<b>100%</b>

The lot types have been developed to respond to the site characteristics and identified market demand for this location. It is recognised for small lots these vary to the cottage and courtyard lots envisaged in the planning scheme. This is because 90% of lots have frontages greater than 10m. This design allows for a greater flexibility in the design outcomes on lots and also a better response to the topography minimising the amount of retaining walls required and providing for more liveable housing outcomes. The overall mix is consistent with that envisaged for the Low Density Residential zones, and the indicative yield provided for the Structure Plan for Phase 2 allows for higher densities in future stages.

#### 4.1.2 Staging Plan

The staging of the residential estate is depicted on the Proposal Plans, and nominate fourteen distinct stages for sequential release. Development for stage 1 is intended to originate at the Collingwood Street frontage in order to utilise existing infrastructure connections and road networks.

The proposal plans indicate the release of land in 14 sequential stages, detailed as follows:

Stage	Allotments	Open Space	New Road (m)	Total Area
Stage 1	25	0.52Ha	408m	2.228Ha
Stage 2	18	-	217m	1.191Ha
Stage 3	23	-	280m	1.283Ha
Stage 4	32	-	315m	1.663Ha
Stage 5	26	-	238m	1.581Ha
Stage 6	26	-	219m	1.116Ha
Stage 7	19	-	316m	1.312Ha
Stage 8	33	-	489m	2.388Ha
Stage 9	23	1.067Ha	438m	3.287Ha
Stage 10	30	-	216m	1.601Ha
Stage 11	25	-	455m	1.993
Stage 12	33	-	144m	1.549Ha
Stage 13	13	-	215m	0.897Ha
Stage 14	10	-	0m	0.591Ha

### 4.1.3 Open Space

Open space areas have been nominated strategically in response to site specific constraints, natural features and values. Delivery of the open space areas will be integrated into the staging plan, in order to ensure open space is provided alongside residential product in a way that encourages active use of the spaces. The Landscape Plan (provided at Appendix E) nominates three key elements within the proposed parks network. These are outlined as follows.

#### Goodna Creek Linear Open Space

The largest area of proposed open space in the development is the large linear park dedication running along the Eastern boundary. Goodna Creek forms the eastern edge to this park, creating opportunities as a natural landscape backdrop and constraints to the limits of development.

This parkland setting serves several functions:

- As a habitat setting where existing trees and natural gully lines outside of the development footprint will be retained and enhanced with extensive weed management and additional endemic species planting.
- As a connective landscape element for the whole Woodlinks Village development.
- As a broader link to the surrounding parks and streets beyond the site.
- As an active recreation resource for walking and cycling with shelters with shaded seating.
- As a passive recreation resource with places to sit and contemplate or enjoy a family picnic.
- As an educational resource signage to interpret the natural and cultural history of the land, flora and fauna.
- To promote community connections among future and existing residents to further nurture this landscape (i.e. waterway care groups).

The creek corridor is viewed as a critical piece of green infrastructure and will be connected with a proposed 3m wide concrete footpath forming a missing link in the existing trunk infrastructure pathway connection between Collingwood Park and the Redbank Plains shopping centre to the north.

A separate less formalised pathway will be established on the eastern side of the main pathway. This pathway is intended to meander between existing trees with break out and rest spaces embellished at key view lines along the creek.

Stormwater flows will be detained via soft landscaping measures designed in conjunction with stormwater and civil engineering modelling and details. These elements are intended to be closely integrated with the ultimate pathway alignment to maintain flood immunity for the pathway and blend stormwater solutions with the environmental setting.

#### Southern Drainage Reserve

This linear corridor of open space is 30m typical in width and serves the primary function of stormwater conveyance and detention. It is intended to integrate passive and active recreation uses within this corridor by providing a turfed base that is free draining and provides a useable informal recreation area except during and immediately after significant rainfall events.

This park will form a strong pedestrian link between the Local Recreation Park at the Collingwood Drive Entry and the Goodna Creek pathway system.

#### Local Recreation Park

The Local Recreation park will provide valuable active and recreational functions for all residents in the site catchment. This park is within easy walking distance (400m) from all residents and connected via the streetscape and parks pathway system. The layout and embellishments in this park respond directly to the ICC DSS requirements.

An estate entry wall is proposed within a dedicated private lot on the Collingwood Drive frontage to the estate. This lot will contain a proposed signage wall and landscape sculptural feature that will be privately owned and maintained by the developer. The details for the proposed sign are to be submitted to ICC at the operational works phase and as a separate signage approval application in accordance with ICC planning policies and guidelines.

The Local Park incorporates important cultural heritage sites. A key design consideration for the park is the recognition of the Verrall Pioneer Graves sites within the park. Engagement with the family will occur to ensure appropriate recognition occurs and is included in the landscape outcomes.

In general the graves and a nominal setback zone around them will be maintained at natural ground level with no excavation. Landscape embellishments to the perimeter of this will be sensitively integrated with the cultural heritage outcomes and family consultation outcomes.

#### 4.1.4 Landscaping

A Landscape Concept Plan has been developed by Saunders Havill for the project and is included at **Appendix E**. This package tailors landscape treatments to the key open space areas to ensure optimal use of the land. The Plan involves the following key landscape elements:

- Street trees to all new roads and landscaping to all new roundabouts and medians;
- High quality landscaping in the local neighbourhood park adjoining the site entry from Collingwood Drive/Mullins Street. This park provides for recreation functions include a playground, kick-about area, covered picnic table, seating, ½ basketball court and drinking fountain. This park also contains cultural heritage values with graves from the Verrall family present on the site;
- The drainage reserve which is a grassed open swale with a pedestrian path providing access between the local neighbourhood park and the linear park along Goodna Creek; and
- Rehabilitation of vegetation within Goodna Creek corridor.

A response to Council's Landscape Code is also included in this package at **Appendix E**.

#### 4.1.5 Staging

Phase 1 of the project will be developed in 14 stages. A development permit is sought at this stage for the creation of lots and future houses not complying with the planning scheme.

At each stage operational works will occur. This will involve:

- Clearing and soil stabilisation in large area stages;
- One or more bulk earthworks and soil stabilisation stages within each cleared area; and
- One or more roads, services and titles stages within each bulk earthworks stage.

Clearing boundaries will be determined based on bushfire management and fill requirements as required ie. areas will need to be cleared to avoid bushfire building controls being built into future homes unnecessarily where it is cleared in a subsequent stage and fill will be sourced on site where it is required, rather than importing it externally. It is noted that the earthworks provides for balance cut and fill within most of Phase 1 within the Phase 1 area itself, however towards the end of this Phase it may be necessary to source fill from the Phase 2 part of the site.

#### 4.1.6 Future Development

The northern balance portion of the land is intended to be developed in future as an extension of this residential precinct, with a similar mix of lot types. The development of this portion of the land will be subject to market demand, as well as relevant approvals. A structure plan showing the intended road major road layout, parkland and open space areas and yield is included at **Appendix C**.

The envisaged future yield is for up to 544 dwellings in Phase 2 comprising:

- Maximum 230 dwellings in Management Area 1
- Maximum 219 dwellings in Management Area 2
- Maximum 81 dwellings in Management Area 3.

Key reports supporting this information addressing, accessibility to services and infrastructure have considered this additional yield to ensure the layout is robust to cater for this future development.

This structure plan also provides transparency around the Applicants future intentions for the balance land.

It is requested that this structure plan become an approved document to guide future development applications complying with the planning scheme. In addition it provides a yield guide should an infrastructure agreement be required with Council to offset the cost of new trunk infrastructure required to be constructed to facilitate the Woodlinks Estate.

## 4.2 Transport and Accessibility

### 4.2.1 Access

As outlined in the Traffic Report at **Appendix F**, the development in its ultimate form will have six access points, two on Collingwood Drive and a single access point on Eagle Street. The other 3 accesses are from Mullins Street. The southern Collingwood Drive access point will be a T-intersection allowing all traffic movements between Collingwood Drive and the proposed Woodlinks Village development access road whilst the northern access point will permit left in and left out traffic movements only. The Eagle Street access point will permit all traffic movements and will be a shared access with the proposed Collingwood Terraces development located on the northern side of Eagle Street.

A detailed design for the intersection of Woodlinks Village to Collingwood Drive is included at **Appendix G**.

The Structure Plan at Appendix C also illustrates a left in left out access to Management Area 3 off Collingwood Drive.

The key outcomes of the assessment of the traffic impacts for the proposed Woodlinks Village development are as follows:

- The Woodlinks Village development will ultimately generate approximately 730 trips per hour in the peak hour operations;
- The staging of the access points is as follows:
  - Southern Collingwood Drive Access – 2015 (year of opening);
  - Northern Collingwood Drive Access – 2019 (500 lots); and
  - Eagle Street Access –2021(700 lots).



- The Southern Collingwood Drive Access intersection is approaching the maximum practical operating capacity by year 2023 (914 lots), therefore, provision for further capacity via the upgrading to a signalised intersection is required to enable satisfactory traffic operational performance to year 2033.
- The traffic generated by the Woodlinks Village development will bring forward the need to upgrade the Collingwood Drive / Eagle Street intersection to a signalised intersection. However, it is important to note that the critical movement in each instance is the right turn movement from the Eagle Street (west) approach and that no traffic to/from the Woodlinks Village development contributes to the addition of traffic to this movement.
- In addition to the above dot point, it is important to note that whilst the addition of the Woodlinks Village traffic does trigger the need to upgrade the intersection the contribution of this traffic (i.e. less than 20% of the total intersection traffic volume) to the overall intersection demand is not significant in comparison to the traffic generated by the other committed developments.
- The daily link volumes indicate that the road links to/from the Southern Collingwood Drive Access and the Eagle Street Access intersections are required to be Major Collector type roads whilst the remainder of the road network will comprise of either Collector or Access Place type streets.
- Pedestrian footpaths will be provided along the verges of the majority of the roads within the Woodlinks Village development. Pedestrian linkages are also proposed to connect the site with the bus stops along the “spine road” as well as providing connections to and through the park at Collingwood Drive and Goodna Creek Linear Park. In addition, it is proposed to provide an external pedestrian connection (via a pedestrian refuge) to the retail complex located on the south eastern corner of the Collingwood Drive / Eagle Street intersection.

The proposed development has been designed to incorporate a future bus route through the development. It is expected that the future bus route would run along the “spine road” through the site (i.e. the road connecting Collingwood Drive to Eagle Street) with bus stops located in the northern (within Woodlinks Village along the “spine route”) and southern areas (on Collingwood Drive) of the development such that there is a bus stop within 400metres of all residents within Woodlinks Village as required under the ICC Planning Scheme.

#### 4.2.2 Parking Provision

As the development is for residential purposes, parking will be provided within each lot and on-street parking is not part of the proposed design.

Council's Residential Code and the proposed new lot provisions for the Woodlink Estate at **Appendix C**, all require 2 carparking spaces on each lot. One of these to be covered and one can be located in tandem in the driveway as a minimum.

The standard road design allows for on street carparking throughout the estate.

#### 4.2.3 Pedestrian and Cyclist Movement

The development is designed to provide for a high level of pedestrian and cyclist accessibility through the estate. A regional bikeway connection to the Redbank Plains centre is also included in Council's PIP and the part through this site north-south is intended to be constructed. The developer would also be interested in an infrastructure agreement to construct other ‘missing’ parts of this regional cycleway, however it is appreciated this is largely in the ownership of other private individuals. This pathway is intended to be 3m wide.

Footpaths will be included in the project in accordance with Council's standards. A 1.2m wide ecological trail is proposed through the linear park.

2m wide footpaths will be provided on both sides of collector roads as well as through the neighbourhood park and drainage reserve.

1.5m wide footpaths will be provided in residential streets in accordance with Council guidelines.

#### 4.2.4 Ultimate yield

The traffic impact assessment has assessed the overall development including an indicative yield for Phase 2, which is anticipated at an additional 530 lots. This ensures that the internal road network is adequately designed and intersections to external roads are appropriate. These yield assumptions are detailed on the Structure Plan at **Appendix C**.

### 4.3 Engineering and Infrastructure Provision

#### 4.3.1 Urban Services

All urban services will be provided to the development site through extension of existing town infrastructure. The development site is located between significant residential development and is an 'infill' site, representing a good opportunity for urban consolidation and efficient use of infrastructure.

##### 4.3.1.1 Water Supply

The development site will be connected Council's reticulated water system. The provision of water will be through extension of existing council infrastructure such that all proposed residential lots will be serviced by reticulated water. A layout of the trunk and internal water system is included in the civil drawings at **Appendix G**.

MWH consultants, on behalf of the applicant, have engaged with Queensland Urban Utilities (QUU) to discuss water supply and sewerage network planning for the proposed development. This meeting was held on 29 April 2014. Details and outcomes of this meeting are provided at **Appendix H**.

##### 4.3.1.2 Sewer

Sewerage connections will be provided through extension of existing town infrastructure, such that all proposed residential lots will be connected to sewer. The existing trunk sewer is located in Harry Ratnam Park on the western side of Goodna Creek. As such a connection to this sewer through Goodna Creek will be required to service the development. A layout of the trunk and internal sewer system is included in the civil drawings at **Appendix G**. A Water Supply and Sewerage Assessment report is intended to be undertaken however we are awaiting QUU sign off on the EP's for the sewer. As such this will be provided as soon as it is available for consideration.

##### 4.3.1.3 Electricity, Gas and Telecommunications

All residential lots will be provided with network connections including electricity, gas and telecommunications.

#### 4.3.2 Bulk Earthworks

Earthworks are required to alter the existing topography to provide for residential lots. The civil drawings at **Appendix G** include preliminary earthworks layout plans. The layout of the estate has been designed to be responsive to topography to reduce the amount of earthworks and retaining required. The vast majority of the estate can be developed with cut or fill less than 1m, however there are isolated areas where cut or fill more than 2m is required. A response to Council's Earthworks Code has been completed and is included at **Appendix N**.

### 4.3.3 Flooding

The development site is mapped as being at risk of inundation under the Flooding & Urban Stormwater Flow Path Areas Overlay, including the ARI 20 and ARI 100 events. This is primarily in association with Goodna Creek and its associated tributaries, and resultantly a minority of the proposed lots will be located in the hazard area. To address this, earthworks will be undertaken to ensure that all habitable areas can be located a safe height above the event level as required.

### 4.3.4 Stormwater

The development seeks a Voluntary Water Quality Nutrient Offset Payment in lieu of meeting the State Planning Policy (SPP) post construction design objectives (Table A) directly on the site, specifically annual load reductions.

Following a meeting held with council officers on the 2<sup>nd</sup> of April 2014, consideration would be given for this request subject to the following conditions;

- Sufficient area in Ratnam Park to accommodate additional storm water, with consideration to other requirements in the park including koalas, etc.
- Demonstrate appropriate mitigation measures to control dispersive soils evident on the site (based on ICC mapping). This includes managing sediment from construction through to the operational phase.
- Compliance to Implementation Guideline 28, Dispersive Soil Management. Need to submit a Soil Management plan as part of the DA.
- Need to satisfy Table A State Planning Policy during the construction phase. For peak flow for the 1-year and 100-year ARI event, use constructed sediment basing to attenuate the discharge rate of the Stormwater from the site.

Subsequent advice from Council is that there is sufficient area in Ratnam Park to accommodate our development site into a regional Stormwater Quality Strategy.

A Dispersive Soil Management Plan (DSMP) has been prepared and the recommendations from this plan have been incorporated into the Construction Phase Stormwater Strategy, including the concept Erosion Sedimentation Control Plan (ESCP) which is also submitted with the application. This strategy demonstrates compliance to SPP (Table A) Stormwater Management design objectives.

The DSMP confirms the following:

- The site typically shows subsoils of a high to very high dispersive nature.
- Topsoil ranges from acidic to strongly acidic and is considered that the addition of ag. Lime (3-10kg/m<sup>3</sup>) be adopted to promote optimum growth conditions as establishment.
- SOILOSS value of approximately 76t/ha/yr, demonstrating that the site exhibits an overall “very low” erosion hazard risk and belongs to “Soil Loss Class 1”

Based on these outcomes the key recommendations are:

- All exposed subsoils during bulk earthworks be covered with confirmed non-dispersive topsoils to a minimum depth of 150mm and appropriately re-vegetated to achieve necessary grass coverage.
- All excavated and backfilled subsoil materials associated with service excavations (eg. stormwater; sewer) have a higher susceptibility to tunnel erosion and shall also be treated with agricultural gypsum (NV >90%) at a rate of ≥14.0 kg/ m<sup>3</sup> equivalent for Vertosol subsoils and ≥10. kg/m<sup>3</sup> equivalent for Dermosol subsoils within the immediate 1.0m (vertical height) of pipe cover and the surface covered with non-dispersible (or treated) soil materials to a minimum depth of 150mm;
- All excavated and backfilled subsoil materials associated with service excavations shall be adequately compacted during back-filling to a minimum 95% compaction and subsequently verified at 1 test per layer per 40 linear meter, or to ICC specific geotechnical requirements, whichever is greater;

- Within any proposed areas subject to concentrated stormwater flow (such as permanent swale drawings and the proposed drainage reserve) and any batter surfaces (>1V:4H) of the development, the surface 300mm of subsoil materials shall be treated with agricultural gypsum (NV <90%) at a rate of  $\geq 14.0$  kg/m<sup>3</sup> equivalent for Vertosol subsoils and  $\geq 10.0$  kg/m<sup>3</sup> equivalent for Dermosol subsoils;
- Temporary Sediment Basins shall be designed as “Type D” in accordance with ICEA. Type D can be described as “wet basins” that require flocculation prior to discharge.

In addition the sediment basins and Northern detention basins have been designed for the peak flow 1-year and 100-year ARI event to attenuate the discharge rate of stormwater site in order to satisfy the waterway stability and flood flow management during the construction phase.

## Refer Appendix I – Stormwater Management Plan

### 4.4 Environmental Management

An Environmental Management Report has been prepared by Saunders Havill (refer **Appendix L**). This report provides a detailed overview of the ecological work undertaken over many years, associated with this application and the previous application over the site. It is considered this proposal provides for a superior ecological outcome to the previous proposal, despite involving clearing of slightly more of the vegetation on the site. This is because the vegetation to be retained is now all located in a consolidated area and significant replanting offsets and management documents are proposed to meet the requirements of our Commonwealth Government approval including:

- Preparation of a Woodlinks Village Koala Management Plan
- Detailed Vegetation Management Plans for each stage of works including the sequencing of clearing and use of temporary exclusion fencing around all works areas
- A Fauna Management Plan – based of the leading practice Draft Code of Practice for the Welfare of Animals Affected by Land Clearing.
- Full use of Registered Fauna Spotters – before, during and post clearing works.
- Education for new residents on appropriate animal management (e.g. domestic dogs)
- Fencing controls for animal management in identified locations
- Planting restrictions through development and future allotment zones
- Development of the Goodna Creek parkland based on an environmental interpretation and education

Copies of these detailed documents, once approved by the Commonwealth will be provided to the Council. Relevant background reports and searches are also included in the Environmental Management Report as well as an explanation of compliance with the State requirements, and a response to Council’s Environmental Management Code.

### 4.5 Construction Management

During construction a number of management plans will need to be implemented to ensure appropriate management of the site. Geotechnical analysis of the site has been undertaken which shows that the site is affected by dispersive soils. As such, a Dispersive Soils report (refer **Appendix M**) has been addressed outlining management strategy for these soils on the site.

In addition an Erosion and Sediment Control Plan is included in the civil drawings at **Appendix G** to outline those measures to be implemented as part of the site works. These include grass filter strips, diversion channels, sediment fences, mulch bank and straw bale barriers. This plan has been developed based on the Erosion Potential Assessment Report at **Appendix K**.

### 4.6 Bushfire Management

A bushfire hazard assessment was undertaken to determine the appropriate bushfire protection management measures for the site (see section 5.3), with consideration to site slope and vegetation. The following measures have been recommended to enhance the protection of human life and assets on site in the event of a bushfire:

- The implementation of Managed Fuel Zones between the assets and the hazardous vegetation to the north, east and southwest;
- All dwellings and habitable buildings within the site should have due regard to the specific considerations given in the Building Code of Australia (BCA) 2014;
- Bushfire Attack Levels as outlined in AS3959-2009 apply to all dwellings within 100m of hazardous vegetation;
- A 4m fire trail to exist along the northern boundary to provide enhanced access to the northern lots for emergency vehicles;
- Roads are to be constructed to provide safe operational access to structures while residents are seeking to evacuate;
- Consideration should be given to suitably managing landscaping and fuel loads on site to decrease potential fire hazards on site; and
- The development is to be connected to the reticulated water supply and that hydrants (double-headed standpipes) be clearly marked and provided for the purposes of fire protection. Fire hydrant spacing, sizing and pressure should comply with AS2419.1-2005.

The Bushfire Hazard Assessment is provided at **Section 5.2**.

#### 4.7 Crawford Street

The Applicant intends to make a request for the road closure of Crawford Street. Crawford Street is an existing unconstructed road reserve. No person uses or has constructed access to Crawford Street existing. It does not provide benefit to us to access our estate from Crawford Street and the land to the south also has extensive alternative road frontage and access should it redevelop.

In the event that approval for the closure of Crawford Street is given, the Applicant would purchase the road reserve, and consider whether this land should be developed as part of this estate. Our planning provides for Stage 14 fronting Crawford Street that could be incorporated with the road reserve as part of a new application to provide for additional residential lots.

## 5. Key Considerations

### 5.1 Native Vegetation Clearing

The development site is significantly affected by the presence of remnant vegetation over the majority of the site, mapped as containing:

- Regional Ecosystems that are *a Least Concern*
- Regional Ecosystems that are *Of Concern*
- Regional Ecosystems that are *Endangered*

Essential Habitat for the Koala (*Phascolarctos cinereus*) also occurs over the site. A separate approval has been obtained from the Department of the Environment (Commonwealth) for this purpose in accordance with the *Environmental Protection and Biodiversity Conservation Act 1999*. Remnant Vegetation mapping is provided at **Appendix B**.

The matter of vegetation clearing over the site has been addressed extensively through previous approvals processes over the site involving previous incarnations of the Department of Natural Resources and Mines (DNRM). Through previous approvals processes, a former landowner arranged a Property Map of Assessable Vegetation (PMAV) for the subject site with environmental consultants Saunders Havill, and the resulting report (dated May 2011) is attached at **Appendix L**. The report was prepared in response to state mapping for the Vegetation Management Act 1999. The report relates directly to the subject site in its pre-amalgamation format (formerly 4 separate titles). We note that no works or improvements have been undertaken on the land since.

The state mapping of the day nominated the following Regional Ecosystems as present over the site:

- Regional Ecosystems that are *a Least Concern*
- Regional Ecosystems that are *Of Concern*
- Regional Ecosystems that are *Endangered*

The report sought to verify the categories of vegetation present over the site, and did so by consolidating the cumulative findings of previous site assessments, as well as concurrence agency responses provided by the former Department of Natural Resources & Water (now DNRM). The results confirmed the absence of 'endangered' Regional Ecosystems over the land.

RPS on behalf of the applicant entered into pre-lodgement discussions with DNRM to discuss these previous findings, and to concurrently confirm the referral matter triggered by the proposed clearing of vegetation mapped as 'of concern' and 'endangered' remnant vegetation under the Vegetation Management Act.

As a result of these investigations a response from DNRM, via SARA, has been received approving the previous PMAV prepared by Saunders Havill and recognising that no endangered vegetation exists on the site – refer **Appendix O**.

The key conclusions drawn in DNRM's response include:

- The vegetation present best represents 'of concern' rather than 'endangered' remnant vegetation;
- DNRM has reflected the classification change on a new PMAV (provided with the response at **Appendix O**) which replaces the Regulated Vegetation Management Map and Supporting Vegetation Management Map;
- The zoning applicable to the lots (Residential Low Density and Recreation) are considered to meet the definition of 'urban area' as per Schedule 26 of the *Sustainable Planning Regulation 2009*. The purpose

of the clearing is for a residential subdivision, which is considered to meet the definition of 'urban purpose' in Schedule 26 of the *Sustainable Planning Regulation 2009*. Clearing is therefore an exempt activity under Schedule 24 of the *Sustainable Planning Regulation 2009*.

## 5.2 Bushfire Hazard

### 5.2.1 Aims of Assessment

The overall outcome of this assessment is to demonstrate that the development does not increase the risk caused by bushfires to people, property or public safety. The relevant State planning provisions do not provide prescriptive criteria or acceptable solutions to increase bushfire prevention; however the local planning scheme (Ipswich Planning Scheme) that is applicable to this site, offers specific outcomes and probable solutions for bushfire risk areas. The proposed development is required to address the Queensland State Planning Policy and Part 11, Division 4 - Natural Hazards of the Ipswich Planning Scheme.

The process to demonstrate the development achieves an acceptable level of bushfire protection includes:

- Determine the classification of the vegetation on and surrounding the development (out to a distance of 140 metres beyond the property boundary), in accordance with the vegetation classification system contained in *AS3959-2009*;
- Undertake an assessment of this vegetation to determine if it is deemed to be a bushfire hazard;
- Undertake an assessment to determine the slope of the land on and surrounding the development;
- Undertake a bushfire assessment for the proposed development that addresses the following matters:
  - » The extent to which the development will provide Managed Fuel Zones (MFZ);
  - » The siting and adequacy of water supplies for fire fighting purposes;
  - » The capacity of public roads to handle increased volumes of traffic in the event of a bushfire emergency;
  - » Whether or not public roads in the vicinity that link with the (proposed / existing) fire trail network have two-way access;
  - » The adequacy of emergency access/egress to the proposed development;
  - » The adequacy of bushfire maintenance plans and fire emergency procedures for the proposed development; and
  - » The construction standards to be used for the proposed buildings within the proposed development.

It is noted that there is currently no model bushfire overlay code; accordingly, the Assessment Criteria of the Ipswich Planning Scheme for the Bushfire Hazard Overlay have been adopted for the purpose of managing the bushfire hazard.

### 5.2.2 Bushfire Prone Land

Bushfire activity is prevalent in landscapes that carry fuel and the two predominant bushfire types are grassland and forest fires. Factors such as topographic characteristics and quantity of fuel loads influence the intensity and spread of fire. The scale of a bushfire hazard is tailored to the characteristics of the hazard, the size and characteristics of the affected population, types of land use exposed to bushfire, predicted development growth pressures and other factors affecting bushfire risk.

The site has been identified in the SPP Interactive Regional Mapping as 'High' and 'Very high' bushfire hazard area (**Figure 4**). Areas outside the site mapped as being bushfire hazard extend further southwest into undeveloped regions, but are mostly discontinued further north due to urban development. Nonetheless, it is

considered the vegetation in the surrounding environment has the potential to create a bushfire hazard. It is considered prudent to demonstrate that the development will achieve an acceptable level risk.

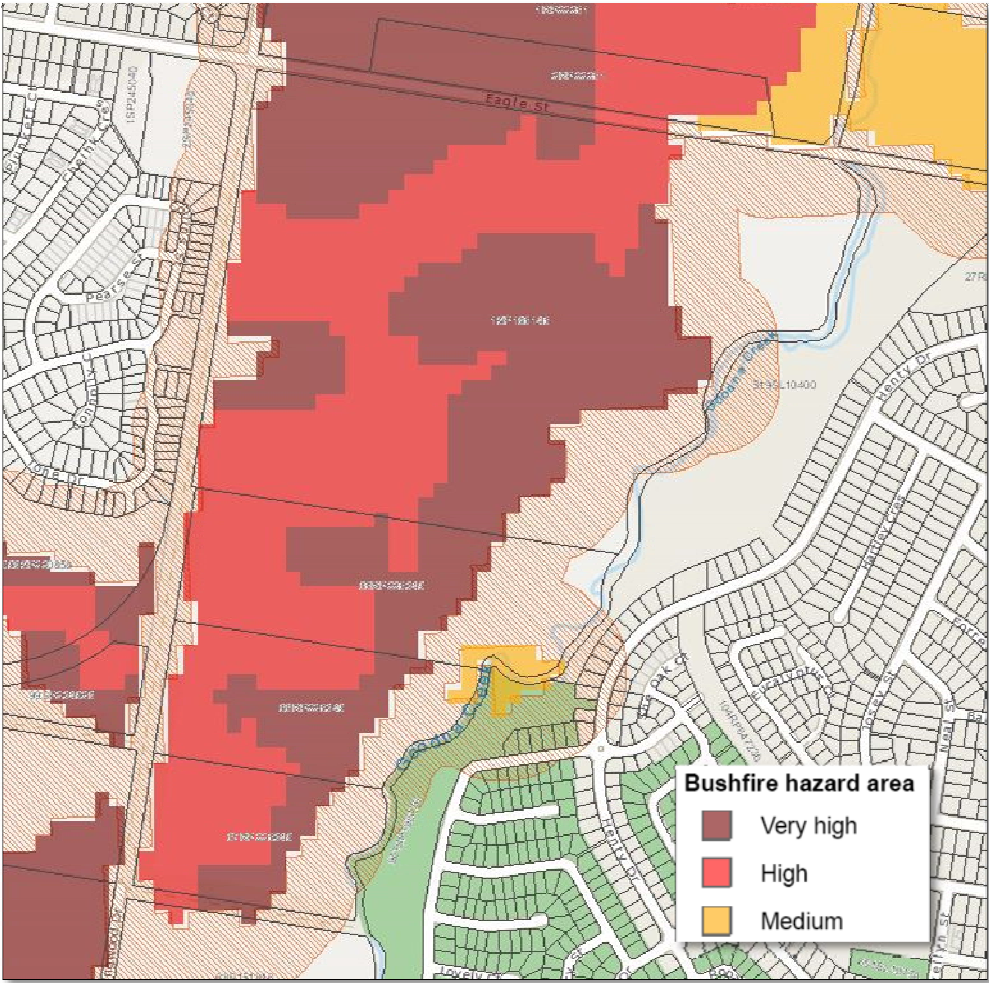


Figure 4 SPP Bushfire Mapping

5.2.3 Vegetation Assessment

In accordance with AS3959-2009, an assessment of the vegetation over a distance of 100m in all directions from the site was undertaken. The predominant vegetation was identified in all directions from the site. The vegetation classification is based on vegetation classifications described in Table 2.3 of AS3959-2009.

Vegetation occurring throughout the site consists of forest.

Vegetation Classification

Direction of Vegetation	Vegetation Community	Classification of Vegetation Formations
North	Forest	Forest
East	Easement/Forest	No hazard/Forest
South	Forest	Forest
West	Residential Development/Forest	No hazard/forest



**5.2.4 Effective Slope Assessment**

As outlined in AS3959-2009, an assessment of the slope under the classified vegetation was undertaken. The topography of the site has been evaluated to identify both the average slope and by identifying the maximum slope present. These values help determine the level of gradient which will most significantly influence the fire behaviour of the site. Refer to **Figure 5**.

The effective slope underneath the vegetation constituting the hazard is documented below.

**Site Slope Assessment**

Direction of Vegetation	Hazard	Slope Classification
North	Forest	0-<5° Down Slope
East	No hazard/Forest	Cross slope
South	Forest	Cross slope
West	No hazard/forest	Cross slope



**Figure 5 Slope and Vegetation Assessment**

### 5.2.5 Bushfire Protection Measures

The Queensland State Government *Single State Planning Policy* and the *Ipswich Planning Scheme – Part 11, Division 4* were used to determine the appropriate measures for protection from bushfire hazards across the site and immediate vicinity.

Requirements outlined by the SPP include the following:

- Development avoids natural hazard areas or mitigates the risk of the natural hazard;
- Development supports, and does not unduly burden, disaster management response, or recovery capacity and capabilities;
- Development directly, indirectly and cumulatively avoids an increase in the severity of the natural hazard and the potential for damage on the site or to other properties;
- Development avoids the risk to public safety and the environment from the location of hazardous materials and the release of these materials as a result of a natural hazard; and
- Development maintains or enhances natural processes and the protective function of landforms and vegetation that can mitigate risks associated with the natural hazard.

Local circumstances vary widely, as do the proposed land uses. In recognition of the variability of individual circumstances, an appropriate combination of bushfire protection measures are recommended to achieve an acceptable outcome.

Appropriate combinations not only depend upon geographic location and the site circumstances but also on the nature of the proposed use/s.

### 5.2.6 Managed Fuel Zone

Areas of defendable space are created by firebreaks that separate lots from areas of bushfire hazard. The Bushfire Hazard Overlay Code in the Ipswich Planning Scheme provides several acceptable solutions to provide setbacks, access and defendable space for emergency vehicles. These firebreaks will be referred to as Managed Fuel Zones (MFZ).

A MFZ is an area surrounding a development that is managed to reduce the bushfire hazard to an acceptable level to mitigate the risk to life and property. Perimeter roads are the preferred mechanism to provide a MFZ, however fire trails with minimum width of 6m may be considered part of a wide MFZ.

A MFZ can include the following:

- lawns;
- discontinuous gardens;
- swimming pools;
- roads, driveways and managed verges;
- unattached non-combustible garages with suitable separation from the dwelling;
- open space / parkland; and
- car parking.

A MFZ in the form of a firebreak extends from the edge of the development to the hazard. The firebreak aims to ensure that the presence of fuels which could contribute to a fire event / intensity, are minimised close to the development. The performance of the firebreak must be such that:

- there is minimal fine fuel at ground level which could be set alight by a bushfire; and
- any vegetation in the firebreak does not provide a path for the transfer of fire to the development – that is, the fuels are discontinuous.

The presence of a few shrubs or trees in the firebreak is acceptable provided that they:

- do not touch or overhang any buildings;
- are well spread out and do not form a continuous canopy;
- are not species that retain dead material or deposit excessive quantities of ground fuel in a short period or in a danger period; and
- are located far enough away from any dwelling so that they will not ignite the dwelling by direct flame contact or radiant heat emission.

Woodpiles, wooden sheds, combustible material storage areas, large areas / quantities of garden mulch, stacked flammable building materials etc. are not be permitted in the firebreak.

### 5.2.7 Determining the Appropriate Setbacks

AS3959-2009 applies a Fire Danger Index (FDI) of 40 to the entire state of Queensland. MFZs are not mandatory under the SPP, however adequate defendable space is required for each dwelling affected by a high and very high bushfire hazard. The recommended setbacks have been calculated based on the topography and the vegetation on and around the site. The table below outlines the recommended Managed Fuel Zones and they are shown on **Figure 6**.

**MFZ Components of the site**

Direction of Hazard	Hazard	Slope Classification	MFZ
North	Forest	0-<5° Down slope	20m
East	No hazard/Forest	Cross slope	20m (Existing)
South	Forest	Cross slope	20m
West	No hazard/forest	Cross Slope	20m (Existing)

The existing 40m power line easement to the east provides a sufficient area of defensible space between the asset and the hazard. Regular maintenance to manage the vegetation growth within this easement occurs, and will suffice as a suitable MFZ for this boundary.

Collingwood Drive borders the length of the site to the west providing sufficient defensible space from the small portion of potentially hazardous vegetation to the south of this area.

Vegetation on the neighbouring property to the south will be separated by Crawford Street subsequent to its construction. However, it is only 17m wide, falling short of the required 20m MFZ for the lots to the south.

Two designated park lands on site will also act as MFZs on site. These are displayed in **Figure 6**.

**5.2.7.1 Staged Development**

The proposed residential development is a staged approach consisting of fourteen consecutive stages. During each construction phase, it is recommended that temporary 100m MFZ be implemented to avoid the application of AS3959-2009. The Bushfire Attack Level (BAL) is the measure by which AS32959-2009 determines the level of construction required. The BAL is calculated at the time of construction; accordingly, should a future land owner seek consent for the construction of a dwelling prior to a subsequent stage being developed, the provisions of AS3959-2009 will apply. Although it is acknowledged that an approved subdivision applies to the adjoining land to the north, the BAL calculation is an assessment of the current bushfire threat as there is no guarantee that future stages of the development will be completed. The rationale in clearing an additional 100m of vegetation at the completion of each stage is to firstly ensure protection of life and property and secondly to avoid prejudice to early lots where in the absence of temporary APZs, higher BALs under AS3959-2009 would occur until such time that future development occurred. As such the final BAL ratings required for the entire development are realised during the release of each stage.

As a result of the implementation of a 100m MFZ to the north of the site prior to construction of Stages 4 and 8, the lots associated within these stages will not be subject to BALs under the AS3959-2009 standard from the northern hazard. A 20m MFZ including a 4m fire trail is still recommended for the northern boundary providing additional emergency access to the adjacent lots.



Figure 6 Managed Fuel Zones and Bushfire Attack Level

### 5.2.8 Building Design and Construction

In addition to the statutory planning instruments, all new residential dwellings must be constructed in accordance with the National Construction Code: Building Code of Australia 2014 (BCA). The BCA identifies residential buildings as Class 1 buildings. All Class 1 buildings within designated bushfire prone lands must comply with the relevant construction requirements prescribed by Australian Standard AS3959-2009 *Construction of Buildings in Bushfire Prone Areas*. Accordingly the *Performance Requirements* of the BCA will only be satisfied if the buildings are constructed in accordance with AS3959-2009. The materials and requirements for dwellings increase the closer a dwelling is located to a bushfire hazard. These additional requirements may include the installation window screens or shutters, thicker glazing, avoiding the use of combustible materials, and protection of openings such as sub-floors and vents/weepholes.

#### 5.2.8.1 Bushfire Attack Levels

The BAL is influenced by vegetation type and topography. The table below is an excerpt of AS3959-2009 which will apply to all residential development of the site within 100m of a designated bushfire hazard area.

**Determination of BAL - FDI 40 (Queensland)**

Vegetation classification	Bushfire Attack Levels (BALs)				
	BAL-FZ	BAL-40	BAL-29	BAL-19	BAL-12.5
	Distance (m) of the site from the predominant vegetation class				
	All upslopes and flat land (0 degrees)				
A. Forest	<10	10-<13	13-<20	20-<28	28-<100
B. Woodland	<6	6-<9	9-<13	13-<19	19-<100
C. Shrubland	<7	7-<9	9-<13	13-<19	19-<100
D. Scrub	<10	10-<13	13-<19	19-<27	27-<100
E. Mallee/Mulga	<6	6-<8	8-<12	12-<17	17-<100
F. Rainforest	<4	4-<5	5-<8	8-<12	12-<100
G. Grassland	<4	4-<5	5-<8	8-<12	12-<50
	Downslope >0 to 5 degrees				
A. Forest	<12	12-<16	16-<24	24-<34	34-<100
B. Woodland	<8	8-<11	11-<16	16-<23	23-<100
C. Shrubland	<7	7-<10	10-<15	15-<22	22-<100
D. Scrub	<11	11-<15	15-<22	22-<31	31-<100
E. Mallee/Mulga	<7	7-<9	9-<13	13-<20	20-<100
F. Rainforest	<5	5-<7	7-<10	10-<15	15-<100
G. Grassland	<4	4-<6	6-<9	9-<14	14-<50

The corresponding Sections of AS3959-2009 for specific construction requirements are in the table below.

#### **BAL and corresponding Sections for Construction Requirements (AS3959-2009)**

Bushfire Attack Level (BAL)	Classified vegetation within 100 m of the site and heat flux exposure thresholds	Description of predicted bushfire attack and levels of exposure	Construction Section
BAL—LOW	See Clause 2.2.3.2	There is insufficient risk to warrant specific construction requirements	4
BAL—12.5	$\leq 12.5 \text{ kW/m}^2$	Ember attack	3 and 5
BAL—19	$> 12.5 \text{ kW/m}^2$ $\leq 19 \text{ kW/m}^2$	Increasing levels of ember attack and burning debris ignited by windborne embers together with increasing heat flux	3 and 6
BAL—29	$> 19 \text{ kW/m}^2$ $\leq 29 \text{ kW/m}^2$	Increasing levels of ember attack and burning debris ignited by windborne embers together with increasing heat flux	3 and 7
BAL—40	$> 29 \text{ kW/m}^2$ $\leq 40 \text{ kW/m}^2$	Increasing levels of ember attack and burning debris ignited by windborne embers together with increasing heat flux with the increased likelihood of exposure to flames	3 and 8
BAL—FZ	$> 40 \text{ kW/m}^2$	Direct exposure to flames from fire front in addition to heat flux and ember attack	3 and 9

As previously discussed, a staged approach to the construction of the development will avoid higher than necessary BALs on the lots within the development that follow the initial stages. Required BALs for the site have been assessed in relation to the hazards surrounding the development. **Figure 6** displays these BALs.

Direction of Hazard	Vegetation Classification	Slope Class	Separation Distance	BAL	Construction Section (AS3959-2009)
North	Forest	0-<5° Downslope	<12m	BAL – FZ	Sect 4, 5, 6, 7, 8 and 9 of AS3959-2009 and Sect A3.7 of PBP Addendum Appendix 3.
			12-<16m	BAL – 40	
			16-<24m	BAL – 29	
			24-<34m	BAL – 19	
			34-<100	BAL – 12.5	
East	No hazard/ Forest	Cross slope	<10m	BAL – FZ	
			10-<13m	BAL – 40	
			13-<20m	BAL – 29	
			20-<28m	BAL – 19	
			28-<100	BAL – 12.5	
South	Forest	Cross slope	<10m	BAL – FZ	
			10-<13m	BAL – 40	
			13-<20m	BAL – 29	
			20-<28m	BAL – 19	
			28-<100	BAL – 12.5	
West	No hazard/	Cross slope	<10m	BAL – FZ	

Direction of Hazard	Vegetation Classification	Slope Class	Separation Distance	BAL	Construction Section (AS3959-2009)
	Forest		10-<13m	BAL – 40	
			13-<20m	BAL – 29	
			20-<28m	BAL – 19	
			28-<100	BAL – 12.5	
			<10m	BAL – 40	

### 5.2.9 Water

Associated with any kind of development upon the land, it is expected that water mains will be extended into the site. Provision of access to this supply should be provided for fire-crews in the form of readily accessible and easily located fire hydrants. Fire hydrant spacing, sizing and pressure should comply with AS 2419.1 – 2005. Hydrants are not to be located within any road carriageway. All above ground water and gas service pipes external to the building are metal, including and up to any taps.

### 5.2.10 Fire Fighting Capability

A fire within the site and surrounding areas would be attended in the first instance by crew from the Ripley Fire Station. To facilitate quick and efficient action by the Fire Brigade / Rural Fire Service upon arrival, it is recommended that all necessary connections / pumps etc be clearly marked and visible, and in good working order.

### 5.2.11 Fuel Management

Fuel loads on site must also be considered to reduce potential fire hazards. Ongoing maintenance is required to ensure that regrowth and fuel load replacement does not occur, particularly within the recommended Managed Fuel Zones.

Careful thought must be given to the type and physical location of any proposed site landscaping. Inappropriately selected and positioned vegetation has the potential to 'replace' any previously removed fuel load.

Bearing in mind the desired aesthetic and environment sought by the site rehabilitation, some basic principles have been recommended to help minimise the chance of such works contributing to the potential hazard on site.

Whilst it is recognised that fire-retardant plant species are not always the most aesthetically pleasing choice for site landscaping, the need for adequate protection of life and property requires that a suitable balance between visual and safety concerns be considered. The southern areas of the site should avoid landscaping with highly flammable species and dense, connected plantings of species.

It is reiterated that it is essential that any landscaped areas and surrounds are subject to ongoing fuel management and reduction to ensure that fine fuels do not build up.

### 5.2.12 Landscaping – Planting Guidelines

The principles of landscaping for bushfire protection aim to:

- Prevent flame impingement on dwellings;



- Provide a defensible space for property protection;
- Reduce fire spread;
- Deflect and filter embers;
- Provide shelter from radiant heat; and
- Reduce wind speed.
- Plants that are less flammable have the following features;
- High moisture content;
- High levels of salt;
- Low volatile oil content of leaves;
- Smooth barks without 'ribbons' hanging from branches or trunks; and
- Dense crown and elevated branches.

Avoiding understorey planting and trimming the lower limbs of trees also assists in reducing fire penetration into the canopy.

Trees with loose, fibrous or stringy bark should be avoided. These trees can easily ignite and encourage ground fire to spread up to, and then through the crown of trees.

In MFZs, the design and management of the landscaped areas in the vicinity of buildings have the potential to improve the chances of survival of people and buildings. Generally landscaping in and around a bushfire hazard should consider the following:

- Priority given to retaining species that have a low flammability;
- Priority given to retaining species which do not drop much litter in the bushfire season and which do not drop litter that persists as ground fuel in the bush fire season;
- Priority given to retaining smooth barked species over stringy bark; and
- Create discontinuous or gaps in the vegetation to slow down or break the progress of fire towards the dwellings.

Landscaping within MFZs should give due regard to fire retardant plants and ensure that fuel loads do not accumulate as a result of the selected plant varieties.

The MFZ should provide a tree canopy cover of less than 15% and should be located greater than 2 metres from any part of the roofline of a dwelling. Grasses and groundcovers should be no more than 10 centimetres in height.

### 5.3 Residential Design and Amenity

**Appendix D** contains proposal plans for the development including plans of development for all lots. The plans of development are intended to provide clear design guidelines for future houses on the site. The proposal plans categorise the lots within the estate into 6 types based on their frontage and size. For each lot type the plan of development specifies a range of provisions. These provisions are broadly outlined below:

- Front setbacks for living area, articulation elements ie. porches and verandahs and to the garage. In general on small lots the front setback is minimum 4m to the house and minimum 5.5m to the garage and for larger lots a minimum of 6m to the house and garage;

- Setbacks to the secondary frontage for corner lots of a minimum of 2.5m;
- A minimum 3m rear setback;
- Minimum side boundary setbacks between 0 and 2m;
- Garage location, including garages to be located to the built to boundary wall where a built to boundary wall has been specified and that all garage are setback a minimum of 1m behind the main façade of the dwelling;
- Maximum of 1 driveway per dwelling;
- Requirement for 2 carparking spaces on site, with at least 1 to be covered;
- Alternative setbacks for irregular shaped lots as depicted on drawings 113258-24 and 113258-25;
- Private outdoor living space not less than 16m<sup>2</sup> with a minimum dimension of 4m directly accessible from a ground floor living area is required.

The mix of lot types will provide for a diversity in housing outcomes, with lots ranging from 300m<sup>2</sup> to 755m<sup>2</sup> in area. The layout has been considered in light of site constraints, in particular topography to ensure that cut and fill is minimised and large retaining walls are avoided. Generally cut and fill on the site does not exceed 2m.

The development also provides a range of public open space areas for residents on site that are well connected using footpaths and pathways. The regional cycleway will provide opportunities for residents to connect to the Redbank Plains centre.

The structure plan at **Appendix C** also provides for consideration of the future development in Phase 2 of Woodlink.

## 6. Planning Assessment

This section provides an overview of the legislative context of the application under the provisions of the SPA.

### 6.1 State Planning Requirements

#### 6.1.1 Single State Planning Policy

The current State Planning Policy (SPP) includes interim development assessment requirements to ensure that state interests are appropriately considered by local governments when assessing development applications where the local government planning scheme has not yet appropriately integrated the state interests in the SPP.

As per Part E of the Single State Planning Policy (SPP), the proposed subdivision triggers application of the SPP with regard to two elements which have not yet been incorporated into the planning scheme:

1. Water Quality (receiving waters) – reconfiguring a lot for urban purposes that involves a land area greater than 2,500m<sup>2</sup> and will result in six or more lots.
2. Natural Hazards (bushfire)- reconfiguration of a lot in a bushfire hazard area.

Given the response to SARA at **Appendix O** on vegetation, a response to the biodiversity state interest has not been provided.

The below table details the interim development assessment requirements applicable to the proposed development.

#### SPP Development Assessment Requirements

SPP Assessment Requirements	Response
<b>Environment &amp; Heritage</b>	
<b>Water Quality - Receiving waters</b>	
(1) Development avoids or otherwise minimises adverse impacts on the environmental values of receiving waters, arising from: <ol style="list-style-type: none"> <li>(a) altered stormwater quality or flow, and</li> <li>(b) wastewater (other than contaminated stormwater and sewage), and</li> <li>(c) the creation or expansion of non-tidal artificial waterways, and</li> </ol>	A Stormwater Quality Management Plan (SQMP) has been prepared to address stormwater requirements of the Local Plan and the State Planning Policy – refer <b>Appendix I</b> .
(2) complies with the SPP code: Water quality (Appendix 2 of the SPP).	The SMP has been prepared to achieve compliance with Appendix 2 of the SPP.
<b>Natural Hazards - Bushfire</b>	
(1) Development avoids natural hazard areas or mitigates the risks of the natural hazard.	Bushfire behaviour is significantly influenced by topography, particularly slope. A series of bushfire protection measures recognising the low risk physical features of the site and surrounding area have been developed and include appropriate managed fuel zone setbacks to provide an area of defensible space between the hazard and the nearest asset.
(2) Development supports, and does not unduly burden, disaster	Consideration to disaster management and the functionality of

SPP Assessment Requirements	Response
management response or recovery capacity and capabilities.	<p>the development to enable emergency service personnel to operate during bushfire event scenarios have been considered a state interest. The development provides a road network made up of several perimeter roads that provide separation between the bushfire hazard and the nearest assets. The recommended continuous loop road provides emergency egress in different directions in the opposite direction from the bushfire threat. By providing several evacuation options residents are able to evacuate whilst eliminating the potential for obstructions to emergency personnel accessing the site. The perimeter roads provide an easily accessible area of defendable space suitable for fire fighting personnel to safely operate within.</p> <p>Essential services and utilities are located underground and therefore unlikely to be at significant risk of damage from bushfire attack. Accordingly, communication, potable water and electricity will continue to be available during and following a bushfire event.</p>
(3) Development directly, indirectly and cumulatively avoids and increase in the severity of the natural hazard and the potential for damage on the site or to other properties.	<p>The buffer areas between the assets and the bushfire hazard will be appropriately maintained as a managed fuel zone to prevent the spread of fire. Similarly, the vegetation within the large areas of open space and recreational areas will be suitably managed to prevent the spread of bushfire.</p> <p>Consideration has been given to the predominant vegetation type and the likely fuel load. Without the benefit of nominated fuel loads for the various vegetation types, the vegetation descriptions and fuel loads identified in AS3959-2009 and PBP (2006) have been adopted.</p>
(4) Development avoids risks to public safety and the environment from the location of hazardous materials and the release of these materials as a result of a natural hazard.	It is unlikely, following the development of the site that large volumes of hazardous materials will be located and stored in high risk bushfire threat areas.
(5) Development maintains or enhances natural processes and the protective function of landforms and vegetation that can mitigate risks associated with the natural hazard.	The recommended bushfire protection measures limit the disturbance to the natural environment primarily due to the extensive road network.

### 6.1.2 State Planning Regulatory Provisions

The SPRP that are applicable to the site and/or proposal are listed in the below table.

State Planning Regulatory Provision	Comment / Compliance
South East Queensland Regional Plan 2009-2031 State Planning Regulatory Provisions	The subject site is contained within the bounds of the Urban Footprint as defined by the <i>South East Queensland Regional Plan 2009 – 2031</i> and is not contained within an identified Development Area. The proposal for a residential use within the Urban footprint is considered to be in keeping with the Regional Plan.
Guragunbah State Planning Regulatory Provision	<b>Not applicable</b> – The subject site is not located in the relevant area.
State Planning Regulatory Provision (Adopted Charges)	<p>The draft State Planning Regulatory Provision (Adopted Charges) may apply to the proposed development application. To date, Ipswich City Council has decided not to prepare an adopted infrastructure charges schedule. Therefore, in the calculation of infrastructure charges, the lesser of the following will apply:</p> <ul style="list-style-type: none"> <li>▪ A charge equivalent to the pre-SPRP amount for development for which the charge is levied under a planning scheme policy or priority infrastructure plan; or</li> <li>▪ The maximum adopted charge for the infrastructure defined under the Draft SPRP – Adopted Charges.</li> </ul> <p>It is noted with respect to infrastructure charges, the Applicant is currently preparing a submission to Council on offsets and credits for the development. This submission will be lodged with Council post lodgement to inform the conditions of the approval, and also to identify any items required to be addressed through an infrastructure agreement.</p>
Yeerongpilly Transit Oriented Development State Planning Regulatory Provision	<b>Not applicable</b> – The subject site is not located in the relevant area.
Off-road motorcycling facility on State-owned land at Wyaralong	<b>Not applicable</b> – The subject site is not located in the relevant area.
State Planning Regulatory Provisions (Adult stores)	<b>Not applicable</b> – The proposal is not for an adult store.
South East Queensland Koala Conservation State Planning Regulatory Provisions	As a permit has been obtained for a 'controlled action' under the EPBC, it is considered that requirements around the conservation of koalas have been sufficiently addressed for the development site.

### 6.1.3 Referrals and State Development Assessment Provisions

Referral matters for this proposal have been assessed against Schedule 7 of the *Sustainable Planning Act 2009 Regulations*.

## Referrals

Sch 7 Ref.	Aspect	Involving	Role	SARA Technical Agency (unless otherwise noted)
Table 3 Item 2	ROL/ MCU	State Transport Infrastructure – exceed threshold	Concurrence	DTMR
Table 2 Item 4	ROL	Clearing Vegetation- Referral not required – refer <b>Appendix O</b> .	Concurrence	DNRM
Table 2 Item 21	ROL	Electricity Infrastructure	Advice	Powerlink
Table 2 Item 35	ROL	Oil & Gas Infrastructure	Advice	APA Group
Table 2 Item 47	ROL	Distributor Retailer	Concurrence	QUU

It is noted that a response from SARA has been received attaching a Property Map of Assessable Vegetation which means that the clearing vegetation referral no longer applies. This is included at **Appendix O**.

A meeting with SARA in relation to TMR matters is scheduled shortly after lodgement, as is a meeting with Powerlink.

Preliminary discussions have been held with APA with respect to the gas pipeline. An APA 400mm high pressure gas pipeline and a 100mm distribution gas pipeline (800 kPag) are located along the Collingwood Drive and Mullins Street frontages, Due to a code changes since the previous risk assessment undertaken by OSD Energy Services in Feb 2007 for the Applicant in relation to the now defunct Eagle Rock Tavern development will need to be reviewed and updated by APA to ensure the pipelines are not impacted by the development.

To accommodate these pipelines the following is required:

- Detailed road design plans for any works on Collingwood Drive and Mullins Street supplied and approved by APA.
- Protective slabs, between road and both pipelines to be included in the design and to be approved by APA.
- All designs for pipeline crossings of third party infrastructure services (sewer, water, power, etc) to comply with the minimum distance requirements of APA, submitted and approved by APA
- Designs must detail risk mitigation measures and detail elevations and cross section designs relative to the APA pipelines
- Site drainage design is to ensure during construction and on-going, that stormwater runoff is diverted away from the Collingwood Drive and Mullins Street easements to prevent soil washout that may expose the pipelines
- Details of any retaining walls or foundations within pipeline easements to be approved by APA
- Maintain minimum distance of 15m between APA pipelines and all powerline earths.

The Applicant will work through these matters with APA during the course of the application.

The State Development Assessment Provisions (SDAP) nominates applicable modules based on the referral agency assessment triggers. The modules and code triggers for assessment under these referral jurisdictions are contained in the below table.

The below table provides an assessment of the relevancy of the applicable State Development Assessment Provisions Codes.

SDAP State Code	Response
<b>Module 2: Regional plans</b>	
2.1 South East Queensland Regional Plan	The development site is located within the Urban Footprint, and the proposed development is for Urban Purposes, therefore achieving consistency with the SEQRP. No further assessment has been undertaken.
<b>Environment and heritage</b>	
<b>Module 8: Native vegetation clearing</b>	A response to the SDAP code for native vegetation clearing has not been provided based on the feedback received from the State – refer <b>Appendix O</b> .
<b>State Transport Infrastructure (thresholds)</b>	
<b>Module 17: Public and Active Transport</b>	
17.1 Public Passenger Transport State Code	A response to sections 17.1 and 17.2 of Module 17 has been undertaken and is provided at <b>Appendix F</b> .
17.2 Active Transport State Code	As above.
<b>Module 18: State Transport Infrastructure Protection</b>	
18.1 Buildings and Structures State Code	A response to sections 18.1, 17.2 and 18.3 has been prepared and is provided at <b>Appendix N</b> .
18.2 Filling and Excavation State Code	As above.
18.3 Stormwater and Drainage Impacts on State Transport Infrastructure Code	As above.
<b>Module 19: State Transport Network Functionality</b>	
19.2 Development Adjacent to Railway, Busway and Light Rail State Code	A response to section 19.2 and 19.3 has been prepared and is provided at <b>Appendix F</b> .
19.3 Transport Infrastructure and Network Design State Code	As above.

## 6.2 Local Planning Requirements

The Ipswich Planning Scheme 2006 is applicable to this application. The relevant provisions are identified and addressed below.

### 6.2.1 Zone

Under the Planning Scheme, the total site is affected by two planning area designation – the ‘Low Density Residential’ zone and the ‘Recreation’ zone. Local zoning around the site is illustrated in the searches provided at **Appendix B**. The Recreation zone is designated specifically to land adjoining the Goodna Creek riparian corridor, with the majority of the lot zoned as Low Density Residential.

The subdivision is consistent with intent of the Low Density Residential zone. Land within the Recreation zone is intended to be retained as open space area and incorporated into the Goodna Creek reserve area, and transferred to Council for management.

A Development Permit for Material Change of Use is sought for single residential on all lots less than 450m<sup>2</sup> and those identified lots in **Appendix D** over 450m<sup>2</sup>. Large regular shaped lots will comply with Council's code requirements.

### 6.2.2 Applicable Codes

The Planning Scheme identifies that the following Codes are applicable to the development.

**Table 3 Applicable Codes**

Applicable Code and Trigger	Location of Response
Urban Areas Code	Refer to <b>Appendix N</b>
Residential Low Density Zone Code	Refer to <b>Appendix N</b>
Recreation Zone Code	Refer to <b>Appendix N</b>
Reconfiguration a Lot Code	Refer to <b>Appendix N</b>
Residential Code	Refer to <b>Section 6.1.2</b>
Vegetation Management Code	Refer to <b>Appendix L</b>
Character Places Overlay Code	Refer to <b>Appendix N</b>
Earthworks Code	Refer to <b>Appendix N</b>
Development Constraints Overlay Code	Refer to <b>Appendix N</b>
Landscaping Code	Refer to <b>Appendix E</b>

#### Urban Areas Code

The Urban Areas Code aims to ensure that integrated communities are created and maintained which enjoy enhanced liveability, effective growth management, sustained economic growth, good urban design and ecological sustainability.

Within this area it is intended that there be a diversity of housing types, and adequate supply of residential land and dwellings that respond to community needs and locational constraints & opportunities. Diversity is provided through increased and mixed residential densities.

The proposed development is consistent with the overarching Urban Areas Code as the creation of the residential estate will release land for residential take up, providing a mix of lot sizes ensuring diversity of housing options. The development of this site represents logical sequencing of development and will consolidate usage of existing networks through efficient use of infrastructure. The proposal is taken to be consistent with this code.

#### Residential Low Density Zone Code

The purpose of the Residential Low Density Zone code is to cater primarily for low density urban residential development that can be provided with network connections in an efficient manner. It is intended that development within this zone provide a mix of low to medium density housing types and allotment sizes in response to community housing needs.

The proposed development is compatible with the intent of the zone.



## Recreation Zone Code

The Recreation Zone seeks to ensure that land is provided to meet recreational needs of residents, with active and passive recreation opportunities, and private and public sporting / recreation facilities. The land designated within the Recreation Zone runs along the eastern length of the property, incorporating the high voltage powerline easement and land beyond, which functions as buffer area to the Goodna Creek riparian corridor. This area is proposed to be retained in a 'natural bushland' open space area as designated on the proposal plans.

A priority of the Recreation zone is to provide for linear / riparian corridors as open space links, and the Goodna Creek area and adjacent land provides an opportunity to preserve, and dedicate additional land to, the riparian corridor. The establishment of a significant public open space area adjacent the creek corridor enables the co-location of recreation facilities within this open space corridor, running the length of the site in a location that is suitable and accessible.

The recreation opportunities provided will encourage both active and passive recreation through the establishment of facilities catering to the community. Of particular importance is the establishment of bicycle/ pedestrian pathways which will provide not only a recreational space, but expand the linkages between the site and surrounding neighbourhood areas.

## Reconfiguration of a Lot Code

The purpose of the Reconfiguration of a Lot code is to allow for the development of safe, convenient and attractive residential neighbourhoods that meet the diverse and changing needs of the community, including provision of a wide choice in good quality housing.

The subdivision broadly achieves consistency with this code, however the inclusion of smaller allotments warrants further discussion with particular regard to lot design.

The code nominates the desirable form for new allotments in terms of size, frontage, setbacks and characteristics. The subdivision design has sought to comply with these provisions, however we note that the concurrent Material Change of Use application seeks to resolve any issues resulting from non-compliance through demonstrating the capacity of all proposed allotments to accommodate a design that is consistent with neighbourhood character and affords a high standard of residential amenity to future residents. As regards the particular outcomes sought by this code, particularly with regard to small lots, the following assertions are made:

- All lots less than 450m<sup>2</sup> are capable of containing a rectangle (suitable for building purposes) of 9 x 15m;
- Building Envelope Plans are nominated for all proposed allotments (refer to the Proposal Plans at **Appendix D**);
- Small lots are dispersed throughout the subdivision to avoid concentration of smaller allotments;
- Corner allotments and lots along the Collingwood Drive / Mullins Street frontage are larger in size to establish neighbourhood character and provide amenity for future residents;
- All lots will contain flat, useable land; and
- Pedestrian linkages will provide pedestrian and bicycle access to local facilities including supermarket, school, and open space areas.

## Vegetation Management Code

A response to the Vegetation Management Code is included with the Environmental Management Report at **Appendix L**. This response identifies that all of the specific outcomes are met with extensive investigation and reporting of ecological values on the site being undertaken.

## Character Places Overlay Code

The site includes a 'Character Place' as nominated in Schedule 2 of the Planning Scheme, which identifies 294 Collingwood Drive, Collingwood Park (former property description Lot 65 on RP225349) as the site of the Verrall Family Pioneer Graves.

The cemetery is described in a 1991 inventory of heritage in Ipswich as possibly containing up to 14 human burials associated with the Verrall family who settled the area in 1860's. It is also possible that neighbours of the Verrall family may also be buried in the area. The first reported burial is of a child in 1880. At the time of the inventory the area was reported to be covered by tree regrowth. Additionally, two graves were identified during a site visit though most above ground burial markers are reported to have been removed by Verrall family members due to prior vandalism.

RPS undertook an Archaeological Geophysical Survey of the site on behalf of the applicant in order to determine the exact location of the grave sites within the cemetery footprint nominated by the Planning Scheme. This involved use of ground penetrating radar (GPR) survey to ascertain the location of the unmarked burials. The GPR survey identified 13 'anomalies' likely to represent human burials. This represents the majority of graves believed to be in the cemetery from oral accounts.

For the purposes of the proposed development, it is intended that the grave sites be retained within a park (lot 9001) to be delivered with Stage 1 of the residential subdivision. Importantly, construction activities will avoid disturbance of the grave sites through erection of an exclusion zone, and no recreation space or equipment will be allowed for in the exclusion area. No GPR anomalies interpreted to be human burials extend beyond the limits of the proposed location of parkland located toward the Collingwood / Mullins Street frontage and including the cemetery area. It is expected that works at the site will be able to proceed without affecting the burial sites.

RPS has initiated contact with Verrall family descendants to ensure appropriate they are appropriately notified and are given opportunities to provide inputs for sensitive management and future interpretation opportunities at the site. A key design for the future park will be the recognition of the Verrall Pioneer Grave sites within the park. Through engagement with the family, appropriate recognition will be included within the landscape outcomes.

Following the GPR survey, a meeting was held on site on 25 May 2014, with Tom and Christine Verrall to discuss the graves located and also to discuss how the cultural heritage of significance of the place could be addressed through the park. Their recommendations are as follows:

- The park to be named the George Verrall Pioneer Memorial Park;
- They have some large sandstone blocks from George Verrall's grave, whose location is know that they would like to return to the site. They would also like to put a fence on top of this grave (which slots into the sandstone blocks). They are happy that the other graves remain as is and unmarked on the ground;
- There is a large sandstone block on the site that they would like to leave in this location as a landscape feature, and for a plaque to be included on this, perhaps outlining the location of the other graves;
- They have 2 pine trees at their house which are descended from the historic pine tree near the former house on the site (down near Goodna Creek). They would like to plant these two pine trees in the graves area;

- They would like an adjoining road to be named after George Verrall and have suggested George Verrall Drive if it is possible. They have also provided significant family history information, that provides other names should the developer wish to include a larger range of Verrall names throughout the estate; and
- They would like to arrange some clearing of trees within the grave area to allow for only good, healthy trees to remain and to allow for planting of the pine trees.

Further consultation to include these into detailed design and consultation will obviously need to occur throughout the project with the Verrall family.

The Archaeological Physical Survey Report is provided at **Appendix J**.

### **Earthworks Code**

The proposal triggers assessment against the earthworks code.

Typically cut and fills are not greater than 2m over the site. The extent of earthworks proposed is shown on the civil drawings at **Appendix G**.

Soil investigations have been undertaken at the site to define the overall erosion hazard and soil dispersion risk of the site soils and to provide appropriate management principles in order to ensure that earthworks does not cause land degradation, ecological processes are maintained and no adverse effects on the environment from soil erosion will occur during the construction phase of the development.

An assessment of the proposal against the earthworks code has been undertaken and is provided with at **Appendix N**.

### **Development Constraints Overlay Code**

A response to the development constraints overlay code is included at **Appendix L**. This code response identifies:

- Bushfire risk can be managed as outlined in the bushfire management section above;
- That the site is not a key resource area or affected by a haul route or existing mine;
- The site is not affected by topography greater than 20%;
- Stormwater on the site can be managed appropriately and adequate flood immunity is provided to future development;
- Adequate noise attenuation will be provided to Collingwood Drive;
- The proposal has no impact on the operational airspace for the Amberley Air Base;
- The site is not located in a motor sports buffer area, wastewater treatment buffer or the Swanbank Power Station buffer;
- The site adjoins a high pressure gas pipeline and consultation with APA with respect to the development has been initiated;
- The site is not within the Warrill Creek Water Catchment;
- The site is affected by high voltage electricity transmission lines and new houses will be adequately separated from these; and
- The site is not near a rail corridor.

### **Landscaping Code**

A Landscape Concept Package has been prepared for the development site by Saunders Havill group, illustrating the landscape strategy for the parks and streetscape landscape areas.

The Plan depicts the broad intent for parkland dedications throughout Woodlinks Village, including the proposed connections, uses and arrangement of embellishments generally proposed.

Design details are intended to be fully resolved at a detailed design phase in conjunction with the consultant engineers and council officers through the Operational Works approval process.

The Landscape Code response is included in the Landscape Concept Package at **Appendix E**.

## 7. Conclusion

This Town Planning report supports a Development Application made by Canberra Estates Consortium No.36 Pty Ltd to Ipswich City Council seeking approval to facilitate a large scale residential estate over land at Collingwood Drive, Collingwood Park.

The application seeks approval for:

- Development Permit for a Reconfiguration of a Lot from 1 into 351 lots plus road, park and balance land; and
- Development Permit for a Material Change of Use for 'Single Residential' for lots non-compliant with the Residential Code, relating to lots both above and below 450m<sup>2</sup> (it is noted this variation predominately applies to smaller lots).

The proposal is generally consistent with the relevant components of the planning scheme particularly the zoning intent of the Low Density Residential zone. The development considers the site specific considerations including: cultural heritage values, vegetation, fauna, slope, soil type, availability of services and accessibility and provides for a layout providing for a range of housing types that is responsive to these considerations.

Detailed background work has been undertaken including EPBC approval and extensive consultation with Council and other relevant parties to ensure that each issue is understood and appropriately integrated into the proposed development.

Approval is recommended subject to reasonable and relevant conditions.