

Table 3.4: Indicative bushfire attack levels for the proposed buildings.

Indicative Bushfire Attack Level for Proposed Buildings on Subject Lots Derived from BAL Contour Map		
Relevant Fire Danger Index (AS 3959-2009 Table 2.1)		80
BAL Determination Method	Method 1 as per AS 3959-2009 s2.2.6 and Table 2.4.3. and Method 2 as per AS 3959-2009 Appendix B.	
Unit No.	Indicative BAL	
1, 2	BAL-12.5	
3, 4	BAL-LOW	
5 - 8	BAL-12.5	
9	BAL-19	
10 - 12	BAL-LOW	
13 - 15	BAL-12.5	
16, 17	BAL-LOW	
18 - 22	BAL-12.5	
23	BAL-LOW	
24 - 26	BAL-12.5	
27	BAL-LOW	
28 - 35	BAL-12.5	
36, 37	BAL-LOW	
38 - 53	BAL-12.5	
54 - 67	BAL-29	
Shops	BAL-12.5	
Clubhouse	BAL-12.5	
Site Manager Residence	BAL-12.5	
Owners Residence	BAL-29	

Note: The BAL Contour Map assumes that the whole of the subject lots and their associated street verges are managed to a low bushfire threat state as per AS3959-2009 s2.2.3.2.

4 Identification of Bushfire Hazard Issues

A narrow strip of forest vegetation exists west of the proposed development on the opposite side of Mandurah Road. Beyond this is Lake Walyungup which is currently dry in the vicinity of the development exposing an area of sparse shrubs. Immediately north of the development are residential and commercial lots and a market garden, which are either partially or wholly managed to a low bushfire threat state (See Figure 4.1).

A residential subdivision of approximately 1 ha lots sits to the south of the development. The dwellings on these lots have managed asset protection zones which will assist in slowing a bushfire approaching from that direction. Further to the south are market gardens which provide a low bushfire threat buffer form the Stakehill Swamp. To the east of the lot is an area of woodland and further east is a low laying wetland area with thick vegetation which would promote a bushfire event in the area (See Figure 4.1).

The whole of the subject lots and the associated road verge along Mandurah Road will be managed to a low bushfire threat state as per AS3959-2009 s2.2.3.2. This will result in the proposed buildings within the development being subject to a BAL rating of BAL-29 or lower.

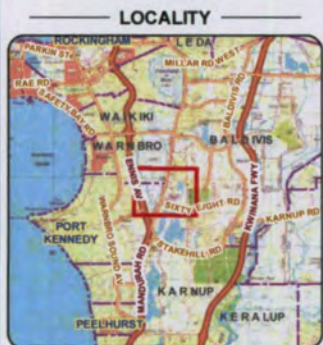
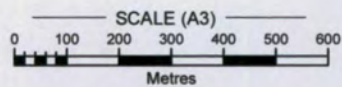
The proposed development will be accessed by 2 separate driveways from Mandurah Road. The internal private driveways will be 6 metres in width and are looped to provide 2 access/egress routes from each unit. Mandurah Road provides access and egress to two different destinations.

A reticulated water supply is available to the subject lots and fire water hydrants will be installed within the development prior to occupancy. The nearest existing fire hydrant is located 38 metres to the west of the subject lots on the opposite side of Mandurah Road.

Figure 4.1

Proposed Development (SPATIAL CONTEXT)

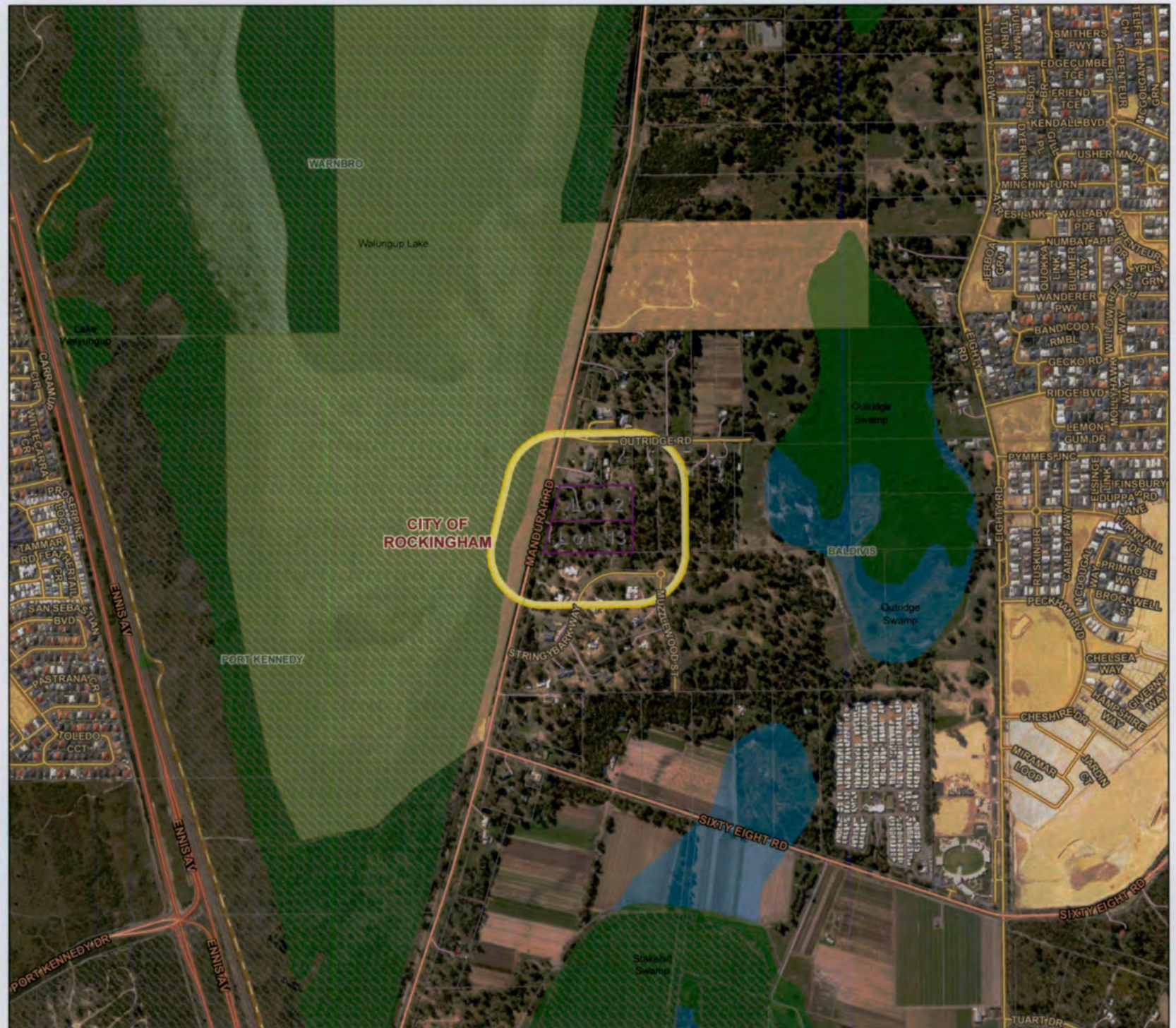
Lots 2 & 13 on Diagram 31973
Mandurah Road
BALDIVIS



Aerial Imagery : Landgate/SLIP
Image Date : AUG 2017

Coordinate System: GDA 1994 MGA Zone 50
Projection: Universal Transverse Mercator Units: Metre
Map compiled by: Russell Wornes
Date map compiled/updated: 29/03/2018

Disclaimer and Limitation: This map has been prepared for bushfire management planning purposes only. All depicted areas, contours and any dimensions shown are subject to survey. Bushfire Prone Planning does not guarantee that this map is without flaw of any kind and disclaims all liability for any errors, loss or other consequence which may arise from relying on any information depicted.
Document Path: G:\BushfireProne\Mapping\MXD\170695_Lots 13 & 2 Mandurah Road, Baldivis BMP (A3L) v18-4.mxd



5 Assessment Against the Bushfire Protection Criteria (BPC)

5.1 Bushfire Protection Criteria - Assessment Summary

Summarised Outcome of the Assessment Against the Bushfire Protection Criteria (BPC)				
Element	Basis for the Assessment of Achieving the Intent of the Element			
	Achieves compliance with the Element through meeting Acceptable Solutions		Achieves compliance with the Element by application of a Performance Based Solution	Minor or Unavoidable Development
	Meets all relevant acceptable solutions	One or more relevant Acceptable Solutions are not <u>fully</u> met. A <u>variation</u> of the solution is provided and justified.	One or more applicable Acceptable Solutions are not met. A solution is developed with the summary presented in this Plan in Section 5.5. The supporting document presenting Bushfire Prone Planning's detailed methodology is submitted separately to the decision makers.	The required supporting statements are presented in this Plan.
Location	✓			N/A
Siting and Design of Development	✓			
Vehicular Access	✓			
Water	✓			

The subject Proposal has been assessed against:

1. The requirements established in Appendix 4 of the Guidelines for Planning in Bushfire Prone Areas, WAPC 2017 v1.3 (the 'Guidelines'). The detail, including technical construction requirements, are found at <https://www.planning.wa.gov.au/8194.aspx>. A summary of relevant information is provided in the appendices of this Plan; and
2. Any endorsed variations to the Guideline's acceptable solutions and associated technical requirements that have been established by the relevant local government. If known and applicable these have been stated in Section 5.2 of this Plan with the detail included as an appendix if required by the relevant local government.

5.2 Local Government Variations to Apply

Local governments may add to or modify the acceptable solutions of the Bushfire Protection Criteria (BPC) and/or apply technical requirements that vary from those specified in the Guidelines for Planning in Bushfire Prone Areas (WAPC). In such instances, this Proposal will be assessed against these variations and/or any specific local government technical requirements for emergency access and water. Refer to Appendices 2 and 3 for relevant technical requirements.

Will local or regional variations to the acceptable solutions (endorsed by WAPC / DFES) and/or the technical requirements contained in the Guidelines, apply to this Proposal.
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N/A

5.3 Bushfire Protection Criteria – Acceptable Solutions Assessment Detail

5.3.1 Element 1: Location

Bushfire Protection Criteria Element 1: Location Assessment Statements and Bushfire Protection Measures to be Applied			
Intent: To ensure that strategic planning proposals, subdivision and development applications are located in areas with the least possible risk of bushfire to facilitate the protection of people, property and infrastructure.			
Acceptable Solution:	A1.1: Development Location	Method of achieving Element compliance and/or the Intent of the Element:	The acceptable solution will be fully met in the future.

The proposed development achieves compliance by:

- By ensuring future building work on the lots can be located on an area that will be subject to potential radiant heat from a bushfire not exceeding 29 kW/m² (i.e. a BAL rating of BAL-29 or less will apply). This can be achieved by using positioning, design and appropriate vegetation removal/modification; and
- Managing the remaining bushfire risk to an acceptable level by the existence/implementation and ongoing maintenance of all required bushfire protection measures, as identified within this Plan. These measures include the requirements for vegetation management, vehicular access and firefighting water supply.

5.3.2 Element 2: Siting and Design of Development

Bushfire Protection Criteria Element 2: Siting and Design of Development Assessment Statements and Bushfire Protection Measures to be Applied			
Intent: To ensure that the siting and design of development (note: not building/construction design) minimises the level of bushfire impact.			
Acceptable Solution:	A2.1: Asset Protection Zone	Method of achieving Element compliance and/or the Intent of the Element:	The acceptable solution will be fully met in the future.

The proposed development achieves compliance by:

- Ensuring future building works on the subject lots can have established around them an APZ of the required dimensions - to ensure that the potential radiant heat from a bushfire to impact future buildings, does not exceed 29 kW/m² (i.e. a BAL rating of BAL-29 or less will apply to determine building construction standards);
- The APZs can be partially established within the lot boundaries. The whole of the subject lots are to be managed to APZ requirements;
- The balance of the APZ's required dimensions are to be contributed by the management of the abutting Mandurah Road verge. The verge is to be maintained to a low bushfire threat state in perpetuity. This is the responsibility of the landowner/s of the subject lots; and
- The landowner/s having the responsibility of continuing to manage the required APZ as low threat vegetation in a minimal fuel state, by maintaining the APZ to the required dimensions and standard, including compliance with the local government's annual firebreak notice.

The APZ technical requirements (Standards) are detailed in Appendix 1.

5.3.3 Element 3: Vehicular Access

Bushfire Protection Criteria Element 3: Vehicular Access			
Assessment Statements and Bushfire Protection Measures to be Applied			

Intent: To ensure that the vehicular access serving a subdivision/development is available and safe during a bushfire event.			
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Acceptable Solution:	A3.1: Two access routes	Method of achieving Element compliance and/or the Intent of the Element:	The acceptable solution is fully met.
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Mandurah Road provides safe access and egress to two different destinations. As a sealed public road, it is available to all residents and the public at all times and under all weather conditions.

Acceptable Solution:	A3.2 Public Road	Method of achieving Element compliance and/or the Intent of the Element:	The acceptable solution is fully met.
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There are no new public roads proposed for this development.

Bushfire Protection Criteria Element 3: Vehicular Access (continued)
Assessment Statements and Bushfire Protection Measures to be Applied

Acceptable Solution:	A3.3 Cul-de-sacs (including a dead-end road)	Method of achieving Element compliance and/or the Intent of the Element:	N/A
Acceptable Solution:	A3.4: Battle-axe	Method of achieving Element compliance and/or the Intent of the Element:	N/A
Acceptable Solution:	A3.5: Private Driveways	Method of achieving Element compliance and/or the Intent of the Element:	The acceptable solution will be fully met in the future.

The construction technical requirements established by the Guidelines and/or the local government can and will be complied with. These requirements are set out in Appendix 2.

In addition to the technical requirements, the internal driveways will have a 6 metre wide trafficable surface. The driveways will be looped to provide 2 different access/egress routes from each building and 2 driveways will be available to provide access onto Mandurah Road.

Acceptable Solution:	A3.6 Emergency Access Way	Method of achieving Element compliance and/or the Intent of the Element:	N/A
Acceptable Solution:	A3.7 Fire Service Access Routes	Method of achieving Element compliance and/or the Intent of the Element:	N/A
Acceptable Solution:	A3.8 Firebreak Width	Method of achieving Element compliance and/or the Intent of the Element:	The acceptable solution will be fully met in the future.

The proposed lots will comply with the requirements of the local government annual firebreak notice issued under s33 of the Bush Fires Act 1954. Firebreaks to be installed prior to development clearance.

5.3.4 Element 4: Water

Bushfire Protection Criteria Element 4: Water Assessment Statements and Bushfire Protection Measures to be Applied			
Intent: To ensure water is available to the subdivision, development or land use to enable people, property and infrastructure to be defended from bushfire.			
Acceptable Solution:	A4.1 Reticulated Areas	Method of achieving Element compliance and/or the Intent of the Element:	The acceptable solution will be fully met in the future.

A reticulated water supply is currently available to the development site. The closest hydrant is located 38 metres west of the subject site on the opposite side of Mandurah Road. Fire hydrants will be installed throughout the development prior to occupancy.

The construction technical requirements established by the Guidelines and/or the local government can and will be complied with. These requirements are set out in Appendix 3.

Acceptable Solution:	A4.2 Non-Reticulated Areas	Method of achieving Element compliance and/or the Intent of the Element:	N/A
Acceptable Solution:	A4.3 Non-reticulated Areas (Individual Lots)	Method of achieving Element compliance and/or the Intent of the Element:	N/A

5.4 Additional Information for Required Bushfire Protection Measures

The purpose of this section of the Plan is:

- As necessary, to provide additional detail (to that provided in the tables of Section 5.3) regarding the implementation of the acceptable solutions for those persons who will have the responsibility to apply the stated requirements;
- As necessary, to detail specific onsite vegetation management requirements such as the APZ dimensions, management of Public Open Space or application of landscaping plans for onsite vegetation;
- To discuss how staged development will be handled, if applicable; and
- As relevant, for future planning stages, consider and discuss the requirements that may apply to future planning applications and the content of the associated BMP. In particular:
 - Any potential Vulnerable or High-Risk Land Uses.
 - Any additional content that will be required in the future BMP.

5.4.1 Vegetation Management

Asset Protection Zone (APZ) Dimensions that are to Apply

The required dimensions of the APZ will vary dependent upon the purpose for which the APZ has been defined. There are effectively three APZ dimensions that can apply:

1. An application for planning approval will be required to show that an APZ can be created which is of sufficient size to ensure the potential radiant heat impact of a fire does not exceed 29kW/m² (BAL-29); and
2. If the assessment has determined a BAL rating for an existing or future building is less than BAL-29, the APZ must be of sufficient size to ensure the potential radiant heat impact of a fire does not exceed the kW/m² corresponding to the lower assessed BAL rating; or
3. Complying with the relevant local government's annual firebreak notice may require an APZ of greater size than that defined by the two previous parameters.

For this proposal the whole of the subject lots and their associated street verges must comply with the requirements for Asset Protection Zones as stated in the Guidelines for Planning in Bushfire Prone Areas and the local government firebreak notice where applicable (See Appendix 1). This is the responsibility of the landowner/s.

'Local Government Firebreak Notice APZ'

Required Minimum Dimensions for the Subject Site

Requirement Set By:	City of Rockingham
Minimum Dimensions:	See City of Rockingham Fire Control Notice
Other Conditions:	If Asset Protection Zone technical requirements are defined in the Notice, the standards and dimensions may differ from the Guideline's APZ Standards, with the intent to better satisfy local conditions. When these are more stringent than those created by the Guidelines, or less stringent and endorsed by the WAPC and DFES, they must be complied with. Refer to Appendix 1.

This requirement has been established through the stated local government's annual fire break notice issued under the Bushfires Act 1954 s33.

Consideration/Implementation of Staged Development

Where the proposed development is to be staged, the remaining onsite vegetation must be managed to achieve the indicative BAL ratings, as stated in Table 3.4 of this Plan, for the proposed buildings in the stage. The required separation distances from classified vegetation must be managed to Asset Protection Zone specifications (See Appendix 1).

The required separation distance from onsite and offsite vegetation to achieve particular BAL ratings are listed in the Table below.

Required Vegetation Separation Distances to Achieve Indicative BAL Ratings							
Vegetation Area	Vegetation Classification	Effective Slope	BAL Assessment Method Applied ¹	BAL Rating and Corresponding Separation Distance (metres)			
		Degrees		BAL-29	BAL-19	BAL-12.5	BAL-LOW
1	Class G Grassland	0	Method 1	8-<12	12-<17	17-<50	50+
2	Class G Grassland	0	Method 1	8-<12	12-<17	17-<50	50+
3	Class B Woodland	0	Method 1	14-<20	20-<29	29-<100	100+
4	Class A Forest	0	Method 1	21-<31	31-<42	42-<100	100+
5	Class B Woodland	>10-15	Method 1	28-<39	39-<53	53-<100	100+
6	Class B Woodland	0	Method 1	14-<20	20-<29	29-<100	100+
7	Class G Grassland	0	Method 1	8-<12	12-<17	17-<50	50+
8	Class G Grassland	>5-10	Method 1	10-<16	16-<23	23-<50	50+
9	Class B Woodland	>5-10	Method 1	22-<31	31-<43	43-<100	100+
10	Class B Woodland	0	Method 1	14-<20	20-<29	29-<100	100+

¹ Method 1 as per AS 3959-2009 Table 2.4.3 and Method 2 as per AS 3959-2009 Appendix B. The input variables applied, other than the calculation model defaults, are presented in Section 3.1 of this Plan.

5.5 Recommended Bushfire Protection Measures

These recommendations are for measures that are not directly considered by SPP 3.7 and the associated Guidelines, including the bushfire protection criteria.

These measures are recommended by the bushfire consultant to improve the safety of property occupants and the resilience of buildings in the event of a bushfire impacting the property.

Recommendations may be of specific benefit in supporting applications for 'Minor Development' or 'Unavoidable Development' which are otherwise unable to fully comply with the established bushfire protection criteria.

Buildings of Class 4 to Class 9 are not required by the Building Code of Australia (BCA) to be constructed to comply with bushfire performance requirements. Although responsible authorities may require it. The proposed Club House and Shops fall into this category and it is recommended that these buildings be constructed to their assessed BAL-12.5 rating.

Some units within the proposed development are assessed to have an indicative BAL rating of BAL-LOW. To protect these buildings from ember attack, which can travel over large distances, it is recommended that they be constructed to the standards for a BAL-12.5 rating.

Retrospective Application of Bushfire Construction Standards

Class 1, 2 and 3 buildings and Class 10a associated buildings and decks, constructed prior to the requirement to comply with bushfire performance requirements, do not need to meet these requirements.

Retrospectively upgrading buildings to assist in reducing bushfire risk to persons and property is a voluntary choice.

As the existing buildings sit in a bushfire prone area and may be subject to a bushfire attack, Bushfire Prone Planning recommends that some degree of upgrading be considered to improve the protection for occupants and the building's survivability. As a minimum, protection from ember attack should be considered (i.e. constructed to the standard required for BAL-12.5).

6 Responsibilities for Implementation and Management of the Bushfire Protection Measures

Table 6.1: BMP Implementation responsibilities prior to lot sale, occupancy or building for the Landowner (Developer).

LANDOWNER (DEVELOPER) - PRIOR TO LOT SALE, OCCUPANCY OR BUILDING	
No.	Implementation Actions
1	<p>The local government may condition a development application approval with a requirement for the landowner/proponent to register a notification onto the certificate of title (it may also need to be included on the deposited plan).</p> <p>This will be done pursuant to Section 70A Transfer of Land Act 1893 as amended ('Factors affecting use and enjoyment of land, notification on title:'). This is to give notice of the bushfire hazard and any restrictions and/or protective measures required to be maintained at the owner's cost.</p> <p>This condition ensures that:</p> <ol style="list-style-type: none"> 1. Landowners/proponents are aware their lot is in a designated bushfire prone area and of their obligations to apply the stated bushfire risk management measures; and 2. Potential purchasers are alerted to the Bushfire Management Plan so that future landowners/proponents can continue to apply the bushfire risk management measures that have been established in the Plan.
2	<p>Prior to sale and post planning approval, the entity responsible for having the BMP prepared should ensure that anyone listed as having responsibility under the Plan has endorsed it and is provided with a copy for their information and informed that it contains their responsibilities. This includes the landowners/proponents (including future landowners where the Plan was prepared as part of a subdivision approval), local government and any other authorities or referral agencies ('Guidelines' s4.6.3).</p>
3	<p>Prior to occupation of the subject lot it is to be compliant with the relevant local government's annual firebreak notice issued under s33 of the Bushfires Act 1954.</p>
4	<p>Prior to occupancy establish the Asset Protection Zone (APZ) on the lots and road verge to the dimensions and standard stated in the BMP. This is the responsibility of the developer.</p>
5	<p>Prior to occupancy, install the required emergency water supply and associated vehicle access, to the standards stated in the BMP.</p>
6	<p>Prior to occupancy, install the private driveways to the standards stated in the BMP.</p>
7	<p>Prior to any building work, inform the builder of the existence of this Bushfire Management Plan and the responsibilities it contains, regarding the required construction standards. This will be:</p> <ul style="list-style-type: none"> • The standard corresponding to the determined BAL rating, as per the bushfire provisions of the Building Code of Australia (BCA); and/or • A higher standard as a result of the BMP establishing that construction is required at a standard corresponding to a higher BAL rating.

Table 6.2: Ongoing management responsibilities for the Landowner/Occupier.

LANDOWNER/OCCUPIER - ONGOING	
No.	Ongoing Management Actions
1	Maintain the Asset Protection Zone (APZ) to the dimensions and standard stated in the BMP.
2	Comply with the City of Rockingham Fire Control Notice issued under s33 of the Bush Fires Act 1954.
3	Maintain vehicular access routes within the lot to the required surface condition and clearances as stated in the BMP.
4	Ensure that any builders (of future structures on the lot) are aware of the existence of this Bushfire Management Plan and the responsibilities it contains regarding the application of construction standards corresponding to a determined BAL rating.
5	<p>Ensure all future buildings the landowner has responsibility for, are designed and constructed in full compliance with:</p> <ol style="list-style-type: none"> 1. the requirements of the WA Building Act 2011 and the bushfire provisions of the Building Code of Australia (BCA); and 2. with any identified additional requirements established by this BMP or the relevant local government.
6	To consider, implement and maintain, as relevant and able, any bushfire protection measures that have been <u>recommended</u> by the bushfire consultant (refer to Section 5.5), in addition to the measures that are <u>required</u> to be implemented and maintained.

Table 6.3: Ongoing management responsibilities for the Local Government.

LOCAL GOVERNMENT - ONGOING	
No.	Ongoing Management Actions
1	Monitor landowner compliance with the Bushfire Management Plan and the annual Fire Control Notice.

Appendix 1 - Onsite Vegetation Management Technical Requirements

It is the responsibility of the landowner to maintain the established bushfire protection measures on their property. Not complying with these responsibilities can result in buildings being subject to a greater potential impact from bushfire than that determined by the assessed BAL rating presented in this Bushfire Management Plan.

For the management of vegetation within a lot (i.e. onsite) the following technical requirements exist:

1. **The APZ:** Installing and maintaining an asset protection zone (APZ) of the required dimensions to the standard established by the Guidelines for Planning in Bushfire Prone Areas (WA Planning Commission, as amended). When, due to the planning stage of the proposal to which this Bushfire Management Plan applies, defined APZ dimensions are known and are to be applied to existing or future buildings – then these dimensions are stated in Section 5.4.1 of this Plan.
2. **The Firebreak/Fuel Load Notice:** Complying with the requirements established by the relevant local government's annual firebreak notice issued under s33 of the Bushfires Act 1954. Note: If an APZ requirement is included in the Notice, the standards and dimensions may differ from the Guideline's APZ Standard – the larger dimension must be complied with.
3. **Changes to Vegetated/Non-Vegetated Areas:**
 - a. If applicable to this Plan, the minimum separation distance from any classified vegetation, that corresponds to the determined BAL for a proposed building, must be maintained as either a non-vegetated area or as low threat vegetation managed to a minimal fuel condition as per AS 3959-2009 s2.2.3.2 (e) and (f). Refer to Part 4 of this Appendix 1.
 - b. Must not alter the composition of onsite areas of classified vegetation (as assessed and presented in Section 3.1.2) to the extent that would require their classification to be changed to a higher bushfire threat classification (as per AS 3959-2009); and
 - c. Must not allow areas within a lot (i.e. onsite) that have been:
 - i. excluded from classification by being low threat vegetation or non-vegetated; and
 - ii. form part of the assessed separation distance that is determining a BAL rating -
...to become vegetated to the extent they no longer represent a low threat (refer to Part 4 of Appendix 1). Note: The vegetation classification exclusion specifications as established by AS 3959-2009 s2.2.3.2, are included at A1.4 below for reference.

1. Requirements Established by the Guidelines – the Asset Protection Zone (APZ) Standards

(Source: *Guidelines for Planning in Bushfire Prone Areas - WAPC 2017 v1.3 Appendix 4, Element 2, Schedule 1 and Explanatory Note E2.1*)

Defining the Asset Protection Zone (APZ)

Description: An APZ is an area surrounding a building that is managed to reduce the bushfire hazard to an acceptable level (by reducing fuel loads). The width of the required APZ varies with slope and vegetation. For planning applications, the minimum sized acceptable APZ is that which is of sufficient size to ensure the potential radiant heat impact of a fire does not exceed 29kW/m² (BAL-29). It will be site specific.

The APZ may include public roads, waterways, footpaths, buildings, rocky outcrops, golf courses, maintained parkland as well as cultivated gardens in an urban context, but does not include grassland or vegetation on a neighbouring rural lot, farmland, wetland reserves and unmanaged public reserves.

For subdivision planning, design elements and excluded/low threat vegetation adjacent to the lot can be utilised to achieve the required vegetation separation distances and therefore reduce the required dimensions of the APZ within the lot.

Defendable Space: The APZ includes a defendable space which is an area adjoining the asset within which firefighting operations can be undertaken to defend the structure. Vegetation within the defendable space should be kept at an absolute minimum and the area should be free from combustible items and obstructions. The width of the defendable space is dependent on the space which is available on the property, but as a minimum should be 3 metres.

Establishment: The APZ should be contained solely within the boundaries of the lot on which the building is situated, except in instances where the neighbouring lot or lots will be managed in a low-fuel state on an ongoing basis, in perpetuity.

Note: Regardless of whether an Asset Protection Zone exists in accordance with the acceptable solutions and is appropriately maintained, fire fighters are not obliged to protect an asset if they think the separation distance between the dwelling and vegetation that can be involved in a bushfire, is unsafe.

Schedule 1: Standards for APZ

Fences: within the APZ are constructed from non-combustible materials (e.g. iron, brick, limestone, metal post and wire). It is recommended that solid or slatted non-combustible perimeter fences are used.

Objects: within 10 metres of a building, combustible objects must not be located close to the vulnerable parts of the building i.e. windows and doors.

Fine Fuel Load: combustible dead vegetation matter less than 6 mm in thickness reduced to and maintained at an average of two tonnes per hectare (example below).

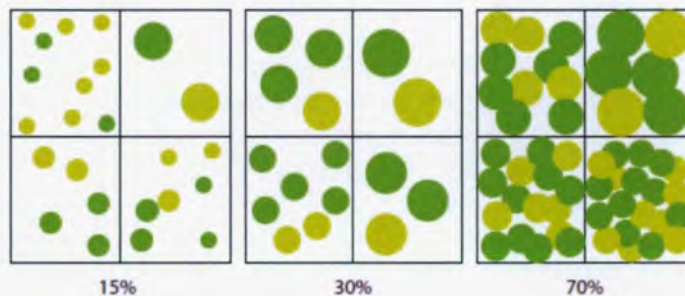
Example Fine Fuel Load of Two Tonnes per Hectare



(Image source: Shire of Augusta Margaret River's Firebreak and Fuel Reduction Hazard Notice)

Trees (> 5 metres in height): trunks at maturity should be a minimum distance of 6 metres from all elevations of the building, branches at maturity should not touch or overhang the building, lower branches should be removed to a height of 2 metres above the ground and or surface vegetation, canopy cover should be less than 15% with tree canopies at maturity well spread to at least 5 metres apart as to not form a continuous canopy. Diagram below represents tree canopy cover at maturity.

Tree canopy cover – ranging from 15 to 70 per cent at maturity



(Source: Guidelines for Planning in Bushfire Prone Areas 2017, Appendix 4)

Shrubs (0.5 metres to 5 metres in height): should not be located under trees or within 3 metres of buildings, should not be planted in clumps greater than 5m² in area, clumps of shrubs should be separated from each other and any exposed window or door by at least 10 metres. Shrubs greater than 5 metres in height are to be treated as trees.

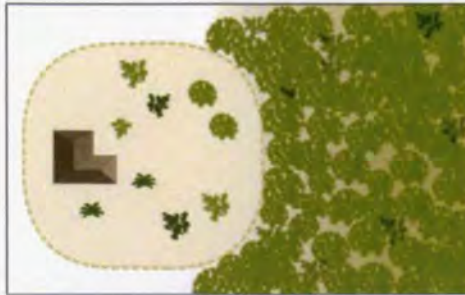
Ground covers (<0.5 metres in height): can be planted under trees but must be properly maintained to remove dead plant material and any parts within 2 metres of a structure, but 3 metres from windows or doors if greater than 100 mm in height. Ground covers greater than 0.5 metres in height are to be treated as shrubs.

Grass: should be managed to maintain a height of 100 mm or less.

The following example diagrams illustrate how the required dimensions of the APZ will be determined by the type and location of the vegetation.

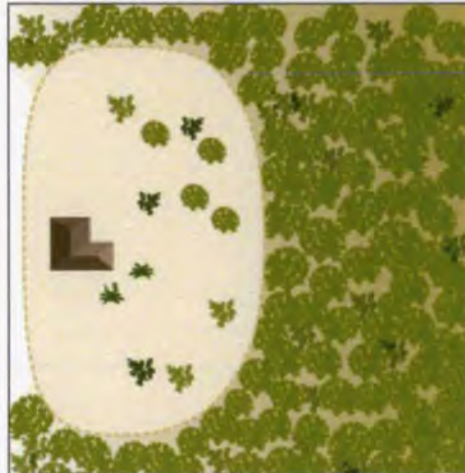
Hazard on one side

APZ



Hazard on three sides

APZ



2. Requirements Established by the Local Government – the Firebreak Notice

These requirements are established by the relevant local government's Firebreak Notice created under s33 of the Bushfires Act 1954 and issued annually (potentially with revisions). The Notice may include additional components directed at managing fuel loads, accessibility and general property management with respect to limiting potential bushfire impact.

The relevant local government's current Firebreak Notice is available on their website, at their offices and is distributed as ratepayer's information. It must be complied with.

If Asset Protection Zone technical requirements are defined in the Notice, the standards and dimensions may differ from the Guideline's APZ Standards, with the intent to better satisfy local conditions. When these are more stringent than those created by the Guidelines, or less stringent and endorsed by the WAPC and DFES, they must be complied with.

When, due to the planning stage of the proposal to which this Bushfire Management Plan applies, defined APZ dimensions are known and are to be applied to existing or future buildings – then these dimensions are stated in Section 5.4.1 of this Plan.

3. Requirements Recommended by DFES – Property Protection Checklists

Further guidance regarding ongoing/lasting property protection (from potential bushfire impact) is presented in the publication 'DFES – Fire Chat – Your Bushfire Protection Toolkit'. It is available from the Department of Fire and Emergency Services (DFES) website.

4. Requirements Established by AS 3959-2009 - Maintaining Areas within your Lot as 'Low Threat'

This information is provided for reference purposes. This knowledge will assist the landowner to comply with Management Requirement No. 3 set out in the Guidance Panel at the start of this Appendix. It identifies what is required for an area of land to be excluded from classification as a potential bushfire threat.

"Australian Standard - AS 3959-2009 Section 2.2.3.2: Exclusions - Low threat vegetation and non-vegetated areas:

The Bushfire Attack Level shall be classified BAL-LOW where the vegetation is one or a combination of the following:

- a) Vegetation of any type that is more than 100m from the site.*
- b) Single areas of vegetation less than 1ha in area and not within 100m of other areas of vegetation being classified.*
- c) Multiple area of vegetation less than 0.25ha in area and not within 20m of the site or each other.*
- d) Strips of vegetation less than 20m in width (measured perpendicular to the elevation exposed to the strip of vegetation) regardless of length and not within 20m of the site or each other, or other areas of vegetation being classified.*
- e) Non-vegetated areas, including waterways, roads, footpaths, buildings and rocky outcrops.*
- f) Low threat vegetation, including grassland managed in a **minimal fuel condition** (i.e. insufficient fuel available to significantly increase the severity of a bushfire attack – recognisable as short cropped grass to a nominal height of 100mm for example), maintained lawns, golf courses, maintained public reserves and parklands, vineyards, orchards, cultivated gardens, commercial nurseries, nature strips and windbreaks."*

Appendix 2 - Vehicular Access Technical Requirements

Each local government may have their own standard technical requirements for emergency vehicular access and they may vary from those stated in the Guidelines.

Contact the relevant local government for the requirements that are to apply in addition to the requirements set out as an acceptable solution in the Guidelines. If the relevant local government requires that these are included in the Bushfire Management Plan, they will be included in this appendix and referenced.

Requirements Established by the Guidelines – The Acceptable Solutions

(Source: *Guidelines for Planning in Bushfire Prone Areas WAPC 2017 v1.3, Appendix 4*)

Vehicular Access Technical Requirements - Part 1

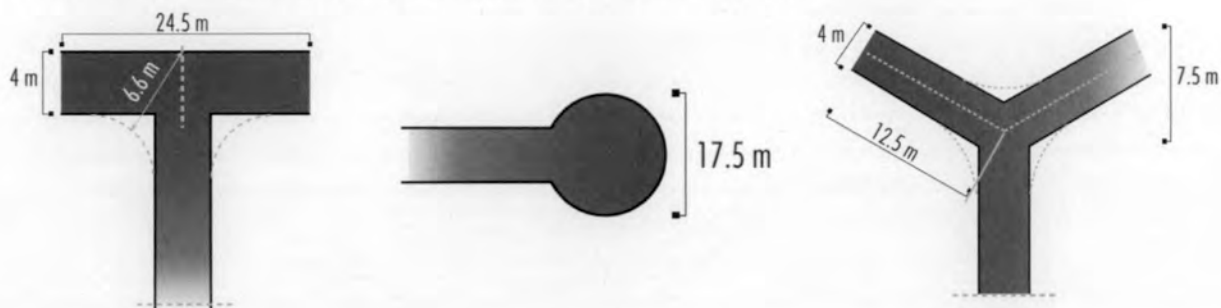
Acceptable Solution 3.5: Private Driveways

The following requirements are to be achieved:

- The design requirements set out in Part 2 of this appendix; and

Where the house site is more than 50 metres from a public road:

- Passing bays every 200 metres with a minimum length of 20 metres and a minimum width of two metres (ie combined width of the passing bay and constructed private driveway to be a minimum six metres);
- Turn-around areas every 500 metres and within 50 metres of a house, designed to accommodate type 3.4 fire appliances to turn around safely (ie kerb to kerb 17.5 metres);
- Any bridges or culverts are able to support a minimum weight capacity of 15 tonnes; and
- All weather surface (i.e. compacted gravel, limestone or sealed).



Acceptable Solution 3.8: Firebreak Width

Lots greater than 0.5 hectares must have an internal perimeter firebreak of a minimum width of three meters or to the level as prescribed in the local firebreak notice issued by the local government.

Vehicular Access Technical Requirements - Part 2

Technical Component	Vehicular Access Types				
	Public Roads	Cul-de-sacs	Private Driveways	Emergency Access Ways	Fire Service Access Routes
Minimum trafficable surface (m)	6*	6	4	6*	6*
Horizontal clearance (m)	6	6	6	6	6
Vertical clearance (m)	4.5	4.5	4.5	4.5	4.5
Maximum grade <50 metres	1 in 10	1 in 10	1 in 10	1 in 10	1 in 10
Minimum weight capacity (t)	15	15	15	15	15
Maximum cross-fall	1 in 33	1 in 33	1 in 33	1 in 33	1 in 33
Curves minimum inner radius (m)	8.5	8.5	8.5	8.5	8.5

* A six metre trafficable surface does not necessarily mean paving width. It could, for example, include four metres of paving and one metre of constructed road shoulders. In special circumstances, where 8 lots or less are being serviced, a public road with a minimum trafficable surface of four metres for a maximum distance of ninety metres may be provided subject to the approval of both the local government and DFES.

Appendix 3 - Water Technical Requirements

Requirements Established by the Guidelines - Acceptable Solution A4.1: Reticulated Areas

(Source: *Guidelines for Planning in Bushfire Prone Areas WAPC 2017 v1.3, Appendix 4, Element 4*)

The requirement is to supply a reticulated water supply and fire hydrants, in accordance with the technical requirements of the relevant water supply authority and DFES.

The Water Corporation's 'No 63 Water Reticulation Standard' is deemed to be the baseline criteria for developments and should be applied unless local water supply authority's conditions apply.

Key specifications in the most recent version/revision of the design standard include:

- **Residential Standard** – hydrants are to be located so that the maximum distance between the hydrants shall be no more than 200 metres.
- **Commercial Standard** – hydrants are to be located with a maximum of 100 metre spacing in Industrial and Commercial areas.
- **Rural Residential Standard** – where minimum site areas per dwelling is 10,000 m² (1ha), hydrants are to be located with a maximum 400m spacing. If the area is further subdivided to land parcels less than 1ha, then the residential standard (200m) is to be applied.

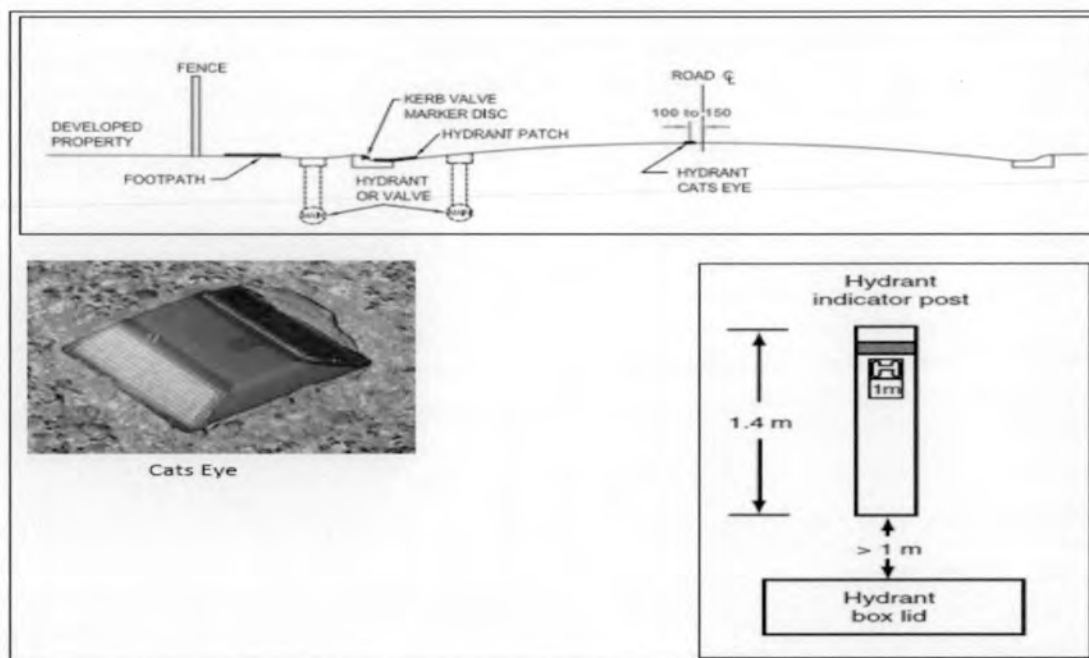


Figure A4.1: Hydrant Location and Identification Specifications

Contact the relevant water supply authority to confirm the technical requirements that are to be applied. They may differ from the minimum requirements of the 'baseline' Water Corporation's No. 63 Water Reticulation Standard.

ATTACHMENT 7:
ENVIRONMENTAL IMPACT ASSESSMENT



**Environmental Impact Assessment of Proposed Development:
1447 and 1457 Mandurah Road, Baldivis**

Prepared for Mirauda Constructions

Ref: T17016

**ecological assessment
& management**



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Revision	Details	Date	Author	Reviewer
Draft	Internal Review	8/9/2017	J. Grehan	K. Jennings
Rev A	Draft for Submission to Client	11/9/2017	J. Grehan	M. Braude

A handwritten signature in black ink, appearing to read "Joe Grehan".

Author: Joseph Grehan
Principal Ecologist

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Terratree Pty Ltd

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Appendix A: EPBC Protected Matters Search Tool Report
Appendix B: NatureMap Species List Report

1 Introduction

Miraudo Constructions Pty Ltd (Miraudo Constructions) commissioned Terratree Pty Ltd (Terratree) to undertake an environmental impact assessment for a proposed residential subdivision development within Lots 1447 and 1457 Mandurah Road, Baldivis, within the City of Rockingham (hereafter referred to as the 'subject site'). In particular, Terratree was commissioned to address items in the scope of work relating to potential impacts to wetlands, biodiversity and associated environmental regulatory requirements.

1.1 Background

Braude Architects have been commissioned by Miraudo Constructions to provide architectural services for the construction of a residential sub-division within 1447 and 1457 Mandurah Road, Baldivis. Braude Architects subsequently contacted Terratree regarding undertaking an environmental impact assessment of the proposed sub-division on behalf of Miraudo Constructions. Terratree has been commissioned to address a scope of work examining environmental constraints and opportunities associated with the proposed development.

1.2 Project Location and Description

The subject site is 40.46ha comprised of two lots, Lots 2 and 13, which are 20.23 ha each. A substantial proportion of the site is 'completely degraded' (Keighery *et al* 1994) consisting of mature Tuart trees (*Eucalyptus gomphocephala*) and the occasional Jarrah (*Eucalyptus marginata*) and Marri (*Corymbia calophylla*), with the understorey dominated by weed apart from the occasional *Macrozamia fraseri*. There are two small areas in 'degraded' condition consisting of mature Tuart trees, *Banksia attenuata*, and *B. sessilis*, with an understorey dominated by introduced grass species with isolated native shrubs, including *Banksia dallanneyi* subsp. *dallanneyi* var. *dallanneyi* and *Spyridium globulosum*.

1.3 Scope of Work

Terratree will conduct a desktop assessment and field survey to identify:

- Rare and priority flora/ fauna and local ecological linkages;
- Review impact on remnant vegetation;
- Review Threatened Ecological Communities;
- Review wetlands and watercourse requirements; and
- Review and constraints associated with Local Natural Areas i.e. Bush Forever sites, wetlands.

Terratree will provide recommendations for the management and minimisation of the following environmental impacts to be included in the report:

- Minimising damage to vegetation including physical damage and introduction of weeds and pathogens;
- Impacts and conservation opportunities to Threatened fauna habitat, including breeding and foraging values for Black Cockatoo species; and
- Any other flora, fauna or wetland related impacts that are identified during the desktop review.

2 Regulatory Context

The following is a list of relevant government legislation, government policy, publications and project reports pertaining to the site and development approvals:

Legislation

- *Wildlife Conservation Act (WC Act) 1950* (Western Australia)
- *Environmental Protection Act (EP Act) 1986* (Western Australia)
- *Western Australian Planning and Development Act 2005* (Western Australia)
- *Environment Protection and Biodiversity Conservation Act (EPBC Act) 1999* (Federal)

Government Policy and Publications

- *Waters and Rivers Position Statement: Wetlands* (Water and Rivers Commission 2001)
- *Position Statement No. 2: Environmental Protection of Native Vegetation in Western Australia* (EPA 2000)
- *Position Statement No.3: Terrestrial Biological Surveys as an Element of Biodiversity Protection* (EPA 2002)
- *Position Statement No.4: Environmental Protection of Wetlands* (EPA 2004)
- *Environmental Protection (Clearing of Native Vegetation) Regulation 2004 Environmental Protection (Environmentally Sensitive Areas) Notice 2005* (EPA 2002)
- *Guideline for the Determination of Wetland Buffer Requirements* (Western Australian Planning Commission, 2005)
- *Environmental Guidance for Planning and Development: Guidance Statement No. 33* (EPA 2008)

2.1 Flora and Vegetation

2.1.1 Threatened and Priority Flora

All Australian native flora is protected under the WC Act, where flora is defined as any plant (including wildflower, palm, shrub, tree, fern, creeper or vine) which is either native to Western Australia or declared to be flora under the Act, and includes any part of flora and all seed and spores thereof. Any activity in Western Australia that involves taking part of or the whole of a WA native plant may require a licence or permit to do so.

Species of flora may be listed as 'Threatened' pursuant to Schedule 1 of the EPBC Act. Any action likely to have a significant impact on a species listed under the EPBC Act requires referral to the Commonwealth Department of the Environment (DotE) and potentially the approval of the Commonwealth Minister for the Environment.

A flora species may be designated 'Declared Rare' species under subsection 2 of section 23F of the WC Act and it is an offence to 'take' or damage rare flora without Ministerial approval. Section 23F of the Act defines 'to take' as "... to gather, pluck, cut, pull up, destroy, dig up, remove or injure the flora to cause or permit the same to be done by any means". The WA State Minister for the Environment can declare taxa (species, subspecies or variety) as 'Declared Rare Flora' (DRF) if they are considered to be in danger of extinction, rare or otherwise in need of special protection. At the State level, the term 'Threatened Flora' is now commonly used to refer to DRF regardless of their Commonwealth status.

Species of flora acquire a 'Declared Rare' or 'Priority' conservation status when populations are restricted geographically or threatened by local processes (**Table 1**). The Department of Biodiversity, Conservation and Attractions (DBCA) recognises these threats and applies regulations towards population protection and species conservation. DBCA enforces regulations under the WC Act to conserve Declared Rare Flora (DRF) and Priority Flora and protect significant populations.

The list of Threatened (Declared Rare) flora is reviewed annually by a scientific panel that assess a taxon's conservation status and ranks them into categories. The Priority Flora list is dynamic, as new information becomes available conservation status is reviewed and changes to the listing may result. The categories for

Priority Flora give an indication of the priority for undertaking further surveys based on the number of known sites, and degree of threat to those populations.

Table 1: Definition of Threatened and Priority Flora Species (DPaW, 2014)

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

2.1.2 Local and Regionally Significant Flora

In addition to plant taxa being recognised as significant through their Declared Rare or Priority Flora status, they can also be significant for a number of other reasons. The Environmental Protection Authority (EPA) in Guidance Statement No. 51 – Terrestrial flora and vegetation surveys for environmental impact assessment in Western Australia (EPA 2004) states that "significant flora" may include taxa that have:

- "a keystone role in a particular habitat for threatened species, or supporting large populations representing a significant proportion of the local regional population of a species;
- relic status;
- anomalous features that indicate a potential new discovery;
- being representative of the range of a species (particularly, at the extremes of range, recently discovered range extensions, or isolated outliers of the main range);
- the presence of restricted subspecies, varieties or naturally occurring hybrids;
- local endemism/a restricted distribution; or
- being poorly reserved. "

Similarly, plant communities or vegetation may be considered "significant vegetation" for reasons other than a listing as a TEC. The EPA (2004) states that these reasons include:

- "scarcity;
- unusual species;
- novel combinations of species;
- a role as a refuge;
- a role as a key habitat for threatened species or large populations representing a significant proportion of the local to regional total population of a species;
- being representative of the range of a unit (particularly, a good local and/or regional example of a unit in 'prime' habitat, at the extremes of range, recently discovered range extensions, or isolated outliers of the main range); or
- a restricted distribution. "

2.1.3 Threatened and Priority Ecological Communities

In Western Australia "Threatened Ecological Communities" (TECs) are defined by the Western Australian Threatened Ecological Communities Scientific Advisory Committee (within the DEC) and are assigned to one of the categories outlined below in **Table 2**. While they are not afforded direct statutory protection at a State level (unlike Declared Rare Flora under the *WC Act*) their significance is acknowledged through other State environmental approval processes (i.e. Environmental Impact Assessment process pursuant to Part IV of the *Environmental Protection Act 1986*).

Table 2: Categories of DEC Threatened Ecological Communities (English and Blyth 1997)

Category	Description
D	Presumed Totally Destroyed An ecological community that has been adequately searched for but for which no representative occurrences have been located.
CE	Critically Endangered An ecological community that has been adequately surveyed and is found to be facing an extremely high risk of total destruction in the immediate future
E	Endangered An ecological community that has been adequately surveyed and is not critically endangered but is facing a very high risk of total destruction in the near future.
V	Vulnerable

	An ecological community that has been adequately surveyed and is not critically endangered or endangered but is facing a high risk of total destruction or significant modification in the medium to long-term future.
--	--

Selected TECs are also afforded statutory protection at a Federal level pursuant to the EPBC Act. Not all State listed TECs are given Federal protection, only a select few. The EPBC Act provides for the strong protection of TECs, which are listed under section 181 of the EPBC Act, and are defined as "Critically Endangered", "Endangered" or "Vulnerable" under Section 182 of the EPBC Act.

The EPBC Act provides protection for TECs under federal legislation, which are defined as communities which are:

- **Critically Endangered** (if, at that time, it is facing an extremely high risk of extinction in the wild in the immediate future);
- **Endangered** (if, at that time, it is not critically endangered and is facing a very high risk of extinction in the wild in the near future); or
- **Vulnerable** (if, at that time, it is not critically endangered or endangered, and is facing a high risk of extinction in the wild in the medium-term future).

Communities that are not listed as a TEC may be listed as a Priority Ecological Community (PEC). DPaW (DEC 2010) describes PECs as ecological communities that are under consideration for listing as a TEC, but does not yet meet the criteria or has not been adequately defined, is placed in either Category 1, 2, or 3 of the PEC list. Ecological communities that are adequately known, and are rare but not threatened, or meet criteria for Near Threatened, or those who have recently been removed from the threatened list, are placed in Priority 4. These ecological communities require monitoring. Conservation dependent ecological communities are placed in Priority 5. Categories and definitions of PEC are listed in **Table 3**.

Table 3: Categories of Priority Ecological Communities (DEC 2009)

Priority Rating	Description
Priority 1	Ecological communities with apparently few, small occurrences, all or most not actively managed for conservation (e.g. within agricultural or pastoral lands, urban areas, active mineral leases) and for which current threats exist. Communities may be included if they are comparatively well-known from one or more localities but do not meet adequacy of survey requirements, and/or are not well defined, and appear to be under immediate threat from known threatening processes across their range.
Priority 2	Communities that are known from few small occurrences, all or most of which are actively managed for conservation (e.g. within national parks, conservation parks, nature reserves, State forest, unallocated Crown land, water reserves, etc.) and not under imminent threat of destruction or degradation. Communities may be included if they are comparatively well known from one or more localities but do not meet adequacy of survey requirements, and/or are not well defined, and appear to be under threat from known threatening processes.
Priority 3	Communities that are known from several to many occurrences, a significant number or area of which are not under threat of habitat destruction or degradation, or; Communities known from a few widespread occurrences, which are either large or within significant remaining areas of habitat in which other occurrences may occur, much of it not under imminent threat, or; Communities made up of large, and/or widespread occurrences, which may or not be represented in the reserve system, but are under threat of modification across much of their range from processes such as grazing by domestic and/or feral stock, and inappropriate fire regimes. Communities may be included if they are comparatively well known from several localities but do not meet adequacy of survey requirements and/or are not well defined, and known threatening processes exist that could affect them.
Priority 4	Ecological communities that are adequately known, rare but not threatened or meet criteria for near threatened, or that have been recently removed from the threatened list. These communities require regular monitoring.
Priority 5	Ecological communities that are not threatened but are subject to a specific conservation program, the cessation of which would result in the community becoming threatened within five years.

2.1.4 Environmentally Sensitive Areas

Under section 51B of the EP Act the Minister can, by notice, declare an area of the State specified in the notice or an area of the State to be an Environmentally Sensitive Area (ESA). ESAs are protected under the *Environmental Protection (Clearing of Native Vegetation) Regulation 2004* and are selected for their environmental values at state or national levels. ESA's can be assigned with regard to the following criteria:

- Protection of rare or threatened species of native plants;
- Protection of wetlands and water courses;
- Protection of sites that have other high conservation, scientific or aesthetic values;
- Protection of Aboriginal or European cultural sites; or
- A declared World Heritage property as defined in section 13 of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) of the Commonwealth.

An ESA is defined under Regulation 6(1) of the *Environmental Protection (Clearing of Native Vegetation) Regulation 2004* as including:

- An area that is registered on the Register of the National Estate, because of its natural values, under the Australian Heritage Commission Act 1975 of the Commonwealth;
- A defined wetland and the area within 50 m of the wetland;
- The area covered by vegetation within 50 m of rare flora, to the extent to which the vegetation is continuous with the vegetation in which the rare flora is located;
- The area covered by a threatened ecological community; and
- A Bush Forever site listed in "Bush Forever" Volumes 1 and 2 (2000), published by the Western Australia Planning Commission, except to the extent to which the site may be cleared under a decision of the Western Australia Planning Commission.

2.2 Fauna

In a legislative context, the conservation of fauna is covered primarily by the following legislation and international treaties:

- *Environment Protection and Biodiversity Conservation Act 1999*
- *Wildlife Conservation Act 1950*
- *Environmental Protection Act 1986*
- *Conservation and Land Management Act 1984*
- *China Australia Migratory Bird Agreement (CAMBA)*
- *Japan Australia Migratory Bird Agreement (JAMBA)*
- *Republic of Korea and Australia Migratory Bird Agreement (ROKAMBA)*

The following documents are relevant to the management of fauna:

- EPA Position Statement N^o. 3: Terrestrial Biological Surveys
- EPA Guidance Statement N^o. 51: Terrestrial Flora and Vegetation Surveys
- EPA Guidance Statement N^o. 56: Terrestrial Fauna Surveys

Any animal that is native to WA is protected under the State's primary wildlife conservation legislation, the Wildlife Conservation Act (1950). Some fauna species have additional protection at a Federal level under the EPBC Act. Penalties apply for any damage to individuals, populations or habitats of protected species.

2.2.1 Schedule and Priority Fauna Species

There are four levels of conservation significance provided for fauna under the Western Australian WC Act 1950. Scheduled species are prioritised and listed as:

- Schedule 1: Fauna that is rare or likely to become extinct (also known as "Threatened Species")
- Schedule 2: Fauna presumed to be extinct
- Schedule 3: Migratory birds protected under an international agreement

- Schedule 4: Other specially protected fauna

DPaW has also produced a supplementary list of "Priority" fauna, including species that are not considered "Threatened" or scheduled under the *WC Act*, but for which DPaW considers require attention. These include:

- Priority 1: Taxa with few, poorly known populations on threatened lands
- Priority 2: Taxa with few, poorly known populations on conservation lands
- Priority 3: Taxa with several, poorly known populations, some on conservation lands
- Priority 4: Taxa in need of monitoring
- Priority 5: Taxa that are conservation dependent (i.e. their conservation status is dependent on ongoing active management).

DPaW also classifies species into one of five categories developed by the International Union for Conservation of Nature (IUCN): extinct (EX), extinct in the wild (EW), critically endangered (CR), endangered (EN) or vulnerable (VU).

These categories are determined by the total distribution of the species within Australia (and internationally where migratory species are concerned), not just within Western Australia.

2.2.2 Threatened and Migratory Species

The *EPBC Act* protects matters of National Environmental Significance (NES), including threatened and migratory species protected under international agreements such as the Japan–Australia Migratory Bird Agreement (JAMBA), the China–Australia Migratory Bird Agreement (CAMBA), the Republic of Korea–Australia Migratory Bird Agreement (ROKAMBA) and the Bonn Convention (the Convention on the Conservation of Migratory Species of Wild Animals). The *EPBC Act* states that the proponent must not take an action that is likely to have a significant impact on any matters of NES without approval.

2.3 Wetlands

DPaW maintains the *Geomorphic Wetland Swan Coastal Plain* dataset, which categorises the individual wetlands into specific management categories, as described in **Table 4**. It is important to understand that the significance of each wetland is based on hydrological, biological and human use features, which are the key components for the determination of management categories. This dynamic dataset is continually updated with site-specific wetland surveys providing new and relevant information. Each classified wetland listed in the *Geomorphic Wetland Swan Coastal Plain* dataset is given a Unique Feature Identifier (UFI). However, in the case of large wetlands that have undergone a degree of disturbance, a separate management category may be assigned to parts of the wetland in order to reflect the current values.

Conservation Category Wetlands (CCWs) are considered to be the highest priority of wetland classification with the objective of preserving wetland attributes and functions through various mechanisms, including protection under *Environmental Protection Act 1986* and reservation in national parks, crown reserves and state-owned land (WRC, 2001). Consequently, the EPA requires that decision making authorities and proponents refer to the EPA any development proposal or subdivision likely to significantly impact the environmental values of a CCW.

Resource Enhancement Wetlands (REWs) are those that have been partially modified but still support substantial ecological attributes and functions. The ultimate objective is for management, restoration and protection towards improving their conservation value. These wetlands have the potential to be restored to CCW status (WRC, 2001).

Multiple Use Wetlands (MUWs) are those that are considered the lowest priority of wetlands with few important ecological attributes and functions remaining. The objective is for development and management with consideration given in the context of ecologically sustainable development and best management practice.

The subject site is located across the road from Walungup Lake which is identified in the *Geomorphic Wetlands Swan Coastal Plain* dataset as a Conservation Class Wetland (UFI 6230).

Table 4: Wetland management categories and management objectives (Western Australian Planning Commission 2005)

Management Category	Description of Wetland	Management Objectives
Conservation (CCW)	Wetlands which support high levels of attributes and functions.	To preserve wetland attributes and functions through reservation in national parks, crown reserves, state owned land and protection under environmental protection policies.
Resource Enhancement (REW)	Wetlands which have been partly modified but still support substantial functions and attributes.	To restore wetlands through maintenance and enhancement of wetland functions and attributes by protection in crown reserves, state or local government owned land and by environmental protection policies, or in private property by sustainable management.
Multiple Use (MUW)	Wetlands with few attributes, which still provide important wetland functions.	Use, development and management should be considered in the context of water, town and environmental planning through landcare.

3 Existing Environment

3.1 Climate

The climate in Perth is characterised as Mediterranean with hot, dry summers and mild, wet winters. These seasons extend into the autumn and spring months, which are transitional periods between the main seasons. Average annual rainfall for the area is approximately 836 mm. The change in season usually occurs between April and May with an average of 90% the rainfall occurring between May and October. The average daily temperatures range between 16°C (min) and 31°C (max) in summer and between 7°C (min) and 17°C (max) in winter (Bureau of Meteorology, 2017).

3.2 Topography and Soils

The subject has a westerly aspect as the land gently slopes towards the Walungup Lake. Mandurah Road runs north-south along the interface between the Quindalup Dune system to the west, and the Cottesloe Dune system to the east. The subject site is on the Cottesloe Dune system which consists of 'a low hilly landscape with shallow sand over limestone, much exposed limestone' (DAF, 2003).

3.3 Regional Vegetation

The subject site lies within the Swan Coastal Plain Subregion of the Drummond Botanical Subdistrict, as described in Plant Life of Western Australia (Beard, 1990). The Drummond Botanical Subdistrict is described as 'Mainly Banksia low woodland on leached sands with Melaleuca swamps where ill-drained; woodland of Tuart (*Eucalyptus gomphocephala*), Jarrah (*E. marginata*) and Marri (*Corymbia calophylla*) on less leached soils. The climate is described as 'warm Mediterranean', with winter precipitation of 600-1000mm and 5-6 dry months per year.

The subject site occurs in the Cottesloe vegetation complex central and south (52), described by Heddlé *et al.* (1980) as a mosaic of woodlands of *Eucalyptus gomphocephala* and open woodlands of *E. gomphocephala* - *E. marginata* and *Corymbia calophylla*; closed heath on limestone outcrops.

3.4 Bush Forever

Bush Forever Site 356 includes Lake Coo loongup, Lake Walyungup, White Lake, Salt Lake, Lark Hill, Tamworth Hill, and part of Rockingham Lakes Regional Park. Areas included in this Bush Forever site include open water, vegetated wetlands, vegetated upland. The vegetation condition of Bush Forever Site 356 is >60% Very Good to Pristine, <40% Good to Degraded, with areas of severe localised disturbance.

3.5 Biodiversity linkages

Habitat fragmentation caused by increasing human activities is a major threat to biodiversity worldwide (Hilty *et al.* 2006). In an increasingly fragmented landscape biodiversity linkages or corridors can be very important tools to help maintain viable populations of biota by increasing connectivity. A biodiversity linkage or corridor can be described as a linear landscape element that connects two or more patches of natural habitat and functions to facilitate movement (Soule and Gilpin 1991, cited in Hilty *et al.* 2006).

Regional Biodiversity Linkages have been identified by the State Government in Bush Forever, Perth's Greenways and the System 6 study and supported by the WA Local Government (WALGA and PBP 2004). The designed linkages are aimed to be used to conserve and enhance our regional biological linkages and reflect the on-ground linkages throughout the Perth Metropolitan area.

Regional biodiversity linkages have been identified for the Perth Region in a Western Australia Local Government spatial dataset (WALGA, 2003). The biodiversity linkages connect remnant native vegetation

and reserves to the east of the subject site to White and Walungup Lake and Bush Forever Site 356. The Greenway linkages are located north and south of the subject site.

4 Desktop Review

4.1 Threatened and Priority Flora

A database search was conducted for NatureMap and EPBC Protected Matters databases for threatened and priority flora records within 5 kilometres of the subject site. In total, 22 flora species of conservation significance have been recorded within the search area, consisting of nine Threatened, one Priority 1, two Priority 2, six Priority 3 and four Priority 4 flora taxa. **Table 5** lists the Threatened and Priority flora species recorded within the search area, and the database in which the record was identified.

Table 5: Threatened and Priority flora recorded within 5km of the subject site

Conservation Status	Species	NatureMap	EPBC
Threatened	<i>Andersonia gracilis</i>		X
	<i>Caladenia huegelii</i> (Grand Spider Orchid)	X	X
	<i>Diuris drummondii</i> (Tall Donkey Orchid)	X	
	<i>Diuris micrantha</i>		X
	<i>Diuris purdiei</i>		X
	<i>Drakaea elastica</i> (Glossy-leaved Hammer Orchid)	X	
	<i>Lepidosperma rostratum</i>		X
	<i>Synaphea</i> sp. Fairbridge Farm (D. Papenfus 696)		X
	<i>Synaphea</i> sp. Serpentine (G.R. Brand 103)	X	
Priority 1	<i>Acacia lasiocarpa</i> var. <i>bracteolata</i> long peduncle variant (G.J. Keighery 5026)	X	
Priority 2	<i>Acacia benthamii</i>	X	
	<i>Cardamine paucijuga</i>	X	
Priority 3	<i>Beyeria cinerea</i> subsp. <i>cinerea</i>	X	
	<i>Calandrinia oraria</i>	X	
	<i>Dillwynia dillwynioides</i>	X	
	<i>Lasiopetalum membranaceum</i>	X	
	<i>Schoenus capillifolius</i>	X	
	<i>Sphaerolobium calcicola</i>	X	
Priority 4	<i>Conostylis pauciflora</i> subsp. <i>pauciflora</i>	X	
	<i>Dodonaea hackettiana</i> (Hackett's Hopbush)	X	
	<i>Jacksonia sericea</i> (Waldjumi)	X	
	<i>Stylidium longitubum</i> (Jumping Jacks)	X	

4.2 Threatened Ecological Communities

Analysis of NatureMap databases and relevant biological reports prepared for the City of Rockingham (Ecosacpe, 2007) identified six Threatened Ecological Communities (TEC's) as potentially occurring within 15km of the subject site. **Table 6** lists these communities, their descriptions and their conservation status at State and Federal levels.

Table 6: Threatened ecological Communities within 15km of the subject site

Threatened Ecological Community	WA Conservation Status (State)	EPBC Conservation Status (Federal)
Banksia Woodland of the Swan Coastal Plain (includes SCO 20a: <i>Banksia attenuata</i> woodland over species rich dense shrublands).	Threatened (EN)	Threatened (EN)
SCP 19: Sedgeland in Holocene dune swales on the southern Swan Coastal Plain.	Threatened (CR)	Threatened (EN)
SCP 30a: <i>Callitris preissii</i> (or <i>Melaleuca lanceolata</i>) forests and woodlands, Swan Coastal Plain.	Threatened (VU)	-
Claypans of the Swan Coastal Plain (includes SCP 9: Dense shrublands on dry clay flats)	Threatened (VU)	Threatened (CR)
SCP 3a: <i>Corymbia calophylla</i> - <i>Kingia australis</i> woodlands on heavy soils, Swan Coastal Plain.	Threatened (CR)	Threatened (EN)
Richmond Microbial: Stromatolite like microbial community of coastal freshwater lakes.	Threatened (CR)	Threatened (EN)

4.3 Threatened and Priority Fauna

A database search was conducted for NatureMap and EPBC Protected Matters databases for threatened and priority flora records within 10 kilometres of the subject site. Threatened fauna includes species that are:

- Rare or likely to become extinct (Schedule 1);
- Birds protected under an international agreement (Schedule3); and
- Other specially protected fauna (Schedule 4).

Species are categorised by their Conservation Status: Critically Endangered (CR), Endangered (EN), Vulnerable (VU), other Specially Protected Fauna (S) and International Agreements (IA). The Priority Codes are also identified for the specific species.

In total, 45 Threatened species listed as Schedule 1 species under the *WC Act* or Threatened species under the *EPBC Act*, were identified in the database search, consisting of four Critically Endangered, sixteen Endangered and 25 Vulnerable fauna species. In addition, 18 migratory bird species listed as Schedule 3 under the *WC Act*, and one specially protected species (S) listed as Schedule 4 species under the *WC Act*, were identified. One Priority 3 and four Priority 4 fauna species were also identified as occurring in the local area.

Tables 8 present the NatureMap and EPBC Protected Matters results for records of fauna of conservation significance within 10km radius of the subject site.

Table 7: NatureMap and EPBC Protected Matters database results for Threatened, Schedule and Priority Fauna species

Type	Conservation Code	Species	EPBC	NatureMap
Bird	CR	<i>Calidris ferruginea</i> (Curlew Sandpiper)	X	X
		<i>Calidris tenuirostris</i> (Great Knot)		X
		<i>Numenius madagascariensis</i> (Eastern Curlew, Far Eastern Curlew)	X	X
	CR, IA	<i>Limosa lapponica menzbieri</i> (Northern Siberian Bar-tailed Godwit, Bar-tailed Godwit)	X	X
	EN	<i>Botaurus poiciloptilus</i> (Australasian Bittern)	X	
		<i>Calidris cantos</i> (Red Knot, Knot)	X	
		<i>Calyptorhynchus latirostris</i> (Carnaby's Cockatoo, Short-billed Black-Cockatoo)	X	
		<i>Diomedea amsterdamensis</i> (Amsterdam Albatross)	X	
		<i>Diomedea dabbenena</i> (Tristan Albatross)	X	
		<i>Diomedea sanfordi</i> (Northern Royal Albatross)	X	
		<i>Rostratula australis</i> (Australian Painted Snipe)	X	
		<i>Sternula nereis nereis</i> (Australian Fairy Tern)	X	
		<i>Thalassarche carteri</i> (Indian Yellow-nosed Albatross)	X	
		<i>Thalassarche cauta cauta</i> (Shy Albatross, Tasmanian Shy Albatross)	X	
	EN, IA	<i>Macronectes giganteus</i> (Southern Giant-Petrel, Southern Giant Petrel)	X	X
	VU	<i>Anous tenuirostris melanops</i> (Australian Lesser Noddy)	X	X
		<i>Calyptorhynchus banksii naso</i> (Forest Red-tailed Black-Cockatoo)	X	X
		<i>Calyptorhynchus baudinii</i> (Baudin's Cockatoo, Long-billed Black-Cockatoo)	X	
		<i>Diomedea epomophora</i> (Southern Royal Albatross)	X	
		<i>Diomedea exulans</i> (Wandering Albatross)	X	
		<i>Halobaena caerulea</i> (Blue Petrel)	X	
		<i>Leipoa ocellata</i> (Malleefowl)	X	
		<i>Pachyptila turtur subantarctica</i> (Fairy Prion (southern))	X	
		<i>Phoebastria fusca</i> (Sooty Albatross)	X	
		<i>Pterodroma mollis</i> (Soft-plumaged Petrel)	X	
		<i>Thalassarche cauta steadi</i> (White-capped Albatross)	X	
		<i>Thalassarche impavida</i> (Campbell Albatross, Campbell Black-browed Albatross)	X	
		<i>Thalassarche melanophris</i> (Black-browed Albatross)	X	
	VU, IA	<i>Limosa lapponica baueri</i> (Bar-tailed Godwit (baueri), Western Alaskan Bar-tailed Godwit)	X	X
		<i>Macronectes halli</i> (Northern Giant Petrel)	X	x
	S	<i>Falco peregrinus</i> (Peregrine Falcon)		X
	P4	<i>Oxyura australis</i> (Blue-billed Duck)		X
	IA	<i>Actitis hypoleucos</i> (Common Sandpiper)		X
		<i>Ardea ibis</i> (Cattle Egret)		X
		<i>Ardea modesta</i> (Eastern Great Egret)		X
		<i>Arenaria interpres</i> (Ruddy Turnstone)		X
		<i>Calidris acuminata</i> (Sharp-tailed Sandpiper)		X

Type	Conservation Code	Species	EPBC	NatureMap
		<i>Calidris alba</i> (Sanderling)		X
		<i>Calidris ruficollis</i> (Red-necked Stint)		X
		<i>Calidris subminuta</i> (Long-toed Stint)		X
		<i>Macronectes giganteus</i> (Southern Giant Petrel)		
		<i>Merops ornatus</i> (Rainbow Bee-eater)		X
		<i>Numenius phaeopus</i> (Whimbrel)		X
		<i>Plegadis falcinellus</i> (Glossy Ibis)		X
		<i>Pluvialis squatarola</i> (Grey Plover)		X
		<i>Sterna anaethetus</i> subsp. <i>anaethetus</i> (Bridled Tern)		X
		<i>Sterna caspia</i> (Caspian Tern)		X
		<i>Tringa glareola</i> (Wood Sandpiper)		X
		<i>Tringa nebularia</i> (Common Greenshank)		X
		<i>Tringa stagnatilis</i> (Marsh Sandpiper)		X
Insect	P4	<i>Synemon gratiosa</i> (Graceful Sunmoth)		X
Mammal	EN	<i>Balaenoptera musculus</i> (Blue Whale)	X	
		<i>Bettongia penicillata</i> (Brush-tailed Bettong, Woylie)	X	
		<i>Eubalaena australis</i> (Southern Right Whale)	X	X
	VU	<i>Dasyurus geoffroyi</i> (Chuditch, Western Quoll)	X	
		<i>Megaptera novaeangliae</i> (Humpback Whale)	X	
		<i>Neophoca cinerea</i> (Australian Sea-lion, Australian Sea Lion)	X	
		<i>Pseudocheirus occidentalis</i> (Western Ringtail Possum)	X	
	P4	<i>Isodon obesulus</i> (Southern Brown Bandicoot)		X
		<i>Macropus irma</i> (Western Brush Wallaby)		X
Mollusc	VU	<i>Westralunio carteri</i> (Carter's Freshwater Mussel)		X
Reptile	EN	<i>Caretta caretta</i> (Loggerhead Turtle)	X	X
		<i>Dermochelys coriacea</i> (Leatherback Turtle)	X	
	VU	<i>Chelonia mydas</i> (Green Turtle)	X	
		<i>Natator depressus</i> (Flatback Turtle)	X	X
	P3	<i>Neelaps calonotos</i> (Black-striped Snake)		X
Shark	VU	<i>Carcharias taurus</i> (west coast population)(Grey Nurse Shark)	X	X
		<i>Carcharodon carcharias</i> (White Shark, Great White Shark)	X	X
		<i>Rhincodon typus</i> (Whale Shark)	X	

4.4 Wetlands

The subject site is located across the road from Walungup Lake which is identified in the *Geomorphic Wetlands Swan Coastal Plain* dataset as a Conservation Class Wetland (UFI 6230) (**Figure 1**).

4.5 Acid Sulphate Soils Risk

A search of Acid Sulphate Soil (ASS) Risk map show that, while there is the potential for ASS in surrounding wetland areas, there is no elevated risk of ASS occurring within the subject site (**Figure 1**). This is because the subject site is an upland area with no wetlands

5 Field Assessment

A field assessment of the subject site was undertaken by botanist Joseph Grehan and zoologist Tony Kirkby on 14th August 2017. The objective of the field assessment was to assess biological values within the subject site, including evidence for the presence of flora, fauna and/or ecological communities of conservation significance.

The survey was conducted in accordance with the *Technical Guide: Flora and Vegetation Surveys for Environmental Impact Assessment* (EPA, 2016a) and applied in conjunction with the *Environmental Factor Guideline for Flora and Vegetation* (EPA, 2016b). The targeted survey did not record any Threatened (Declared Rare), Priority or other conservation significant flora species. The fauna survey was undertaken in accordance with Terrestrial Fauna Guidance Statement No. 56 (EPA, 2004).

5.1 Flora

A total of 26 vascular flora species including 12 introduced (exotic) species, were recorded within the survey area, representing 22 genera from 16 families. Families with the highest species representation were Fabaceae (five taxa), followed by Myrtaceae Poaceae and Proteaceae, with three taxa each. Well-represented genera include Banksia (three taxa), Acacia (two taxa) and Eucalyptus (two taxa).

Table 8 lists all vascular flora species recorded in the subject area.

No Threatened or Priority flora species were recorded within the subject area.

Table 8: Flora species recorded in the subject area

Family	Species
Aizoaceae	* <i>Carpobrotus edulis</i>
Anacardiaceae	* <i>Schinus terebinthifolius</i>
Asphodelaceae	* <i>Trachyandra divaricata</i>
Casuarinaceae	<i>Allocasuarina fraseriana</i>
Euphorbiaceae	* <i>Euphorbia terracina</i>
Fabaceae	<i>Acacia pulchella</i> var. <i>pulchella</i>
	<i>Acacia rostellifera</i>
	<i>Hardenbergia comptoniana</i>
	<i>Kennedia prostrata</i>
	* <i>Lupinus angustifolius</i>
Geraniaceae	* <i>Pelargonium capitatum</i>
Haemodoraceae	<i>Conostylis aculeata</i>
Meliaceae	* <i>Melia azedarach</i>
Myrtaceae	<i>Agonis flexuosa</i>
	<i>Eucalyptus erythrocorys</i>
	<i>Eucalyptus gomphocephala</i>
Oxalidaceae	* <i>Oxalis pes-caprae</i>
Poaceae	* <i>Cynodon dactylon</i>
	* <i>Ehrharta calycina</i>
	* <i>Pennisetum clandestinum</i>
Proteaceae	<i>Banksia attenuata</i>
	<i>Banksia dallanneyi</i> subsp. <i>dallanneyi</i> var. <i>dallanneyi</i>
	<i>Banksia sessilis</i> subsp. <i>sessilis</i>
Rhamnaceae	<i>Spyridium globulosum</i>

Family	Species
Solanaceae	* <i>Solanum nigrum</i>
Zamiaceae	<i>Macrozamia fraseri</i>

* Denotes introduced (exotic) taxa

5.2 Vegetation Communities

The vegetation of the subject site is described as 'Open Forest of *Eucalyptus gomphocephala* over Low Open Woodland of *Banksia attenuata*, *Banksia sessilis* subsp. *sessilis* and *Allocasuarina fraseriana* over Closed Grassland/Forbland of **Ehrharta calycina*, **Carpobrotus edulis* and * *Pelargonium capitatum*' (Plate 1)(Figure 2).

This vegetation community is not considered to be representative of any Threatened or Priority Ecological communities identified in the desktop assessment.

5.3 Vegetation Condition

Vegetation condition is usually rated according to the Bush Forever Vegetation Condition Scale commonly used in the Perth Metropolitan Region (Bush Forever, 2000). While the subject site has mature Tuart trees throughout, according to the definitions of vegetation conditions described in Table 9, the vegetation condition over the majority of the site is 'completely degraded' with the understorey almost completely cleared of native vegetation and dominated by weeds. Two small patches are in a 'degraded' condition consisting of mature Tuart trees, *Banksia attenuata* and *B. sessilis* subsp. *sessilis* with an understorey dominated by weeds with the occasional native shrub including *Banksia dallanneyi* subsp. *dallanneyi* var. *dallanneyi* and *Spyridium globulosum* (Plate 2 & Plate 4) (Figure 2).

Figure 2

Table 9: Vegetation Condition Scale (WAPC 2000)

Condition Rating	Description
Pristine	Pristine or nearly so, no obvious signs of disturbance.
Excellent	Vegetation structure intact, disturbance affecting individual species and weeds are non-aggressive species.
Very Good	Vegetation structure altered; obvious signs of disturbance. For example, disturbance to vegetation structure caused by repeated fires, the presence of some more aggressive weeds, dieback, logging and grazing.
Good	Vegetation structure significantly altered by very obvious signs of multiple disturbances. Retains basic vegetation structure or ability to regenerate it. For example, disturbance to vegetation structure caused by very frequent fires, the presence of some very aggressive weeds at high density, partial clearing, Dieback and grazing.
Degraded	Basic vegetation structure severely impacted by disturbance. Scope for regeneration but not to a state approaching good condition without intensive management. For example, disturbance to vegetation structure caused by very frequent fires, the presence of very aggressive weeds, partial clearing, dieback and grazing.
Completely Degraded	The structure of the vegetation is no longer intact and the area is completely or almost completely without native species. These areas are often described as "parkland cleared" with the flora comprising weed or crop species with isolated native trees or shrubs.

5.4 Weeds

Twelve introduced flora species were recorded within the subject area, representing 46% of recorded floristic diversity. The vegetation understory in the subject site is dominated by introduced weed species, predominately Veldt Grass (**Ehrharta calycina*) and Pelargonium (**Pelargonium capitatum*) (Plate 3).

No 'Declared' weed species listed under the Biosecurity and Agriculture Management Act 2007 were recorded during the site visit. In addition, no Weeds of National Significance (Commonwealth of Australia 2005) were recorded.

5.5 Fauna Habitat

An assessment of the fauna habitat values of the subject site was conducted by Zoologist Tony Kirkby on September 4th. 2017. In particular the fauna assessment focussed on potential habitat for the three Threatened species of Black Cockatoos: Carnaby's cockatoo (endangered) *Calyptorhynchus latirostris*, Baudin's cockatoo (vulnerable) *Calyptorhynchus baudinii*, Forest red-tailed black cockatoo (vulnerable) *Calyptorhynchus banksii naso*.

Potential nesting, roosting and foraging habitat species include fifty mature Tuart trees (six of which are dead) two Jarrah trees and *Banksia attenuata*, *B. sessilis* and *Allocasuarina fraseriana*. The mature Tuart Trees were all >600mm Diameter at Breast Height. Only five of the Tuart trees were found to have hollows of a suitable size and shape to be suitable breeding habitat for Black Cockatoos (Plate 5.) (Figure 2). One the suitable hollows were occupied by Eastern long-billed Corella. There was evidence of Black Cockatoos foraging for grubs within *Banksia attenuata* fruit (Plate 6.)

6 Discussion-Potential Impacts and Management

6.1 Wetlands

Walungup Lake, located across Mandurah Road opposite of the subject site, is a Conservation Class Wetland (UFI 6230) as defined in the *Geomorphic Wetlands Swan Coastal Plain* dataset. The CCW boundary and the currently required 50m buffer from the defined wetland boundary are shown in **Figure 2**. Previous correspondence obtained from the Wetlands Branch of DBCA confirms that a 50m buffer is required to be maintained from CCWs as they are mapped in the dataset. The application of a 50m buffer to the defined boundary of CCW (UFI 6230) does not intersect the subject site.

6.2 Bush Forever Site 356

Bush Forever site 356, which includes Walungup Lake and fringing vegetation, is located in the immediate vicinity of the subject site. While there may be some concern about surface water run-off and dust generation during construction, provided appropriate measures are implemented to control fugitive dust and the quality of surface water leaving the subject site then the proposed development is not expected have a significant environmental impact.

6.3 Remnant Native Vegetation

Remnant native vegetation in the Mundijong Whitby District is very fragmented as most of the land has been historically cleared for agriculture. Consequently there are no biodiversity linkages of conservation significance within the vicinity of the subject site.

Due to the Degraded to Completely Degraded condition of the vegetation, there were no significant vegetation values identified within the subject site. The values of remnant mature *Eucalyptus gomphocephala* (Tuart) trees as fauna habitat are discussed in **Section 6.5**.

6.4 Threatened and Priority Flora Species and Ecological Communities

No Threatened or Priority flora and/or ecological communities were identified as occurring in the subject area. Due to the localised nature of the proposed development, no impacts to flora and/or ecological communities of conservation significance are expected.

6.5 Threatened, Schedule and Priority Fauna

A total of 51 significant Black Cockatoo habitat trees were recorded within the subject site, including six with potential Black Cockatoo breeding hollows. Significant habitat trees were all *Eucalyptus gomphocephala* (Tuart) individuals, with the exception of two *E. marginata* subsp. *marginata* (Jarrah).

Carnaby's Black Cockatoos (*Calyptrorhynchus latirostris*) were observed to be active in the area at the time of survey, including juveniles. In addition, both recent and older evidence of foraging for grubs in *Banksia attenuata* shrubs and trees was observed.

Due to this observed habitat, all significant trees within the subject site have been identified for retention during construction. Therefore, the proposed development is not expected to result in significant impacts to fauna habitat values.

7 Assessment Against the Clearing Principles

Any clearing of native vegetation in Western Australia must be conducted under a Native Vegetation Clearing Permit, in accordance with the EP Act (1986). When considering an application for a permit, the predicted impacts to ecological values will be assessed against the 10 vegetation clearing principles.

Table 10 list the 10 clearing principles, and assesses the results of the Targeted flora and vegetation and the Black Cockatoo assessment assessed against the relevant criteria to identify potential variances with these principles. This assessment has been conducted with the assumption that all impacts to significant trees are to be avoided during construction, with these individuals retained across the subject site.

The assessment of the environmental values concluded that clearing of native vegetation within the survey area is unlikely to be at variance with any of the clearing principles.

Table 10: Assessment against the 10 clearing principles

Principle Number	Principle Description	Assessment	Outcome
1 (a)	Native vegetation should not be cleared if it comprises a high level of biological diversity	A total of 26 vascular flora species were identified in the survey area, of which 12 (46%) were introduced exotic species. No significant landforms or other features were observed.	Proposal unlikely to be at variance with this principle.
2 (b)	Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna indigenous to Western Australia	As all significant trees are proposed to be retained during construction, no impacts to significant fauna habitat are predicted.	Proposal unlikely to be at variance with this principle.
3 (c)	Native vegetation should not be cleared if it includes, or is necessary for the continued existence of rare flora	No Threatened flora species were recorded within the survey area during the surveys, and is unlikely to support suitable habitat for such.	Proposal unlikely to be at variance with this principle.
4 (d)	Native vegetation should not be cleared if it comprises the whole or part of, or is necessary for the maintenance of a Threatened Ecological Community	No Threatened or Priority ecological communities were identified as occurring in the study area. Local TEC's are not considered to be represented within the study area.	Proposal unlikely to be at variance with this principle.
5 (e)	Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared	The regional landscape has been heavily impacted by clearing for rural and urban development. However, no significant native vegetation values are proposed to be cleared within the study area.	Proposal unlikely to be at variance with this principle.
6 (f)	Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland	Conservation Class wetland Walungup Lake (UFI 6230) is located immediately to the west of the study area. However, no clearing will be conducted within the geomorphic area, including within a 50 meter buffer.	Proposal unlikely to be at variance with this principle.
7 (g)	Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation	The project area contains stable landforms and soils, and is unlikely to be significantly impacted by the proposal or result in appreciable land degradation.	Proposal unlikely to be at variance with this principle.

8 (h)	Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area	The effects of the proposal will be local in nature, and no nearby conservation areas, including Bush Forever site 356, to be potentially impacted.	Proposal is unlikely to be at variance with this principle.
9 (i)	Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water	No significant surface water issues, were identified within the survey area. Local occurrences of Acid Sulphate Soil risk were not identified as occurring within the study area. The extent of vegetation to be cleared is unlikely to significantly affect groundwater quality or processes.	Proposal unlikely to be at variance with this principle.
10 (j)	Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate the incidence or intensity of flooding	The proposal is not considered likely to cause or exacerbate the incidence or intensity of flooding events due to the small disturbance footprint.	Proposal unlikely to be at variance with this principle.

8 Conclusion and Recommendations

The application of a 50m buffer to the mapped extent of the CCW Walyungup Lake (UFI 6230) shows that the subject site does not intersect this wetland area.

In conclusion, it is determined that the proposed development on 1447 and 1457 Mandurah Road, Baldivis is unlikely to have significant impacts on environmental values including flora, fauna, ecological communities and ecosystem function.

For the protection of ecological values in Bush Forever site 356 and the Conservation Class Wetland Walyungup Lake (UFI 6230) during construction, appropriate measures should be implemented to control fugitive dust and surface water quality.

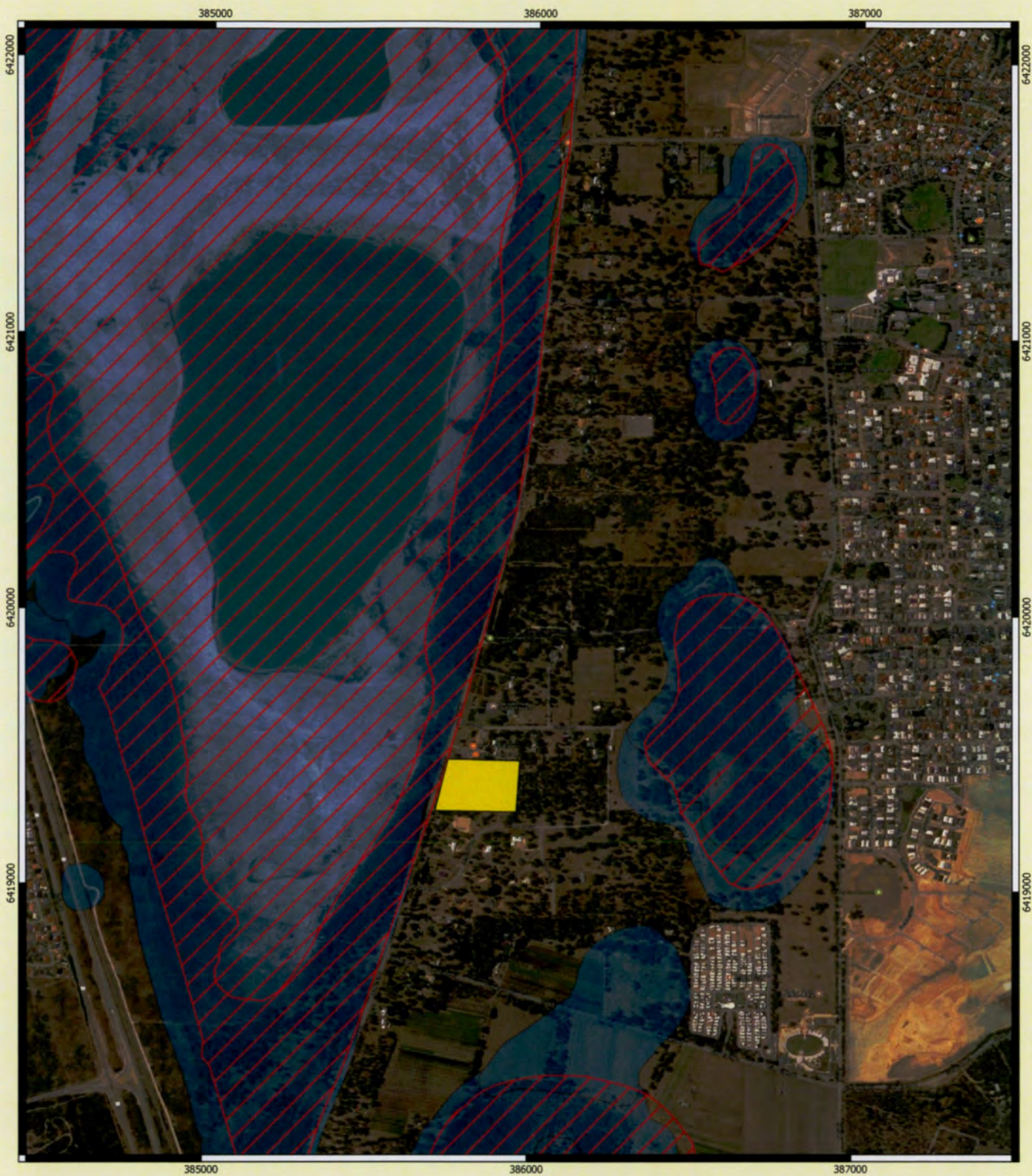
Terratree makes the following recommendation to avoid environmental impacts in the first instance or, if unavoidable, to minimise and mitigate these impacts:

- Ensure that all vehicles and machinery are 'clean on entry' to the site so that soil or vegetative materials are not adhering to surfaces. This will help to avoid introducing weed and pathogens into the site and adjacent bushland areas;
- Avoid felling Tuart (*Eucalyptus gomphocephala*) trees to avoid the requirement for an EPBC referral of the proposed development;
- A clearing permit will need to be obtained for any clearing of native vegetation unless an exemption can be granted through the *Regulations for clearing native vegetation* under Part V of *Environmental Protection Act 1986*; and
- Consider using Black Cockatoo foraging species in the landscaping for the development i.e. Marri, Proteaceous species including *Banksia* spp., *Hakea* spp, *Grevillea* spp and Kangaroo Paws (*Anigozanthos flavidus*).

9 References

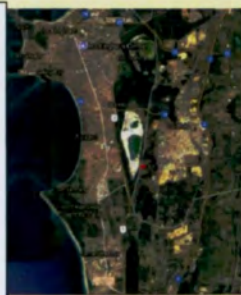
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Figures



Legend

- Study_Area
 - Acid Sulphate Soil Risk
 - Geomorphic Wetlands (50 meter Buffer)
- Google Hybrid



Project Location

Environmental Impact Assessment: 1447 and 1457 Mandurah Road, Baldivas

**Figure 1: Geomorphic Wetlands and
Acid Sulphate Soil Risk Areas**



Scale: 1: 10,000

Datum: GDA 1994
Projection: MGA Zone 50

Created: 07/09/2017

Prepared: K Jennings

Project No: T17016

Expiry Date: N/A

Checked: J Grehan

Revision: Rev A

T17016_F01

Terratree



Legend

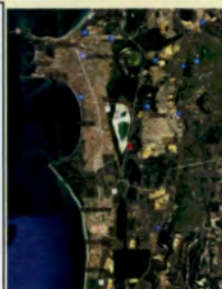
Significant Black Cockatoo Trees

- Eucalyptus gomphocephala
- Eucalyptus gomphocephala (dead)
- Eucalyptus marginata
- Eucalyptus marginata (dead)

Vegetation Condition

- Completely Degraded
- Degraded

Google Satellite



Project Location

Figure 2: Vegetation Condition and Significant Tree Locations

Environmental Impact Assessment of 1447 and 1457 Mandurah Rd, Baldivas



Scale: 1: 2,000

Datum: GDA 1994
Projection: MGA Zone 50

Date Created: 11/09/2017

Prepared: K Jennings

Project No: T17013

Expiry Date: 26/07/2018

Checked: J Grehan

Revision: Rev A

T17016_F02

Terratree

Plates



Plate 1: Completely Degraded Tuart (*Eucalyptus gomphocephala*) open forest



Plate 2: Degraded low open woodland of *Banksia attenuata*



Plate 3: Veldt grass (*Ehrharta calycina*) dominating the understorey



Plate 4: *Banksia sessilis* in Degraded low open Banksia woodland



Plate 5: Potential Black Cockatoo nesting hollow in Tuart tree

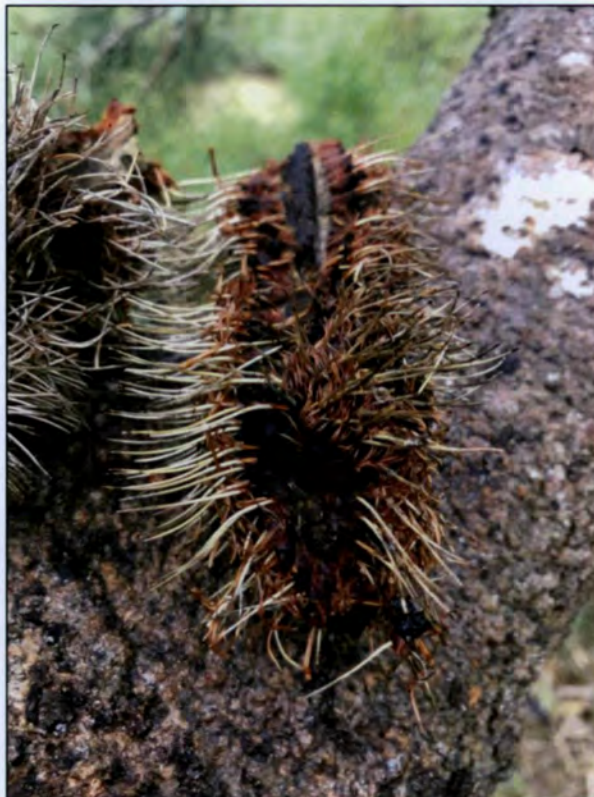


Plate 6: Evidence of Black Cockatoo foraging on grubs in *Banksia attenuata* fruit

Appendix A: EPBC Protected Matters Search Tool Report



EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected.

Information on the coverage of this report and qualifications on data supporting this report are contained in the caveat at the end of the report.

Information is available about [Environment Assessments](#) and the EPBC Act including significance guidelines, forms and application process details.

Report created: 07/09/17 16:10:13

[Summary](#)

[Details](#)

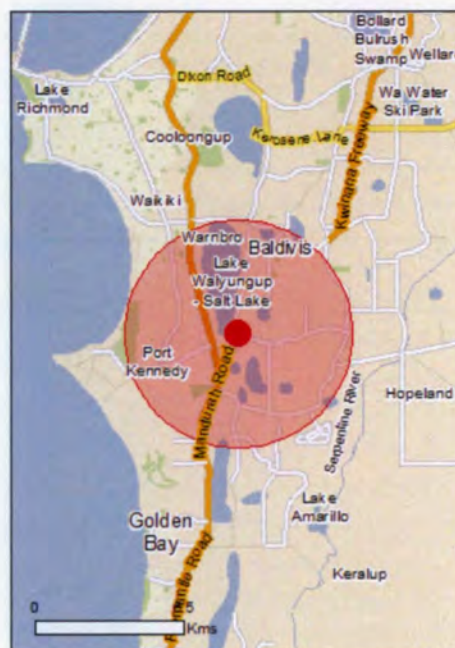
[Matters of NES](#)

[Other Matters Protected by the EPBC Act](#)

[Extra Information](#)

[Caveat](#)

[Acknowledgements](#)



This map may contain data which are
©Commonwealth of Australia
(Geoscience Australia), ©PSMA 2010

[Coordinates](#)

Buffer: 5.0Km



Summary

Matters of National Environmental Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the [Administrative Guidelines on Significance](#).

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance:	2
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	2
Listed Threatened Species:	47
Listed Migratory Species:	38

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at <http://www.environment.gov.au/heritage>

A [permit](#) may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Land:	1
Commonwealth Heritage Places:	None
Listed Marine Species:	67
Whales and Other Cetaceans:	12
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Commonwealth Reserves Marine:	None

Extra Information

This part of the report provides information that may also be relevant to the area you have nominated.

State and Territory Reserves:	2
Regional Forest Agreements:	None
Invasive Species:	36
Nationally Important Wetlands:	1
Key Ecological Features (Marine)	None

Details

Matters of National Environmental Significance

Wetlands of International Importance (Ramsar)		[Resource Information]
Name		Proximity
<u>Becher point wetlands</u>		Within Ramsar site
<u>Peel-yalgorup system</u>		10 - 20km upstream

Listed Threatened Ecological Communities		[Resource Information]
For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.		

Name	Status	Type of Presence
<u>Banksia Woodlands of the Swan Coastal Plain ecological community</u>	Endangered	Community likely to occur within area
<u>Sedgelands in Holocene dune swales of the southern Swan Coastal Plain</u>	Endangered	Community known to occur within area

Listed Threatened Species		[Resource Information]
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Name	Status	Type of Presence
Birds		
<u>Anous tenuirostris melanops</u> Australian Lesser Noddy [26000]	Vulnerable	Species or species habitat may occur within area
<u>Botaurus poiciloptilus</u> Australasian Bittern [1001]	Endangered	Species or species habitat may occur within area
<u>Calidris canutus</u> Red Knot, Knot [855]	Endangered	Species or species habitat known to occur within area
<u>Calidris ferruginea</u> Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area
<u>Calyptorhynchus banksii naso</u> Forest Red-tailed Black-Cockatoo, Karrak [67034]	Vulnerable	Species or species habitat known to occur within area
<u>Calyptorhynchus baudinii</u> Baudin's Cockatoo, Long-billed Black-Cockatoo [769]	Vulnerable	Species or species habitat likely to occur within area
<u>Calyptorhynchus latirostris</u> Carnaby's Cockatoo, Short-billed Black-Cockatoo [59523]	Endangered	Species or species habitat known to occur within area
<u>Diomedea amsterdamensis</u> Amsterdam Albatross [64405]	Endangered	Species or species habitat may occur within area
<u>Diomedea dabbenena</u> Tristan Albatross [66471]	Endangered	Species or species habitat may occur within area

Name	Status	Type of Presence
<u>Diomedea epomophora</u> Southern Royal Albatross [89221]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
<u>Diomedea exulans</u> Wandering Albatross [89223]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
<u>Diomedea sanfordi</u> Northern Royal Albatross [64456]	Endangered	Foraging, feeding or related behaviour likely to occur within area
<u>Leipoa ocellata</u> Malleefowl [934]	Vulnerable	Species or species habitat likely to occur within area
<u>Limosa lapponica baueri</u> Bar-tailed Godwit (baueri), Western Alaskan Bar-tailed Godwit [86380]	Vulnerable	Species or species habitat known to occur within area
<u>Limosa lapponica menzbieri</u> Northern Siberian Bar-tailed Godwit, Bar-tailed Godwit (menzbieri) [86432]	Critically Endangered	Species or species habitat may occur within area
<u>Macronectes giganteus</u> Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area
<u>Macronectes halli</u> Northern Giant Petrel [1061]	Vulnerable	Species or species habitat may occur within area
<u>Numenius madagascariensis</u> Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
<u>Pachyptila turtur subantarctica</u> Fairy Prion (southern) [64445]	Vulnerable	Species or species habitat likely to occur within area
<u>Rostratula australis</u> Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area
<u>Sternula nereis nereis</u> Australian Fairy Tern [82950]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
<u>Thalassarche cauta cauta</u> Shy Albatross, Tasmanian Shy Albatross [82345]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
<u>Thalassarche cauta steadi</u> White-capped Albatross [82344]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
<u>Thalassarche impavida</u> Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area
<u>Thalassarche melanophris</u> Black-browed Albatross [66472]	Vulnerable	Species or species habitat may occur within area
Mammals		
<u>Balaenoptera musculus</u> Blue Whale [36]	Endangered	Species or species habitat likely to occur within area
<u>Bettongia penicillata</u> Brush-tailed Bettong, Woylie [213]	Endangered	Species or species habitat known to occur within area

Name	Status	Type of Presence
<u>Dasyurus geoffroii</u> Chuditch, Western Quoll [330]	Vulnerable	Species or species habitat likely to occur within area
<u>Eubalaena australis</u> Southern Right Whale [40]	Endangered	Breeding known to occur within area
<u>Megaptera novaeangliae</u> Humpback Whale [38]	Vulnerable	Species or species habitat known to occur within area
<u>Neophoca cinerea</u> Australian Sea-lion, Australian Sea Lion [22]	Vulnerable	Species or species habitat may occur within area
<u>Pseudocheirus occidentalis</u> Western Ringtail Possum, Ngwayir, Womp, Woder, Ngoor, Ngoolangit [25911]	Vulnerable	Species or species habitat likely to occur within area
Plants		
<u>Andersonia gracilis</u> Slender Andersonia [14470]	Endangered	Species or species habitat may occur within area
<u>Caladenia huegelii</u> King Spider-orchid, Grand Spider-orchid, Rusty Spider-orchid [7309]	Endangered	Species or species habitat likely to occur within area
<u>Diuris micrantha</u> Dwarf Bee-orchid [55082]	Vulnerable	Species or species habitat likely to occur within area
<u>Diuris purdiei</u> Purdie's Donkey-orchid [12950]	Endangered	Species or species habitat may occur within area
<u>Drakaea elastica</u> Glossy-leaved Hammer Orchid, Glossy-leaved Hammer Orchid, Warty Hammer Orchid [16753]	Endangered	Species or species habitat likely to occur within area
<u>Drakaea micrantha</u> Dwarf Hammer-orchid [56755]	Vulnerable	Species or species habitat likely to occur within area
<u>Lepidosperma rostratum</u> Beaked Lepidosperma [14152]	Endangered	Species or species habitat likely to occur within area
<u>Synaphea sp. Fairbridge Farm (D. Papenfus 696)</u> Selena's Synaphea [82881]	Critically Endangered	Species or species habitat likely to occur within area
Reptiles		
<u>Caretta caretta</u> Loggerhead Turtle [1763]	Endangered	Breeding likely to occur within area
<u>Chelonia mydas</u> Green Turtle [1765]	Vulnerable	Breeding likely to occur within area
<u>Dermochelys coriacea</u> Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Breeding likely to occur within area
<u>Natator depressus</u> Flatback Turtle [59257]	Vulnerable	Breeding likely to occur within area
Sharks		
<u>Carcharias taurus (west coast population)</u> Grey Nurse Shark (west coast population) [68752]	Vulnerable	Species or species habitat known to occur within area
<u>Carcharodon carcharias</u> White Shark, Great White Shark [64470]	Vulnerable	Species or species

Name	Status	Type of Presence
<i>Rhincodon typus</i> Whale Shark [66680]	Vulnerable	habitat known to occur within area Species or species habitat may occur within area
Listed Migratory Species		[Resource Information]
* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.		
Name	Threatened	Type of Presence
Migratory Marine Birds		
<i>Anous stolidus</i> Common Noddy [825]		Species or species habitat may occur within area
<i>Apus pacificus</i> Fork-tailed Swift [678]		Species or species habitat likely to occur within area
<i>Ardenna carneipes</i> Flesh-footed Shearwater, Flesh-footed Shearwater [82404]		Species or species habitat likely to occur within area
<i>Diomedea amsterdamensis</i> Amsterdam Albatross [64405]	Endangered	Species or species habitat may occur within area
<i>Diomedea epomophora</i> Southern Royal Albatross [89221]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
<i>Diomedea exulans</i> Wandering Albatross [89223]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
<i>Hydroprogne caspia</i> Caspian Tern [808]		Foraging, feeding or related behaviour known to occur within area
<i>Macronectes giganteus</i> Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area
<i>Macronectes halli</i> Northern Giant Petrel [1061]	Vulnerable	Species or species habitat may occur within area
<i>Onychoprion anaethetus</i> Bridled Tern [82845]		Foraging, feeding or related behaviour likely to occur within area
<i>Sterna dougallii</i> Roseate Tern [817]		Foraging, feeding or related behaviour likely to occur within area
<i>Thalassarche cauta</i> Tasmanian Shy Albatross [89224]	Vulnerable*	Foraging, feeding or related behaviour likely to occur within area
<i>Thalassarche melanophris</i> Black-browed Albatross [66472]	Vulnerable	Species or species habitat may occur within area
Migratory Marine Species		
<i>Balaena glacialis australis</i> Southern Right Whale [75529]	Endangered*	Breeding known to occur within area
<i>Balaenoptera edeni</i> Bryde's Whale [35]		Species or species habitat may occur within area

Name	Threatened	Type of Presence
<u>Balaenoptera musculus</u> Blue Whale [36]	Endangered	Species or species habitat likely to occur within area
<u>Caperea marginata</u> Pygmy Right Whale [39]		Species or species habitat may occur within area
<u>Carcharodon carcharias</u> White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat known to occur within area
<u>Caretta caretta</u> Loggerhead Turtle [1763]	Endangered	Breeding likely to occur within area
<u>Chelonia mydas</u> Green Turtle [1765]	Vulnerable	Breeding likely to occur within area
<u>Dermochelys coriacea</u> Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Breeding likely to occur within area
<u>Lamna nasus</u> Porbeagle, Mackerel Shark [83288]		Species or species habitat may occur within area
<u>Manta alfredi</u> Reef Manta Ray, Coastal Manta Ray, Inshore Manta Ray, Prince Alfred's Ray, Resident Manta Ray [84994]		Species or species habitat may occur within area
<u>Manta birostris</u> Giant Manta Ray, Chevron Manta Ray, Pacific Manta Ray, Pelagic Manta Ray, Oceanic Manta Ray [84995]		Species or species habitat may occur within area
<u>Megaptera novaeangliae</u> Humpback Whale [38]	Vulnerable	Species or species habitat known to occur within area
<u>Natator depressus</u> Flatback Turtle [59257]	Vulnerable	Breeding likely to occur within area
<u>Orcinus orca</u> Killer Whale, Orca [46]		Species or species habitat may occur within area
<u>Rhincodon typus</u> Whale Shark [66680]	Vulnerable	Species or species habitat may occur within area
Migratory Terrestrial Species		
<u>Motacilla cinerea</u> Grey Wagtail [642]		Species or species habitat may occur within area
Migratory Wetlands Species		
<u>Actitis hypoleucos</u> Common Sandpiper [59309]		Species or species habitat known to occur within area
<u>Calidris acuminata</u> Sharp-tailed Sandpiper [874]		Species or species habitat likely to occur within area
<u>Calidris canutus</u> Red Knot, Knot [855]	Endangered	Species or species habitat known to occur within area
<u>Calidris ferruginea</u> Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area
<u>Calidris melanotos</u> Pectoral Sandpiper [858]		Species or species habitat likely to occur

Name	Threatened	Type of Presence
<u>Limosa lapponica</u> Bar-tailed Godwit [844]		within area Species or species habitat known to occur within area
<u>Numenius madagascariensis</u> Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
<u>Pandion haliaetus</u> Osprey [952]		Species or species habitat likely to occur within area
<u>Tringa nebularia</u> Common Greenshank, Greenshank [832]		Species or species habitat likely to occur within area

Other Matters Protected by the EPBC Act

Commonwealth Land [Resource Information]

The Commonwealth area listed below may indicate the presence of Commonwealth land in this vicinity. Due to the unreliability of the data source, all proposals should be checked as to whether it impacts on a Commonwealth area, before making a definitive decision. Contact the State or Territory government land department for further information.

Name

Commonwealth Land -

Listed Marine Species [Resource Information]

* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.

Name	Threatened	Type of Presence
Birds		
<u>Actitis hypoleucos</u> Common Sandpiper [59309]		Species or species habitat known to occur within area
<u>Anous stolidus</u> Common Noddy [825]		Species or species habitat may occur within area
<u>Anous tenuirostris melanops</u> Australian Lesser Noddy [26000]	Vulnerable	Species or species habitat may occur within area
<u>Apus pacificus</u> Fork-tailed Swift [678]		Species or species habitat likely to occur within area
<u>Ardea alba</u> Great Egret, White Egret [59541]		Species or species habitat known to occur within area
<u>Ardea ibis</u> Cattle Egret [59542]		Species or species habitat may occur within area
<u>Calidris acuminata</u> Sharp-tailed Sandpiper [874]		Species or species habitat likely to occur within area
<u>Calidris canutus</u> Red Knot, Knot [855]	Endangered	Species or species habitat known to occur within area
<u>Calidris ferruginea</u> Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur

Name	Threatened	Type of Presence
<u>Calidris melanotos</u> Pectoral Sandpiper [858]		within area Species or species habitat likely to occur within area
<u>Diomedea amsterdamensis</u> Amsterdam Albatross [64405]	Endangered	Species or species habitat may occur within area
<u>Diomedea dabbenena</u> Tristan Albatross [66471]	Endangered	Species or species habitat may occur within area
<u>Diomedea epomophora</u> Southern Royal Albatross [89221]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
<u>Diomedea exulans</u> Wandering Albatross [89223]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
<u>Diomedea sanfordi</u> Northern Royal Albatross [64456]	Endangered	Foraging, feeding or related behaviour likely to occur within area
<u>Haliaeetus leucogaster</u> White-bellied Sea-Eagle [943]		Species or species habitat likely to occur within area
<u>Limosa lapponica</u> Bar-tailed Godwit [844]		Species or species habitat known to occur within area
<u>Macronectes giganteus</u> Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area
<u>Macronectes halli</u> Northern Giant Petrel [1061]	Vulnerable	Species or species habitat may occur within area
<u>Merops ornatus</u> Rainbow Bee-eater [670]		Species or species habitat may occur within area
<u>Motacilla cinerea</u> Grey Wagtail [642]		Species or species habitat may occur within area
<u>Numenius madagascariensis</u> Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
<u>Pachyptila turtur</u> Fairy Prion [1066]		Species or species habitat likely to occur within area
<u>Pandion haliaetus</u> Osprey [952]		Species or species habitat likely to occur within area
<u>Puffinus assimilis</u> Little Shearwater [59363]		Foraging, feeding or related behaviour known to occur within area
<u>Puffinus carneipes</u> Flesh-footed Shearwater, Fleshy-footed Shearwater [1043]		Species or species habitat likely to occur within area
<u>Rostratula benghalensis (sensu lato)</u> Painted Snipe [889]	Endangered*	Species or species habitat likely to occur within area

Name	Threatened	Type of Presence
<u><i>Sterna anaethetus</i></u> Bridled Tern [814]		Foraging, feeding or related behaviour likely to occur within area
<u><i>Sterna caspia</i></u> Caspian Tern [59467]		Foraging, feeding or related behaviour known to occur within area
<u><i>Sterna dougallii</i></u> Roseate Tern [817]		Foraging, feeding or related behaviour likely to occur within area
<u><i>Thalassarche cauta</i></u> Tasmanian Shy Albatross [89224]	Vulnerable*	Foraging, feeding or related behaviour likely to occur within area
<u><i>Thalassarche impavida</i></u> Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area
<u><i>Thalassarche melanophris</i></u> Black-browed Albatross [66472]	Vulnerable	Species or species habitat may occur within area
<u><i>Thalassarche steadi</i></u> White-capped Albatross [64462]	Vulnerable*	Foraging, feeding or related behaviour likely to occur within area
<u><i>Thinornis rubricollis</i></u> Hooded Plover [59510]		Species or species habitat likely to occur within area
<u><i>Tringa nebularia</i></u> Common Greenshank, Greenshank [832]		Species or species habitat likely to occur within area
Fish		
<u><i>Acentronura australe</i></u> Southern Pygmy Pipehorse [66185]		Species or species habitat may occur within area
<u><i>Campichthys galei</i></u> Gale's Pipefish [66191]		Species or species habitat may occur within area
<u><i>Heraldia nocturna</i></u> Upside-down Pipefish, Eastern Upside-down Pipefish, Eastern Upside-down Pipefish [66227]		Species or species habitat may occur within area
<u><i>Hippocampus angustus</i></u> Western Spiny Seahorse, Narrow-bellied Seahorse [66234]		Species or species habitat may occur within area
<u><i>Hippocampus breviceps</i></u> Short-head Seahorse, Short-snouted Seahorse [66235]		Species or species habitat may occur within area
<u><i>Hippocampus subelongatus</i></u> West Australian Seahorse [66722]		Species or species habitat may occur within area
<u><i>Histiogamphelus cristatus</i></u> Rhino Pipefish, Macleay's Crested Pipefish, Ring-back Pipefish [66243]		Species or species habitat may occur within area
<u><i>Lissocampus caudalis</i></u> Australian Smooth Pipefish, Smooth Pipefish [66249]		Species or species habitat may occur within area
<u><i>Lissocampus fatiloquus</i></u> Prophet's Pipefish [66250]		Species or species habitat may occur within area

Name	Threatened	Type of Presence
<u>Lissocampus runa</u> Javelin Pipefish [66251]		Species or species habitat may occur within area
<u>Maroubra perserrata</u> Sawtooth Pipefish [66252]		Species or species habitat may occur within area
<u>Mitotichthys meraculus</u> Western Crested Pipefish [66259]		Species or species habitat may occur within area
<u>Nannocampus subosseus</u> Bonyhead Pipefish, Bony-headed Pipefish [66264]		Species or species habitat may occur within area
<u>Phycodurus eques</u> Leafy Seadragon [66267]		Species or species habitat may occur within area
<u>Phyllopteryx taeniolatus</u> Common Seadragon, Weedy Seadragon [66268]		Species or species habitat may occur within area
<u>Pugnaso curtirostris</u> Pugnose Pipefish, Pug-nosed Pipefish [66269]		Species or species habitat may occur within area
<u>Solegnathus lettiensis</u> Gunther's Pipehorse, Indonesian Pipefish [66273]		Species or species habitat may occur within area
<u>Stigmatopora argus</u> Spotted Pipefish, Gulf Pipefish, Peacock Pipefish [66276]		Species or species habitat may occur within area
<u>Stigmatopora nigra</u> Widebody Pipefish, Wide-bodied Pipefish, Black Pipefish [66277]		Species or species habitat may occur within area
<u>Stigmatopora olivacea</u> a pipefish [74966]		Species or species habitat may occur within area
<u>Urocampus carinirostris</u> Hairy Pipefish [66282]		Species or species habitat may occur within area
<u>Vanacampus margaritifer</u> Mother-of-pearl Pipefish [66283]		Species or species habitat may occur within area
<u>Vanacampus phillipi</u> Port Phillip Pipefish [66284]		Species or species habitat may occur within area
<u>Vanacampus poecilolaemus</u> Longsnout Pipefish, Australian Long-snout Pipefish, Long-snouted Pipefish [66285]		Species or species habitat may occur within area
Mammals		
<u>Arctocephalus forsteri</u> Long-nosed Fur-seal, New Zealand Fur-seal [20]		Species or species habitat may occur within area
<u>Neophoca cinerea</u> Australian Sea-lion, Australian Sea Lion [22]	Vulnerable	Species or species habitat may occur within area
Reptiles		
<u>Caretta caretta</u> Loggerhead Turtle [1763]	Endangered	Breeding likely to occur within area

Name	Threatened	Type of Presence
<u>Chelonia mydas</u> Green Turtle [1765]	Vulnerable	Breeding likely to occur within area
<u>Dermochelys coriacea</u> Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Breeding likely to occur within area
<u>Disteira kingii</u> Spectacled Seasnake [1123]		Species or species habitat may occur within area
<u>Natator depressus</u> Flatback Turtle [59257]	Vulnerable	Breeding likely to occur within area
Whales and other Cetaceans		[Resource Information]
Name	Status	Type of Presence
Mammals		
<u>Balaenoptera acutorostrata</u> Minke Whale [33]		Species or species habitat may occur within area
<u>Balaenoptera edeni</u> Bryde's Whale [35]		Species or species habitat may occur within area
<u>Balaenoptera musculus</u> Blue Whale [36]	Endangered	Species or species habitat likely to occur within area
<u>Caperea marginata</u> Pygmy Right Whale [39]		Species or species habitat may occur within area
<u>Delphinus delphis</u> Common Dolphin, Short-beaked Common Dolphin [60]		Species or species habitat may occur within area
<u>Eubalaena australis</u> Southern Right Whale [40]	Endangered	Breeding known to occur within area
<u>Grampus griseus</u> Risso's Dolphin, Grampus [64]		Species or species habitat may occur within area
<u>Megaptera novaeangliae</u> Humpback Whale [38]	Vulnerable	Species or species habitat known to occur within area
<u>Orcinus orca</u> Killer Whale, Orca [46]		Species or species habitat may occur within area
<u>Stenella attenuata</u> Spotted Dolphin, Pantropical Spotted Dolphin [51]		Species or species habitat may occur within area
<u>Tursiops aduncus</u> Indian Ocean Bottlenose Dolphin, Spotted Bottlenose Dolphin [68418]		Species or species habitat likely to occur within area
<u>Tursiops truncatus s. str.</u> Bottlenose Dolphin [68417]		Species or species habitat may occur within area

Extra Information

State and Territory Reserves	[Resource Information]
Name	State
Port Kennedy Scientific Park	WA
Unnamed WA44004	WA

Invasive Species [Resource Information]

Weeds reported here are the 20 species of national significance (WoNS), along with other introduced plants that are considered by the States and Territories to pose a particularly significant threat to biodiversity. The following feral animals are reported: Goat, Red Fox, Cat, Rabbit, Pig, Water Buffalo and Cane Toad. Maps from Landscape Health Project, National Land and Water Resources Audit, 2001.

Name	Status	Type of Presence
Birds		
<i>Acridotheres tristis</i> Common Myna, Indian Myna [387]		Species or species habitat likely to occur within area
<i>Anas platyrhynchos</i> Mallard [974]		Species or species habitat likely to occur within area
<i>Carduelis carduelis</i> European Goldfinch [403]		Species or species habitat likely to occur within area
<i>Columba livia</i> Rock Pigeon, Rock Dove, Domestic Pigeon [803]		Species or species habitat likely to occur within area
<i>Passer domesticus</i> House Sparrow [405]		Species or species habitat likely to occur within area
<i>Passer montanus</i> Eurasian Tree Sparrow [406]		Species or species habitat likely to occur within area
<i>Streptopelia chinensis</i> Spotted Turtle-Dove [780]		Species or species habitat likely to occur within area
<i>Streptopelia senegalensis</i> Laughing Turtle-dove, Laughing Dove [781]		Species or species habitat likely to occur within area
<i>Sturnus vulgaris</i> Common Starling [389]		Species or species habitat likely to occur within area
<i>Turdus merula</i> Common Blackbird, Eurasian Blackbird [596]		Species or species habitat likely to occur within area
Mammals		
<i>Bos taurus</i> Domestic Cattle [16]		Species or species habitat likely to occur within area
<i>Canis lupus familiaris</i> Domestic Dog [82654]		Species or species habitat likely to occur within area
<i>Felis catus</i> Cat, House Cat, Domestic Cat [19]		Species or species habitat likely to occur within area
<i>Funambulus pennantii</i> Northern Palm Squirrel, Five-striped Palm Squirrel		Species or species

Name	Status	Type of Presence
[129]		habitat likely to occur within area
<i>Mus musculus</i> House Mouse [120]		Species or species habitat likely to occur within area
<i>Oryctolagus cuniculus</i> Rabbit, European Rabbit [128]		Species or species habitat likely to occur within area
<i>Rattus norvegicus</i> Brown Rat, Norway Rat [83]		Species or species habitat likely to occur within area
<i>Rattus rattus</i> Black Rat, Ship Rat [84]		Species or species habitat likely to occur within area
<i>Vulpes vulpes</i> Red Fox, Fox [18]		Species or species habitat likely to occur within area
Plants		
<i>Asparagus asparagoides</i> Bridal Creeper, Bridal Veil Creeper, Smilax, Florist's Smilax, Smilax Asparagus [22473]		Species or species habitat likely to occur within area
<i>Brachiaria mutica</i> Para Grass [5879]		Species or species habitat may occur within area
<i>Cenchrus ciliaris</i> Buffel-grass, Black Buffel-grass [20213]		Species or species habitat may occur within area
<i>Chrysanthemoides monilifera</i> Bitou Bush, Boneseed [18983]		Species or species habitat may occur within area
<i>Chrysanthemoides monilifera</i> subsp. <i>monilifera</i> Boneseed [16905]		Species or species habitat likely to occur within area
<i>Genista linifolia</i> Flax-leaved Broom, Mediterranean Broom, Flax Broom [2800]		Species or species habitat likely to occur within area
<i>Genista</i> sp. X <i>Genista monspessulana</i> Broom [67538]		Species or species habitat may occur within area
<i>Lantana camara</i> Lantana, Common Lantana, Kamara Lantana, Large-leaf Lantana, Pink Flowered Lantana, Red Flowered Lantana, Red-Flowered Sage, White Sage, Wild Sage [10892]		Species or species habitat likely to occur within area
<i>Lycium ferocissimum</i> African Boxthorn, Boxthorn [19235]		Species or species habitat likely to occur within area
<i>Olea europaea</i> Olive, Common Olive [9160]		Species or species habitat may occur within area
<i>Opuntia</i> spp. Prickly Pears [82753]		Species or species habitat likely to occur within area
<i>Pinus radiata</i> Radiata Pine Monterey Pine, Insignis Pine, Wilding Pine [20780]		Species or species habitat may occur within area

Name	Status	Type of Presence
Rubus fruticosus aggregate Blackberry, European Blackberry [68406]		Species or species habitat likely to occur within area
Salix spp. except S.babylonica, S.x calodendron & S.x reichardtii Willows except Weeping Willow, Pussy Willow and Sterile Pussy Willow [68497]		Species or species habitat likely to occur within area
Salvinia molesta Salvinia, Giant Salvinia, Aquarium Watermoss, Kariba Weed [13665]		Species or species habitat likely to occur within area
Tamarix aphylla Athel Pine, Athel Tree, Tamarisk, Athel Tamarisk, Athel Tamarix, Desert Tamarisk, Flowering Cypress, Salt Cedar [16018]		Species or species habitat likely to occur within area
Reptiles		
Hemidactylus frenatus Asian House Gecko [1708]		Species or species habitat likely to occur within area

Nationally Important Wetlands		[Resource Information]
Name		State
<u>Becher Point Wetlands</u>		WA

Caveat

The information presented in this report has been provided by a range of data sources as acknowledged at the end of the report.

This report is designed to assist in identifying the locations of places which may be relevant in determining obligations under the Environment Protection and Biodiversity Conservation Act 1999. It holds mapped locations of World and National Heritage properties, Wetlands of International and National Importance, Commonwealth and State/Territory reserves, listed threatened, migratory and marine species and listed threatened ecological communities. Mapping of Commonwealth land is not complete at this stage. Maps have been collated from a range of sources at various resolutions.

Not all species listed under the EPBC Act have been mapped (see below) and therefore a report is a general guide only. Where available data supports mapping, the type of presence that can be determined from the data is indicated in general terms. People using this information in making a referral may need to consider the qualifications below and may need to seek and consider other information sources.

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species distributions have been derived through a variety of methods. Where distributions are well known and if time permits, maps are derived using either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc) together with point locations and described habitat; or environmental modelling (MAXENT or BIOCLIM habitat modelling) using point locations and environmental data layers.

Where very little information is available for species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc). In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More reliable distribution mapping methods are used to update these distributions as time permits.

Only selected species covered by the following provisions of the EPBC Act have been mapped:

- migratory and
- marine

The following species and ecological communities have not been mapped and do not appear in reports produced from this database:

- threatened species listed as extinct or considered as vagrants
- some species and ecological communities that have only recently been listed
- some terrestrial species that overfly the Commonwealth marine area
- migratory species that are very widespread, vagrant, or only occur in small numbers

The following groups have been mapped, but may not cover the complete distribution of the species:

- non-threatened seabirds which have only been mapped for recorded breeding sites
- seals which have only been mapped for breeding sites near the Australian continent

Such breeding sites may be important for the protection of the Commonwealth Marine environment.

Coordinates

-32.36265 115.78574

Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

- [Office of Environment and Heritage, New South Wales](#)
- [Department of Environment and Primary Industries, Victoria](#)
- [Department of Primary Industries, Parks, Water and Environment, Tasmania](#)
- [Department of Environment, Water and Natural Resources, South Australia](#)
- [Department of Land and Resource Management, Northern Territory](#)
- [Department of Environmental and Heritage Protection, Queensland](#)
- [Department of Parks and Wildlife, Western Australia](#)
- [Environment and Planning Directorate, ACT](#)
- [Birdlife Australia](#)
- [Australian Bird and Bat Banding Scheme](#)
- [Australian National Wildlife Collection](#)
- Natural history museums of Australia**
- [Museum Victoria](#)
- [Australian Museum](#)
- [South Australian Museum](#)
- [Queensland Museum](#)
- [Online Zoological Collections of Australian Museums](#)
- [Queensland Herbarium](#)
- [National Herbarium of NSW](#)
- [Royal Botanic Gardens and National Herbarium of Victoria](#)
- [Tasmanian Herbarium](#)
- [State Herbarium of South Australia](#)
- [Northern Territory Herbarium](#)
- [Western Australian Herbarium](#)
- [Australian National Herbarium, Canberra](#)
- [University of New England](#)
- [Ocean Biogeographic Information System](#)
- [Australian Government, Department of Defence](#)
- [Forestry Corporation, NSW](#)
- [Geoscience Australia](#)
- [CSIRO](#)
- [Australian Tropical Herbarium, Cairns](#)
- [eBird Australia](#)
- [Australian Government – Australian Antarctic Data Centre](#)
- [Museum and Art Gallery of the Northern Territory](#)
- [Australian Government National Environmental Science Program](#)
- [Australian Institute of Marine Science](#)
- [Reef Life Survey Australia](#)
- [American Museum of Natural History](#)
- [Queen Victoria Museum and Art Gallery, Inveresk, Tasmania](#)
- [Tasmanian Museum and Art Gallery, Hobart, Tasmania](#)
- Other groups and individuals

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the [Contact Us](#) page.

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Appendix B: NatureMap Species Report

NatureMap Species Report

Created By Guest user on 07/09/2017

Current Names Only Yes
Core Datasets Only Yes
Method 'By Circle'
Centre 115° 47' 18" E, 32° 21' 24" S
Buffer 10km
Group By Conservation Status

Conservation Status	Species	Records
Non-conservation taxon	970	8817
Other specially protected fauna	1	2
Priority 1	1	2
Priority 2	2	7
Priority 3	8	34
Priority 4	10	468
Protected under international agreement	21	161
Rare or likely to become extinct	19	246
TOTAL	1032	9737

Name ID	Species Name	Naturalised	Conservation Code	Endemic To Query Area
Rare or likely to become extinct				
1.	24506 <i>Anous tenuirostris</i> subsp. <i>melanops</i> (Australian Lesser Noddy)		T	
2.	24162 <i>Bettongia penicillata</i> subsp. <i>ogilbyi</i> (Woylie, Brush-tailed Bettong)		T	
3.	1596 <i>Caladenia huegelii</i> (Grand Spider Orchid)		T	
4.	24784 <i>Calidris ferruginea</i> (Curlew Sandpiper)		T	
5.	24790 <i>Calidris tenuirostris</i> (Great Knot)		T	
6.	24731 <i>Calyptorhynchus banksii</i> subsp. <i>naso</i> (Forest Red-tailed Black-Cockatoo)		T	
7.	24733 <i>Calyptorhynchus baudinii</i> (Baudin's Cockatoo (long-billed black-cockatoo), Baudin's Cockatoo)		T	
8.	24734 <i>Calyptorhynchus latirostris</i> (Carnaby's Cockatoo (short-billed black-cockatoo), Carnaby's Cockatoo)		T	
9.	34034 <i>Carcharias taurus</i> (Grey Nurse Shark)		T	
10.	34031 <i>Carcharodon carcharias</i> (Great White Shark)		T	
11.	25335 <i>Caretta caretta</i> (Loggerhead Turtle)		T	
12.	24092 <i>Dasyurus geoffroii</i> (Chuditch, Western Quoll)		T	
13.	10796 <i>Diuris drummondii</i> (Tall Donkey Orchid)		T	
14.	1639 <i>Drakaea elastica</i> (Glossy-leaved Hammer Orchid)		T	
15.	24043 <i>Eubalaena australis</i> (Southern Right Whale)		T	
16.	25344 <i>Natator depressus</i> (Flatback Turtle)		T	
17.	24798 <i>Numenius madagascariensis</i> (Eastern Curlew)		T	
18.	28354 <i>Synaphea</i> sp. <i>Serpentine</i> (G.R. Brand 103)		T	
19.	34113 <i>Westralunio carteri</i> (Carter's Freshwater Mussel)		T	
Protected under international agreement				
20.	41323 <i>Actitis hypoleucos</i> (Common Sandpiper)		IA	
21.	25554 <i>Apus pacificus</i> (Fork-tailed Swift, Pacific Swift)		IA	
22.	25558 <i>Ardea ibis</i> (Cattle Egret)		IA	
23.	41324 <i>Ardea modesta</i> (Eastern Great Egret)		IA	
24.	25736 <i>Arenaria interpres</i> (Ruddy Turnstone)		IA	
25.	24779 <i>Calidris acuminata</i> (Sharp-tailed Sandpiper)		IA	
26.	24780 <i>Calidris alba</i> (Sanderling)		IA	
27.	24788 <i>Calidris ruficollis</i> (Red-necked Stint)		IA	
28.	24789 <i>Calidris subminuta</i> (Long-toed Stint)		IA	
29.	30932 <i>Limosa lapponica</i> (Bar-tailed Godwit)		IA	
30.	24690 <i>Macronectes giganteus</i> (Southern Giant Petrel)		IA	
31.	24691 <i>Macronectes halli</i> (Northern Giant Petrel)		IA	
32.	24598 <i>Merops ornatus</i> (Rainbow Bee-eater)		IA	
33.	25742 <i>Numenius phaeopus</i> (Whimbrel)		IA	
34.	24843 <i>Plegadis falcinellus</i> (Glossy Ibis)		IA	
35.	24383 <i>Pluvialis squatarola</i> (Grey Plover)		IA	
36.	24520 <i>Sterna anaethetus</i> subsp. <i>anaethetus</i> (Bridled Tern)		IA	

	Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
37.	24523	<i>Sterna caspia</i> (Caspian Tern)		IA	
38.	24806	<i>Tringa glareola</i> (Wood Sandpiper)		IA	
39.	24808	<i>Tringa nebularia</i> (Common Greenshank)		IA	
40.	24809	<i>Tringa stagnatilis</i> (Marsh Sandpiper)		IA	
Other specially protected fauna					
41.	25624	<i>Falco peregrinus</i> (Peregrine Falcon)		S	
Priority 1					
42.	14932	<i>Acacia lasiocarpa</i> var. <i>bracteolata</i> long peduncle variant (G.J. Keighery 5026)		P1	
Priority 2					
43.	3237	<i>Acacia benthamii</i>		P2	
44.	3006	<i>Cardamine paucijuga</i>		P2	
Priority 3					
45.	34236	<i>Beyeria cinerea</i> subsp. <i>cinerea</i>		P3	
46.	44226	<i>Calandrinia oraria</i>		P3	
47.	3863	<i>Dillwynia dillwynioides</i>		P3	
48.	5038	<i>Lasiopetalum membranaceum</i>		P3	
49.	25147	<i>Lerista lineata</i> (Perth Slider, Lined Skink)		P3	
50.	25249	<i>Neelaps calonotos</i> (Black-striped Snake)		P3	
51.	980	<i>Schoenus capillifolius</i>		P3	
52.	20348	<i>Sphaerolobium calcicola</i>		P3	
Priority 4					
53.	11657	<i>Conostylis pauciflora</i> subsp. <i>pauciflora</i>		P4	
54.	4763	<i>Dodonaea hackettiana</i> (Hackett's Hopbush)		P4	
55.	24215	<i>Hydromys chrysogaster</i> (Water-rat, Rakali)		P4	
56.	25478	<i>Isodon obesulus</i> (Southern Brown Bandicoot)		P4	
57.	24153	<i>Isodon obesulus</i> subsp. <i>fusciventer</i> (Quenda, Southern Brown Bandicoot)		P4	
58.	4027	<i>Jacksonia sericea</i> (Waldjumi)		P4	
59.	24133	<i>Macropus irma</i> (Western Brush Wallaby)		P4	
60.	24328	<i>Oxyura australis</i> (Blue-billed Duck)		P4	
61.	7756	<i>Stylidium longitubum</i> (Jumping Jacks)		P4	
62.	33992	<i>Synemon gratiosa</i> (Graceful Sunmoth)		P4	
Non-conservation taxon					
63.	15466	<i>Acacia applanata</i>			
64.	3262	<i>Acacia cochlearis</i> (Rigid Wattle)			
65.	3282	<i>Acacia cyclops</i> (Coastal Wattle)			
66.	3409	<i>Acacia lasiocarpa</i> (Panjang)			
67.	11611	<i>Acacia lasiocarpa</i> var. <i>lasiocarpa</i>			
68.	15481	<i>Acacia pulchella</i> var. <i>glaberrima</i>			
69.	15482	<i>Acacia pulchella</i> var. <i>goadbyi</i>			
70.	3525	<i>Acacia rostellifera</i> (Summer-scented Wattle)			
71.	3527	<i>Acacia saligna</i> (Orange Wattle, Kudjong)			
72.	30033	<i>Acacia saligna</i> subsp. <i>lindleyi</i>			
73.	30032	<i>Acacia saligna</i> subsp. <i>saligna</i>			
74.	3557	<i>Acacia stenoptera</i> (Narrow Winged Wattle)			
75.	3602	<i>Acacia willdenowiana</i> (Grass Wattle)			
76.		<i>Acanthaluteres brownii</i>			
77.	24260	<i>Acanthiza apicalis</i> (Broad-tailed Thornbill, Inland Thornbill)			
78.	24261	<i>Acanthiza chrysorrhoa</i> (Yellow-rumped Thornbill)			
79.	24262	<i>Acanthiza inornata</i> (Western Thornbill)			
80.	1208	<i>Acanthorhynchus preissii</i>			
81.	24560	<i>Acanthorhynchus superciliosus</i> (Western Spinebill)			
82.	25535	<i>Accipiter cirrocephalus</i> (Collared Sparrowhawk)			
83.	25536	<i>Accipiter fasciatus</i> (Brown Goshawk)			
84.	24282	<i>Accipiter fasciatus</i> subsp. <i>fasciatus</i> (Brown Goshawk)			
85.	42368	<i>Acritoscincus trilineatus</i> (Western Three-lined Skink)			
86.	25755	<i>Acrocephalus australis</i> (Australian Reed Warbler)			
87.	4582	<i>Adriana quadripartita</i> (Bitter Bush)			
88.		<i>Afurcagobius suppositus</i>			
89.	47094	<i>Agave attenuata</i>	Y		
90.	17202	<i>Agonis flexuosa</i> var. <i>flexuosa</i>			
91.	184	<i>Aira caryophyllea</i> (Silvery Hairgrass)	Y		
92.	185	<i>Aira cupaniana</i> (Silvery Hairgrass)	Y		
93.		<i>Allenichthys glauerti</i>			
94.	1728	<i>Allocasuarina fraseriana</i> (Sheoak, Kondil)			
95.		<i>Allotrochosisa karri</i>			
96.	2652	<i>Alternanthera nodiflora</i> (Common Joyweed)			
97.	6565	<i>Alyxia buxifolia</i> (Dysentery Bush)			

	Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
98.	7821	<i>Ambrosia psilostachya</i> (Perennial Ragweed)	Y		
99.	46276	<i>Ambrosia tenuifolia</i> (Lacy Ragweed)	Y		
100.	35159	<i>Ammophila arenaria</i> subsp. <i>arenaria</i>	Y		
101.	13101	<i>Amperea simulans</i>			
102.		<i>Aname mainae</i>			
103.		<i>Aname tepperi</i>			
104.	24310	<i>Anas castanea</i> (Chestnut Teal)			
105.	24312	<i>Anas gracilis</i> (Grey Teal)			
106.	24313	<i>Anas platyrhynchos</i> (Mallard)			
107.	24315	<i>Anas rhynchotis</i> (Australasian Shoveler)			
108.	24316	<i>Anas superciliosa</i> (Pacific Black Duck)			
109.	47414	<i>Anhinga novaehollandiae</i> (Australasian Darter)			
110.	1409	<i>Anigozanthos humilis</i> (Catspaw)			
111.	1411	<i>Anigozanthos manglesii</i> (Mangles Kangaroo Paw, Kurulbrang)			
112.		<i>Anoplocapros amygdaloides</i> ?			
113.	26466	<i>Anotrichium elongatum</i>			
114.		<i>Anser anser</i>			
115.	6949	<i>Anthocercis littorea</i> (Yellow Tailflower)			
116.	24561	<i>Anthochaera carunculata</i> (Red Wattlebird)			
117.	24562	<i>Anthochaera lunulata</i> (Western Little Wattlebird)			
118.	202	<i>Anthoxanthum odoratum</i> (Sweet Vernal Grass)	Y		
119.	25670	<i>Anthus australis</i> (Australian Pipit)			
120.	26475	<i>Antithamnion hanovioides</i>			
121.	3688	<i>Aotus gracillima</i>			
122.	1117	<i>Aphelia cyperoides</i>			
123.	6210	<i>Apium annuum</i>			
124.	6211	<i>Apium prostratum</i> (Sea Celery)			
125.	12040	<i>Apium prostratum</i> var. <i>prostratum</i> (Sea Celery)			
126.		<i>Aplodactylus westralis</i>			
127.	24991	<i>Aprasia repens</i> (Sand-plain Worm-lizard)			
128.		<i>Aptychotrema</i> sp.			
129.		<i>Aptychotrema vincentiana</i>			
130.	24285	<i>Aquila audax</i> (Wedge-tailed Eagle)			
131.		<i>Aracana aurita</i>			
132.	46393	<i>Arctotheca calendula</i> x <i>populifolia</i>	Y		
133.	7840	<i>Arctotis stoechadifolia</i> (White Arctotis, Silver Arctotis)	Y		
134.	24337	<i>Ardea garzetta</i> subsp. <i>nigripes</i> (Little Egret)			
135.	24340	<i>Ardea novaehollandiae</i> (White-faced Heron)			
136.	24341	<i>Ardea pacifica</i> (White-necked Heron)			
137.	26484	<i>Areschougia ligulata</i>			
138.		<i>Armillaria luteobubalina</i>			
139.	25566	<i>Artamus cinereus</i> (Black-faced Woodswallow)			
140.	24353	<i>Artamus cyanopterus</i> (Dusky Woodswallow)			
141.	226	<i>Arundo donax</i> (Giant Reed)	Y		
142.	8779	<i>Asparagus asparagoides</i> (Bridal Creeper)	Y		
143.	1364	<i>Asphodelus fistulosus</i> (Onion Weed)	Y		
144.	20350	<i>Astartea affinis</i> (West-coast Astartea)			
145.	20283	<i>Astartea scoparia</i> (Common Astartea)			
146.	7851	<i>Asteridea pulverulenta</i> (Common Bristle Daisy)			
147.	6323	<i>Astroloma ciliatum</i> (Candle Cranberry)			
148.	6334	<i>Astroloma pallidum</i> (Kick Bush)			
149.		<i>Atherinosoma presbyteroides</i>			
150.		<i>Atherinosoma wallacei</i>			
151.	2471	<i>Atriplex prostrata</i> (Hastate Orache)	Y		
152.	2480	<i>Atriplex suberecta</i>			
153.	38762	<i>Auriscalpium barbatum</i>			
154.	17234	<i>Austrostipa compressa</i>			
155.	17239	<i>Austrostipa exilis</i>			
156.	17240	<i>Austrostipa flavescens</i>			
157.	231	<i>Avellinia michelii</i>	Y		
158.	233	<i>Avena barbata</i> (Bearded Oat)	Y		
159.	234	<i>Avena fatua</i> (Wild Oat)	Y		
160.	24318	<i>Aythya australis</i> (Hardhead)			
161.	1800	<i>Banksia attenuata</i> (Slender Banksia, Piara)			
162.	1819	<i>Banksia grandis</i> (Bull Banksia, Pulgarla)			
163.	1822	<i>Banksia ilicifolia</i> (Holly-leaved Banksia)			
164.	1830	<i>Banksia littoralis</i> (Swamp Banksia, Pungura)			
165.	1834	<i>Banksia menziesii</i> (Firewood Banksia)			
166.	32202	<i>Banksia nivea</i> (Honey-pot Dryandra, Pudjam)			
167.	32077	<i>Banksia sessilis</i> var. <i>cygnorum</i>			

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168.	32080	<i>Banksia sessilis</i> var. <i>sessilis</i>			
169.		<i>Barnardius zonarius</i>			
170.	15037	<i>Bartsia trixago</i>	Y		
171.		<i>Batrachomoeus rubricephalus</i>			
172.	740	<i>Baumea arthropophylla</i>			
173.	741	<i>Baumea articulata</i> (Jointed Rush)			
174.	743	<i>Baumea juncea</i> (Bare Twigrush)			
175.	744	<i>Baumea laxa</i>			
176.	748	<i>Baumea vaginalis</i> (Sheath Twigrush)			
177.	4594	<i>Beyeria cinerea</i>			
178.	24319	<i>Biziura lobata</i> (Musk Duck)			
179.	749	<i>Bolboschoenus caldwellii</i> (Marsh Club-rush)			
180.		<i>Boletus</i> sp.			
181.	26511	<i>Bometia binderiana</i>			
182.	3710	<i>Bossiaea eriocarpa</i> (Common Brown Pea)			
183.	6341	<i>Brachyloma preissii</i> (Globe Heath)			
184.	30142	<i>Brachyloma preissii</i> subsp. <i>obtusifolium</i>			
185.	30136	<i>Brachyloma preissii</i> subsp. <i>preissii</i>			
186.	8661	<i>Brachypodium distachyon</i> (False Brome)	Y		
187.	7878	<i>Brachyscome iberidifolia</i>			
188.	42381	<i>Brachyurophis semifasciatus</i> (Southern Shovel-nosed Snake)			
189.	2999	<i>Brassica rapa</i>	Y		
190.	3000	<i>Brassica tournefortii</i> (Mediterranean Turnip)	Y		
191.	2995	<i>Brassica x napus</i>	Y		
192.	244	<i>Briza maxima</i> (Blowfly Grass)	Y		
193.	245	<i>Briza minor</i> (Shivery Grass)	Y		
194.	247	<i>Bromus arenarius</i> (Sand Brome)			
195.	249	<i>Bromus diandrus</i> (Great Brome)	Y		
196.	250	<i>Bromus hordeaceus</i> (Soft Brome)	Y		
197.	26520	<i>Brongniartella australis</i>			
198.	26521	<i>Bryopsis australis</i>			
199.	26522	<i>Bryopsis foliosa</i>			
200.	1383	<i>Burchardia bairdiae</i>			
201.	12770	<i>Burchardia congesta</i>			
202.	1385	<i>Burchardia multiflora</i> (Dwarf Burchardia)			
203.	24359	<i>Burhinus grallarius</i> (Bush Stone-curlew)			
204.	25714	<i>Cacatua pastinator</i> (Western Long-billed Corella)			
205.	25715	<i>Cacatua roseicapilla</i> (Galah)			
206.	25716	<i>Cacatua sanguinea</i> (Little Corella)			
207.	24729	<i>Cacatua tenuirostris</i> (Eastern Long-billed Corella)	Y		
208.	25598	<i>Cacomantis flabelliformis</i> (Fan-tailed Cuckoo)			
209.	42307	<i>Cacomantis pallidus</i> (Pallid Cuckoo)			
210.	1276	<i>Caesia micrantha</i> (Pale Grass Lily)			
211.	3002	<i>Cakile maritima</i> (Sea Rocket)	Y		
212.	15330	<i>Caladenia arenicola</i>			
213.	1599	<i>Caladenia latifolia</i> (Pink Fairy Orchid)			
214.	15361	<i>Caladenia longicauda</i> subsp. <i>calcigena</i>			
215.	17589	<i>Caladenia occidentalis</i>			
216.	18019	<i>Caladenia vulgata</i>			
217.	2845	<i>Calandrinia brevipedata</i> (Short-stalked Purslane)			
218.	2846	<i>Calandrinia calyptata</i> (Pink Purslane)			
219.	2848	<i>Calandrinia corrigioloides</i> (Strap Purslane)			
220.	2854	<i>Calandrinia granulifera</i> (Pygmy Purslane)			
221.	2856	<i>Calandrinia liniflora</i> (Parakeelya)			
222.	40827	<i>Calandrinia tholiformis</i>			
223.	26527	<i>Calliblepharis planicaulis</i>			Y
224.	96	<i>Callitris preissii</i> (Rottneist Island Pine, Maro)			
225.	26533	<i>Callophycus costatus</i>			
226.	26535	<i>Callophycus harveyanus</i>			
227.	26536	<i>Callophycus oppositifolius</i>			
228.		<i>Calocera guepinoides</i>			
229.	5415	<i>Calothamnus lateralis</i>			
230.	35816	<i>Calothamnus quadrifidus</i> subsp. <i>quadrifidus</i>			
231.	25717	<i>Calyptorhynchus banksii</i> (Red-tailed Black-Cockatoo)			
232.	5439	<i>Calytrix angulata</i> (Yellow Starflower)			
233.		<i>Candelariella</i> sp.			
234.	25454	<i>Canis lupus</i> (Dog, Dingo)	Y		
235.	30883	<i>Canis lupus</i> subsp. <i>familiaris</i> (Dog)	Y		
236.	3005	<i>Cardamine hirsuta</i> (Common Bittercress)	Y		
237.	43241	<i>Carex thecata</i>			

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238.	2798	<i>Carpobrotus virescens</i> (Coastal Pigface, Kolboko, Bain)			
239.	26546	<i>Carpopeltis elata</i>			
240.	1162	<i>Cartonema philydroides</i>			
241.	2951	<i>Cassytha flava</i> (Dodder Laurel)			
242.	2952	<i>Cassytha glabella</i> (Tangled Dodder Laurel)			
243.	2957	<i>Cassytha racemosa</i> (Dodder Laurel)			
244.	11799	<i>Cassytha racemosa</i> forma <i>racemosa</i>			
245.	1742	<i>Casuarina obesa</i> (Swamp Sheoak, Kuli)			
246.	26586	<i>Caulocystis uvifera</i>			
247.	259	<i>Cenchrus echinatus</i> (Burrgrass)	Y		
248.	6539	<i>Centaurium erythraea</i> (Common Centaury)	Y		
249.	6542	<i>Centaurium tenuiflorum</i>	Y		
250.	6214	<i>Centella asiatica</i>			
251.	35322	<i>Centranthus ruber</i> subsp. <i>ruber</i>	Y		
252.	1120	<i>Centrolepis alepyroides</i>			
253.	1121	<i>Centrolepis aristata</i> (Pointed Centrolepis)			
254.	1125	<i>Centrolepis drummondiana</i>			
255.	1129	<i>Centrolepis glabra</i> (Smooth Centrolepis)			
256.	2889	<i>Cerastium glomeratum</i> (Mouse Ear Chickweed)	Y		
257.	17685	<i>Chaetanthus aristatus</i>			
258.		<i>Chaetodermis penicilligera</i>			
259.	24186	<i>Chalinolobus gouldii</i> (Gould's Wattle Bat)			
260.	1280	<i>Chamaescilla corymbosa</i> (Blue Squill)			
261.	26616	<i>Champia affinis</i>			
262.	26621	<i>Champia zostericola</i>			
263.	24377	<i>Charadrius ruficapillus</i> (Red-capped Plover)			
264.	43380	<i>Chelodina colliei</i> (South-western Snake-necked Turtle)			
265.	24321	<i>Chenonetta jubata</i> (Australian Wood Duck, Wood Duck)			
266.	2483	<i>Chenopodium album</i> (Fat Hen)	Y		
267.	2490	<i>Chenopodium glaucum</i> (Glaucous Goosefoot)	Y		
268.	2494	<i>Chenopodium murale</i> (Nettle-leaf Goosefoot)	Y		
269.	47909	<i>Cheramoeca leucosterna</i> (White-backed Swallow)			
270.		<i>Cherax destructor</i>			
271.	763	<i>Chorizandra enodis</i> (Black Bristlerush)			
272.	24980	<i>Christinus marmoratus</i> (Marbled Gecko)			
273.		<i>Chroicocephalus novaehollandiae</i>			
274.	24431	<i>Chrysococcyx basalus</i> (Horsfield's Bronze Cuckoo)			
275.	41264	<i>Chrysothrix xanthina</i>			
276.	6543	<i>Cicendia filiformis</i> (Slender Cicendia)	Y		
277.	24288	<i>Circus approximans</i> (Swamp Harrier)			
278.	24289	<i>Circus assimilis</i> (Spotted Harrier)			
279.	7937	<i>Cirsium vulgare</i> (Spear Thistle, Scotch Thistle)	Y		
280.	24774	<i>Cladorhynchus leucocephalus</i> (Banded Stilt)			
281.	26661	<i>Cladosiphon filum</i>			
282.		<i>Cleidopus gloriamaris</i>			
283.	10804	<i>Clematis linearifolia</i>			
284.	26671	<i>Codium duthieae</i>			
285.	26672	<i>Codium galeatum</i>			
286.	25675	<i>Colluricincla harmonica</i> (Grey Shrike-thrush)			
287.	24399	<i>Columba livia</i> (Domestic Pigeon)	Y		
288.	4550	<i>Comesperma calymega</i> (Blue-spike Milkwort)			
289.	4552	<i>Comesperma confertum</i>			
290.	4555	<i>Comesperma integerrimum</i>			
291.	4564	<i>Comesperma virgatum</i> (Milkwort)			
292.	6217	<i>Conium maculatum</i> (Hemlock)	Y		
293.	16853	<i>Conospermum capitatum</i> subsp. <i>glabratum</i>			
294.	1885	<i>Conospermum triplinervium</i> (Tree Smokebush)			
295.	6348	<i>Conostephium pendulum</i> (Pearl Flower)			
296.	6349	<i>Conostephium preissii</i>			
297.	1418	<i>Conostylis aculeata</i> (Prickly Conostylis)			
298.	11826	<i>Conostylis aculeata</i> subsp. <i>aculeata</i>			
299.	1427	<i>Conostylis candicans</i> (Grey Cottonhead)			
300.	12027	<i>Conostylis candicans</i> subsp. <i>calicicola</i>			
301.	11438	<i>Conostylis candicans</i> subsp. <i>candicans</i>			
302.	1436	<i>Conostylis juncea</i>			
303.	1443	<i>Conostylis pauciflora</i> (Dawesville Conostylis)			
304.	20074	<i>Conyza sumatrensis</i>	Y		
305.	25568	<i>Coracina novaehollandiae</i> (Black-faced Cuckoo-shrike)			
306.	2891	<i>Corrigiola litoralis</i> (Strapwort)	Y		
307.	25592	<i>Corvus coronoides</i> (Australian Raven)			

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308.	1285	<i>Corynotheca micrantha</i> (Sand Lily)			
309.	7945	<i>Cotula coronopifolia</i> (Waterbuttons)	Y		
310.	24671	<i>Coturnix pectoralis</i> (Stubble Quail)			
311.	25595	<i>Cracticus tibicen</i> (Australian Magpie)			
312.	24422	<i>Cracticus tibicen</i> subsp. <i>dorsalis</i> (White-backed Magpie)			
313.	25596	<i>Cracticus torquatus</i> (Grey Butcherbird)			
314.	42009	<i>Craspedia</i> sp. Yalgorup National Park (G.J. Keighery 14449)			
315.	26702	<i>Craspedocarpus ramentaceus</i>			
316.	26704	<i>Craspedocarpus venosus</i>			
317.	3137	<i>Crassula colorata</i> (Dense Stonecrop)			
318.	11709	<i>Crassula colorata</i> var. <i>acuminata</i>			
319.	11563	<i>Crassula colorata</i> var. <i>colorata</i>			
320.	3140	<i>Crassula glomerata</i>	Y		
321.	3142	<i>Crassula natans</i>	Y		
322.	15706	<i>Crassula natans</i> var. <i>minus</i>	Y		
323.	25399	<i>Crinia glauerti</i> (Clicking Frog)			
324.	25400	<i>Crinia insignifera</i> (Squelching Froglet)			
325.	4802	<i>Cryptandra mutila</i>			
326.	30893	<i>Cryptoblepharus buechananii</i>			
327.	25020	<i>Cryptoblepharus plagiocephalus</i>			
328.	30899	<i>Ctenophorus adelaidensis</i> (Southern Heath Dragon, Western Heath Dragon)			
329.	25027	<i>Ctenotus australis</i>			
330.	25039	<i>Ctenotus fallens</i>			
331.	26712	<i>Curdiea obesa</i>			
332.	6663	<i>Cuscuta epithymum</i> (Lesser Dodder, Greater Dodder)	Y		
333.	11021	<i>Cuscuta planiflora</i>	Y		
334.	768	<i>Cyathochaeta avenacea</i>			
335.	24322	<i>Cygnus atratus</i> (Black Swan)			
336.	19625	<i>Cymbalaria muralis</i> subsp. <i>muralis</i>	Y		
337.	283	<i>Cynodon dactylon</i> (Couch)	Y		
338.	285	<i>Cynosurus echinatus</i> (Rough Dogtail)	Y		
339.	783	<i>Cyperus congestus</i> (Dense Flat-sedge)	Y		
340.	815	<i>Cyperus tenellus</i> (Tiny Flatsedge)	Y		
341.	816	<i>Cyperus tenuiflorus</i> (Scaly Sedge)	Y		
342.	10916	<i>Cyrtostylis huegelii</i>			
343.	26720	<i>Cystophora grevillei</i>			
344.	30901	<i>Dacelo novaeguineae</i> (Laughing Kookaburra)	Y		
345.		<i>Dactylophora nigricans</i>			
346.		<i>Dactylopus dactylopus</i>			
347.	7454	<i>Dampiera linearis</i> (Common Dampiera)			
348.	7484	<i>Dampiera trigona</i> (Angled-stem Dampiera)			
349.	25673	<i>Daphoenositta chrysoptera</i> (Varied Sittella)			
350.	26739	<i>Dasya extensa</i>			
351.	26751	<i>Dasyclonium flaccidum</i>			
352.	26752	<i>Dasyclonium incisum</i>			
353.	1218	<i>Dasypogon bromeliifolius</i> (Pineapple Bush)			
354.	6218	<i>Daucus glochidiatus</i> (Australian Carrot)			
355.	15505	<i>Daviesia incrassata</i> subsp. <i>incrassata</i>			
356.	3832	<i>Daviesia physodes</i>			
357.	3845	<i>Daviesia triflora</i>			
358.	25468	<i>Demansia psammophis</i> (Yellow-faced Whipsnake)			
359.	17663	<i>Desmocladius asper</i>			
360.	17691	<i>Desmocladius fasciculatus</i>			
361.	16595	<i>Desmocladius flexuosus</i>			
362.	299	<i>Deyeuxia quadriseta</i> (Reed Bentgrass)			
363.	1259	<i>Dianella revoluta</i> (Blueberry Lily)			
364.	11636	<i>Dianella revoluta</i> var. <i>divaricata</i>			
365.	25607	<i>Dicaeum hirundinaceum</i> (Mistletoebird)			
366.	306	<i>Dichelachne crinita</i> (Longhair Plumegrass)			
367.	1287	<i>Dichopogon capillipes</i>			
368.	26762	<i>Dictyomenia sonderi</i>			
369.	26766	<i>Dictyopteris muelleri</i>			
370.	29537	<i>Dictyota fastigiata</i>			
371.	35223	<i>Dictyota polyclada</i>			
372.		<i>Dingosa serrata</i>			
373.		<i>Diodon nictemerus</i>			
374.	4454	<i>Diplolaena dampieri</i> (Southern Diplolaena)			
375.	18541	<i>Diplopeltis huegelii</i> subsp. <i>huegelii</i>			
376.	3011	<i>Diplotaxis muralis</i> (Wall Rocket)	Y		
377.	7054	<i>Dischisma arenarium</i>	Y		

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378.	7055	<i>Dischisma capitatum</i> (Woolly-headed Dischisma)	Y		
379.	12939	<i>Diuris magnifica</i>			
380.	11156	<i>Drakaea livida</i>			
381.	24470	<i>Dromaius novaehollandiae</i> (Emu)			
382.	3095	<i>Drosera erythrorhiza</i> (Red Ink Sundew)			
383.	3097	<i>Drosera gigantea</i> (Giant Sundew)			
384.	16244	<i>Drosera gigantea</i> subsp. <i>geniculata</i>			
385.	3098	<i>Drosera glanduligera</i> (Pimpinel Sundew)			
386.	3106	<i>Drosera macrantha</i> (Bridal Rainbow)			
387.	13216	<i>Drosera menziesii</i> subsp. <i>penicillaris</i>			
388.	3113	<i>Drosera neesii</i> (Jewel Rainbow)			
389.	3114	<i>Drosera nitidula</i> (Shining Sundew)			
390.	3118	<i>Drosera pallida</i> (Pale Rainbow)			
391.	3131	<i>Drosera stolonifera</i> (Leafy Sundew)			
392.		<i>Echeneis naucrates</i>			
393.	26803	<i>Echinothamnion hystrix</i>			
394.	25096	<i>Egernia kingii</i> (King's Skink)			
395.		<i>Egretta garzetta</i>			
396.		<i>Egretta novaehollandiae</i>			
397.	347	<i>Ehrharta calycina</i> (Perennial Veldt Grass)	Y		
398.	349	<i>Ehrharta longiflora</i> (Annual Veldt Grass)	Y		
399.		<i>Elanus axillaris</i>			
400.	25540	<i>Elanus caeruleus</i> (Black-shouldered Kite)			
401.	25250	<i>Elapognathus coronatus</i> (Crowned Snake)			
402.	47937	<i>Elseymia melanops</i> (Black-fronted Dotterel)			
403.		<i>Eolophus roseicapillus</i>			
404.	6131	<i>Epilobium billardiereum</i> (Glabrous Willow Herb)			
405.	11992	<i>Epilobium billardiereum</i> subsp. <i>intermedium</i>			
406.	14289	<i>Epilobium tetragonum</i> subsp. <i>tetragonum</i>	Y		
407.	24567	<i>Epthianura albifrons</i> (White-fronted Chat)			
408.	379	<i>Eragrostis elongata</i> (Clustered Lovegrass)			
409.	17175	<i>Eremophila glabra</i> subsp. <i>albicans</i>			
410.		<i>Eriophora biapicata</i>			
411.	4333	<i>Erodium cicutarium</i> (Common Storksbill)	Y		
412.	15446	<i>Eryngium pinnatifidum</i> subsp. <i>pinnatifidum</i>			
413.	26821	<i>Erythroclonium muelleri</i>			
414.	24379	<i>Erythronys cinctus</i> (Red-kneed Dotterel)			
415.		<i>Eubalichthys caeruleoguttatus</i>			
416.		<i>Eubalichthys cyanoura</i>			
417.		<i>Eubalichthys mosaicus</i>			
418.	5649	<i>Eucalyptus foecunda</i> (Narrow-leaved Red Mallee)			
419.	5659	<i>Eucalyptus gomphocephala</i> (Tuart, Duart)			
420.	5708	<i>Eucalyptus marginata</i> (Jarrah, Djara)			
421.	13547	<i>Eucalyptus marginata</i> subsp. <i>marginata</i> (Jarrah)			
422.	20808	<i>Eucalyptus petiolaris</i>	Y		
423.	5763	<i>Eucalyptus rudis</i> (Flooded Gum, Kulurda)			
424.	25746	<i>Eudyptula minor</i> (Little Penguin)			
425.		<i>Euleptorhamphus viridis</i>			
426.	4636	<i>Euphorbia paralias</i> (Sea Spurge)	Y		
427.	4648	<i>Euphorbia terracina</i> (Geraldton Carnation Weed)	Y		
428.	3880	<i>Eutaxia virgata</i>			
429.	10765	<i>Exocarpos sparteus</i> (Broom Ballart, Djuk)			
430.	25621	<i>Falco berigora</i> (Brown Falcon)			
431.	25622	<i>Falco cenchroides</i> (Australian Kestrel, Nankeen Kestrel)			
432.	25623	<i>Falco longipennis</i> (Australian Hobby)			
433.	48244	<i>Feldmannia mitchelliae</i>			
434.	24041	<i>Felis catus</i> (Cat)	Y		
435.	20216	<i>Ficinia nodosa</i> (Knotted Club Rush)			
436.		<i>Fomitopsis lilacinogilva</i>			
437.	25727	<i>Fulica atra</i> (Eurasian Coot)			
438.	24761	<i>Fulica atra</i> subsp. <i>australis</i> (Eurasian Coot)			
439.		<i>Furgaleus macki</i>			
440.	907	<i>Gahnia trifida</i> (Coast Saw-sedge)			
441.	34028	<i>Galaxias occidentalis</i> (Western Minnow)			
442.	7323	<i>Galium murale</i> (Small Goosegrass)	Y		
443.	25729	<i>Gallinula tenebrosa</i> (Dusky Moorhen)			
444.	24763	<i>Gallinula tenebrosa</i> subsp. <i>tenebrosa</i> (Dusky Moorhen)			
445.	20346	<i>Gamochaeta coarctata</i>	Y		
446.	20473	<i>Gastrolobium ebracteolatum</i>			
447.	20482	<i>Gastrolobium nervosum</i>			

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448.	4339	<i>Geranium molle</i> (Dove's Foot Cranesbill)	Y		
449.	4340	<i>Geranium retrorsum</i>			
450.	4341	<i>Geranium solanderi</i> (Native Geranium)			
451.	25530	<i>Gerygone fusca</i> (Western Gerygone)			
452.	1518	<i>Gladiolus angustus</i> (Long Tubed Painted Lady)	Y		
453.	1520	<i>Gladiolus caryophyllaceus</i> (Wild Gladiolus)	Y		
454.	26860	<i>Gloiocladia halymenioides</i>			
455.		<i>Gnathanacanthus goetzei</i>			
456.		<i>Gnathopis longicaudatus</i>			
457.	6587	<i>Gomphocarpus fruticosus</i> (Narrowleaf Cottonbush)	Y		
458.	10909	<i>Gompholobium confertum</i>			
459.	3957	<i>Gompholobium tomentosum</i> (Hairy Yellow Pea)			
460.		<i>Gonorynchus greyi</i>			
461.	7538	<i>Goodenia pulchella</i>			
462.	24443	<i>Grallina cyanoleuca</i> (Magpie-lark)			
463.	1982	<i>Grevillea crithmifolia</i>			
464.	15839	<i>Grevillea preissii</i> subsp. <i>preissii</i>			
465.	2119	<i>Grevillea vestita</i>			
466.	12824	<i>Grevillea vestita</i> subsp. <i>vestita</i>			
467.		<i>Gymnapistes marmoratus</i>			
468.		<i>Gymnopilus allantopus</i>			
469.		<i>Gymnothorax</i> sp.			
470.		<i>Gymnothorax woodwardi</i>			
471.	24487	<i>Haematopus longirostris</i> (Pied Oystercatcher)			
472.	1468	<i>Haemodorum laxum</i>			
473.	1472	<i>Haemodorum simplex</i>			
474.	2175	<i>Hakea lissocarpha</i> (Honey Bush)			
475.	2197	<i>Hakea prostrata</i> (Harsh Hakea)			
476.	2216	<i>Hakea varia</i> (Variable-leaved Hakea)			
477.	24293	<i>Haliaeetus leucogaster</i> (White-bellied Sea-Eagle)			
478.	24295	<i>Haliastur sphenurus</i> (Whistling Kite)			
479.	24689	<i>Halobaena caerulea</i> (Blue Petrel)			
480.	26900	<i>Haloplegma preissii</i>			
481.	3961	<i>Hardenbergia comptoniana</i> (Native Wisteria)			
482.	25410	<i>Heleioporus eyrei</i> (Moaning Frog)			
483.	25412	<i>Heleioporus psammophilus</i> (Sand Frog)			
484.	3016	<i>Heliophila pusilla</i>	Y		
485.	16933	<i>Hemiandra glabra</i>			
486.	6839	<i>Hemiandra pungens</i> (Snakebush)			
487.	25232	<i>Hemidactylus frenatus</i> (Asian House Gecko)	Y		
488.	25119	<i>Hemiergis quadrilineata</i>			
489.	26915	<i>Hennedya crista</i>			
490.	26919	<i>Herposiphonia rostrata</i>			
491.		<i>Heterodontus portusjacksoni</i>			
492.	26929	<i>Heterosiphonia callithamnium</i>			
493.	26938	<i>Heterosiphonia wrangelioides</i>			
494.		<i>Hexanchus nakamurai</i>			Y
495.	5117	<i>Hibbertia cuneiformis</i> (Cutleaf Hibbertia)			
496.	5135	<i>Hibbertia hypericoides</i> (Yellow Buttercups)			
497.	5162	<i>Hibbertia racemosa</i> (Stalked Guinea Flower)			
498.	5172	<i>Hibbertia stellaris</i> (Orange Stars)			
499.	5176	<i>Hibbertia vaginata</i>			
500.	47965	<i>Hieraaetus morphnoides</i> (Little Eagle)			
501.	25734	<i>Himantopus himantopus</i> (Black-winged Stilt)			
502.		<i>Hippocampus elongatus</i>			
503.	26942	<i>Hirsutiathalia loricata</i>			
504.	24491	<i>Hirundo neoxena</i> (Welcome Swallow)			
505.	13758	<i>Histiogaster incisa</i>			
506.		<i>Histrio histrio</i>			
507.		<i>Hogna crispipes</i>			
508.	445	<i>Holcus setiger</i> (Annual Fog)	Y		
509.	6222	<i>Homaloscium homalocarpum</i>			
510.	12859	<i>Hovea trisperma</i> var. <i>trisperma</i>			
511.	5216	<i>Hybanthus calycinus</i> (Wild Violet)			
512.	5218	<i>Hybanthus debilissimus</i>			
513.	26949	<i>Hydroclathrus clathratus</i>			
514.	6223	<i>Hydrocotyle alata</i>			
515.	6224	<i>Hydrocotyle blepharocarpa</i>			
516.	6229	<i>Hydrocotyle diantha</i>			
517.	6232	<i>Hydrocotyle hispidula</i>			

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518.	6241	<i>Hydrocotyle tetragonocarpa</i>			
519.	25366	<i>Hydrophis elegans</i> (Elegant Seasnake, Bar-bellied Seasnake)			
520.	43384	<i>Hydrophis platurus</i> (Yellow-bellied Seasnake)			
521.		<i>Hydroprogne caspia</i>			
522.	452	<i>Hyparrhenia hirta</i> (Tambookie Grass)	Y		
523.		<i>Hypnos monopterygium</i>			
524.	5817	<i>Hypocalymma angustifolium</i> (White Myrtle, Kudjid)			
525.	35070	<i>Hypocalymma angustifolium</i> subsp. Swan Coastal Plain (G.J. Keighery 16777)			
526.	5825	<i>Hypocalymma robustum</i> (Swan River Myrtle)			
527.	8086	<i>Hypochoeris glabra</i> (Smooth Catsear)	Y		
528.	9352	<i>Hypochoeris radicata</i> (Flat Weed, Cats-ear)	Y		
529.	26981	<i>Hypoglossum revolutum</i>			
530.	1070	<i>Hypolaena exsulca</i>			
531.	17841	<i>Hypolaena pubescens</i>			
532.		<i>Idiomma blackwalli</i>			
533.	910	<i>Isolepis cernua</i> (Nodding Club-rush)			
534.	20199	<i>Isolepis cernua</i> var. <i>cernua</i>			
535.	20200	<i>Isolepis cernua</i> var. <i>setiformis</i>			
536.	917	<i>Isolepis marginata</i> (Coarse Club-rush)			
537.	919	<i>Isolepis oldfieldiana</i>			
538.	921	<i>Isolepis producta</i>			
539.		<i>Isometroides vesus</i>			
540.		<i>Isopeda leishmanni</i>			
541.	7396	<i>Isotoma hypocrateriformis</i> (Woodbridge Poison)			
542.	3992	<i>Isotropis cuneifolia</i> (Granny Bonnets)			
543.	19700	<i>Isotropis cuneifolia</i> subsp. <i>cuneifolia</i>			
544.	8092	<i>Ixiolaena viscosa</i> (Sticky Ixiolaena)			
545.	4012	<i>Jacksonia furcellata</i> (Grey Stinkwood)			
546.		<i>Jalmenus inous inous</i>			Y
547.	20454	<i>Juncus acutus</i> subsp. <i>acutus</i>	Y		
548.	1178	<i>Juncus bufonius</i> (Toad Rush)	Y		
549.	1180	<i>Juncus capitatus</i> (Capitate Rush)	Y		
550.	1185	<i>Juncus kraussii</i> (Sea Rush)			
551.	11922	<i>Juncus kraussii</i> subsp. <i>australiensis</i>			
552.	1188	<i>Juncus pallidus</i> (Pale Rush)			
553.	1189	<i>Juncus pauciflorus</i> (Loose Flower Rush)			
554.	4037	<i>Kennedia coccinea</i> (Coral Vine)			
555.	4044	<i>Kennedia prostrata</i> (Scarlet Runner)			
556.	5832	<i>Kunzea ericifolia</i> (Spearwood, Pondil)			
557.	15498	<i>Kunzea glabrescens</i> (Spearwood)			
558.	13562	<i>Lachenalia aloides</i>	Y		
559.	1370	<i>Lachenalia reflexa</i>	Y		
560.	20019	<i>Lachnagrostis filiformis</i>			
561.		<i>Lagocephalus scleratus</i>			
562.	467	<i>Lagurus ovatus</i> (Hare's Tail Grass)	Y		
563.	28342	<i>Landoltia punctata</i> (Thin Duckweed)			
564.	25637	<i>Larus novaehollandiae</i> (Silver Gull)			
565.	24511	<i>Larus novaehollandiae</i> subsp. <i>novaehollandiae</i> (Silver Gull)			
566.	25638	<i>Larus pacificus</i> (Pacific Gull)			
567.	45082	<i>Lasiopetalum glutinosum</i> subsp. <i>latifolium</i>			
568.	4052	<i>Latrobea tenella</i>			
569.		<i>Latrodectus hasseltii</i>			
570.	27002	<i>Laurencia forsteri</i>			
571.	27008	<i>Laurencia shepherdii</i>			
572.	1309	<i>Laxmannia squarrosa</i>			
573.	27011	<i>Lenormandia latifolia</i>			
574.	44490	<i>Leontodon rhagadioloides</i>	Y		
575.	925	<i>Lepidosperma angustatum</i>			
576.	42742	<i>Lepidosperma calcicola</i>			
577.	932	<i>Lepidosperma effusum</i> (Spreading Sword-sedge)			
578.	933	<i>Lepidosperma gladiatum</i> (Coast Sword-sedge, Kerbin)			
579.	937	<i>Lepidosperma longitudinale</i> (Pithy Sword-sedge)			
580.	940	<i>Lepidosperma pubisquameum</i>			
581.	944	<i>Lepidosperma scabrum</i>			
582.		<i>Lepidosperma</i> sp.			
583.	945	<i>Lepidosperma squamatum</i>			
584.	1078	<i>Leptocarpus coangustatus</i>			
585.	46375	<i>Leptocarpus decipiens</i>			
586.	46382	<i>Leptocarpus royci</i>			
587.	1080	<i>Leptocarpus scariosus</i>			

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588.	2352	<i>Leptomeria preissiana</i>			
589.	17852	<i>Leptorhynchus scaber</i> (Lanky Buttons)			
590.	27015	<i>Leptosomia rosea</i>			
591.	5850	<i>Leptospermum laevigatum</i> (Coast Teatree)	Y		
592.	1085	<i>Lepyrodia glauca</i>			
593.	25133	<i>Lerista elegans</i>			
594.	25148	<i>Lerista lineopunctulata</i>			
595.	6360	<i>Leucopogon australis</i> (Spiked Beard-heath)			
596.	6374	<i>Leucopogon conostephioides</i>			
597.	6427	<i>Leucopogon parviflorus</i> (Coast Beard-heath)			
598.	6436	<i>Leucopogon propinquus</i>			
599.	7677	<i>Levenhookia stipitata</i> (Common Stylewort)			
600.	25005	<i>Lialis burtonis</i>			
601.	25661	<i>Lichmera indistincta</i> (Brown Honeyeater)			
602.	24582	<i>Lichmera indistincta</i> subsp. <i>indistincta</i> (Brown Honeyeater)			
603.	25415	<i>Limnodynastes dorsalis</i> (Western Banjo Frog)			
604.	7075	<i>Linaria maroccana</i>	Y		
605.	4362	<i>Linum marginale</i> (Wild Flax)			
606.	36160	<i>Liparophyllum capitatum</i>			
607.	36179	<i>Liparophyllum violifolium</i>			
608.	25378	<i>Litoria adelaidensis</i> (Slender Tree Frog)			
609.	25388	<i>Litoria moorei</i> (Motorbike Frog)			
610.	9289	<i>Lobelia anceps</i> (Angled Lobelia)			
611.	7408	<i>Lobelia tenuior</i> (Slender Lobelia)			
612.	27044	<i>Lobospira bicuspidata</i>			
613.	6515	<i>Logania vaginalis</i> (White Spray)			
614.	476	<i>Lolium perenne</i> (Perennial Ryegrass)	Y		
615.	478	<i>Lolium rigidum</i> (Wimmera Ryegrass)	Y		
616.	11073	<i>Lolium x hybridum</i>	Y		
617.	1223	<i>Lomandra caespitosa</i> (Tufted Mat Rush)			
618.	1228	<i>Lomandra hermaphrodita</i>			
619.	1231	<i>Lomandra maritima</i>			
620.	1232	<i>Lomandra micrantha</i> (Small-flower Mat-rush)			
621.	14542	<i>Lomandra micrantha</i> subsp. <i>micrantha</i>			
622.	1234	<i>Lomandra nigricans</i>			
623.	1239	<i>Lomandra preissii</i>			
624.	1243	<i>Lomandra sericea</i> (Silky Mat Rush)			
625.	1246	<i>Lomandra suaveolens</i>			
626.		<i>Lophoictinia isura</i>			
627.		<i>Lotella rhacinus</i>			
628.	8564	<i>Lotus subbiflorus</i>	Y		
629.	1198	<i>Luzula meridionalis</i> (Field Woodrush)			
630.		<i>Lycidas michaelsoni</i>			
631.	1097	<i>Lyginia barbata</i>			
632.	18049	<i>Lyginia imberbis</i>			
633.	36375	<i>Lysimachia arvensis</i> (Pimpernel)	Y		
634.		<i>Macrolepiota clelandii</i>			
635.	24132	<i>Macropus fuliginosus</i> (Western Grey Kangaroo)			
636.	85	<i>Macrozamia riedlei</i> (Zamia, Djiridji)			
637.	24326	<i>Malacorhynchus membranaceus</i> (Pink-eared Duck)			
638.	25654	<i>Malurus splendens</i> (Splendid Fairy-wren)			
639.	24552	<i>Malurus splendens</i> subsp. <i>splendens</i> (Splendid Fairy-wren)			
640.	36480	<i>Malva arborea</i> (Tree Mallow)	Y		
641.	4961	<i>Malva parviflora</i> (Marshmallow)	Y		
642.	31351	<i>Malva preissiana</i>			
643.	24583	<i>Manorina flavivula</i> (Yellow-throated Miner)			
644.	4079	<i>Medicago polymorpha</i> (Burr Medic)	Y		
645.	25758	<i>Megalurus gramineus</i> (Little Grassbird)			
646.	34676	<i>Meionectes brownii</i> (Swamp Raspwort)			
647.	13271	<i>Melaleuca huegelii</i> subsp. <i>huegelii</i>			
648.	5921	<i>Melaleuca incana</i> (Grey Honey-myrtle)			
649.	13273	<i>Melaleuca incana</i> subsp. <i>incana</i>			
650.	5926	<i>Melaleuca lateritia</i> (Robin Redbreast Bush)			
651.	5952	<i>Melaleuca preissiana</i> (Moonah)			
652.	5959	<i>Melaleuca raphiophylla</i> (Swamp Paperbark)			
653.	18598	<i>Melaleuca systema</i>			
654.	5978	<i>Melaleuca teretifolia</i> (Banbar)			
655.	5980	<i>Melaleuca thymoides</i>			
656.	5987	<i>Melaleuca viminea</i> (Mohan)			
657.	13280	<i>Melaleuca viminea</i> subsp. <i>viminea</i>			

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658.	4084	<i>Melilotus albus</i>	Y		
659.	4085	<i>Melilotus indicus</i>	Y		
660.	25184	<i>Menetia greyii</i>			
661.	6886	<i>Mentha x piperita</i>	Y		Y
662.	955	<i>Mesomelaena pseudostygia</i>			
663.	957	<i>Mesomelaena tetragona</i> (Semaphore Sedge)			
664.		<i>Microcarbo melanoleucos</i>			
665.	485	<i>Microlaena stipoides</i> (Weeping Grass)			
666.	10954	<i>Microtis media</i> (Tall Mignonette Orchid)			
667.	15419	<i>Microtis media</i> subsp. <i>media</i>			
668.	1660	<i>Microtis orbicularis</i> (Dark Mignonette Orchid)			
669.	8105	<i>Millotia myosotidifolia</i>			
670.	16693	<i>Minuartia mediterranea</i>	Y		
671.	7085	<i>Misopates orontium</i> (Lesser Snapdragon)	Y		
672.		<i>Missulena granulosa</i>			
673.		<i>Missulena occatoria</i>			
674.	7410	<i>Monopsis debilis</i>	Y		
675.	37440	<i>Monopsis debilis</i> var. <i>depressa</i>	Y		
676.	4662	<i>Monotaxis grandiflora</i> (Diamond of the Desert)			
677.	4666	<i>Monotaxis occidentalis</i>			
678.	25240	<i>Morelia spilota</i> subsp. <i>imbricata</i> (Carpet Python)			
679.	25191	<i>Morethia lineocellata</i>			
680.	48008	<i>Morus serrator</i> (Australasian Gannet)			
681.	2412	<i>Muehlenbeckia adpressa</i> (Climbing Lignum)			
682.	24223	<i>Mus musculus</i> (House Mouse)	Y		
683.		<i>Mustelus antarcticus</i>			
684.	38811	<i>Mycena clarkeana</i>			
685.		<i>Mycena nargan</i>			
686.		<i>Myliobatis</i> sp.			
687.	7289	<i>Myoporum caprarioides</i> (Slender Myoporum)			
688.	7291	<i>Myoporum insulare</i> (Blueberry Tree, boobialla)			
689.		<i>Nannoperca vittata</i>			
690.	24738	<i>Neophema elegans</i> (Elegant Parrot)			
691.	18356	<i>Nerium oleander</i>	Y		
692.		<i>Nicodamus mainae</i>			
693.	27103	<i>Nizymenia conferta</i>			
694.	25252	<i>Notechis scutatus</i> (Tiger Snake)			
695.	2401	<i>Nuytsia floribunda</i> (Christmas Tree, Mudja)			
696.	25564	<i>Nycticorax caledonicus</i> (Rufous Night Heron)			
697.	24194	<i>Nyctophilus geoffroyi</i> (Lesser Long-eared Bat)			
698.	24407	<i>Ocyphaps lophotes</i> (Crested Pigeon)			
699.	16390	<i>Oenothera drummondii</i> subsp. <i>drummondii</i>	Y		
700.	14292	<i>Oenothera stricta</i> subsp. <i>stricta</i>	Y		
701.	8127	<i>Olearia axillaris</i> (Coastal Daisybush)			
702.	38816	<i>Omphalotus nidiformis</i>			
703.	7348	<i>Opercularia hispidula</i> (Hispid Stinkweed)			
704.	18255	<i>Opercularia vaginata</i> (Dog Weed)			
705.		<i>Ophisurus serpens</i>			
706.	1372	<i>Ornithogalum arabicum</i> (Lesser Cape Lily)	Y		
707.	4113	<i>Ornithopus compressus</i> (Yellow Serradella)	Y		
708.	7122	<i>Orobancha minor</i> (Lesser Broomrape)	Y		
709.	24085	<i>Oryctolagus cuniculus</i> (Rabbit)	Y		
710.	30375	<i>Oxalis exilis</i>			
711.	4355	<i>Oxalis perennans</i>			
712.	25680	<i>Pachycephala rufiventris</i> (Rufous Whistler)			
713.	24692	<i>Pachyptila belcheri</i> (Slender-billed Prion)			
714.	24693	<i>Pachyptila desolata</i> (Antarctic Prion)			
715.	25707	<i>Pachyptila salvini</i> (Salvin's Prion)			
716.		<i>Pandion cristatus</i>			
717.	516	<i>Parapholis incurva</i> (Coast Barbgrass)	Y		
718.	25253	<i>Parasuta gouldii</i>			
719.	25681	<i>Pardalotus punctatus</i> (Spotted Pardalote)			
720.	25682	<i>Pardalotus striatus</i> (Striated Pardalote)			
721.	7089	<i>Parentucellia latifolia</i> (Common Bartsia)	Y		
722.	7090	<i>Parentucellia viscosa</i> (Sticky Bartsia)	Y		
723.	1762	<i>Parietaria debilis</i> (Pellitory)			
724.	1763	<i>Parietaria judaica</i> (Pellitory)	Y		
725.	528	<i>Paspalum distichum</i> (Water Couch)	Y		
726.	1550	<i>Patersonia occidentalis</i> (Purple Flag, Koma)			
727.	30471	<i>Patersonia occidentalis</i> var. <i>angustifolia</i>			

	Name ID	Species Name	Naturalised	Conservation Code	Endemic To Query Area
728.	30472	<i>Patersonia occidentalis</i> var. <i>occidentalis</i>			
729.	24674	<i>Pavo cristatus</i> (Common Peafowl, Indian Peafowl)	Y		
730.		<i>Pegasus</i> sp.			Y
731.	4343	<i>Pelargonium capitatum</i> (Rose Pelargonium)	Y		
732.	4346	<i>Pelargonium littorale</i>			
733.	24648	<i>Pelecanus conspicillatus</i> (Australian Pelican)			
734.	27121	<i>Penicillus nodulosus</i>			
735.	6006	<i>Pericalymma ellipticum</i> (Swamp Teatree)			
736.	16478	<i>Pericalymma ellipticum</i> var. <i>floridum</i>			
737.	2273	<i>Persoonia saccata</i> (Snottygobble)			
738.	48061	<i>Petrochelidon nigricans</i> (Tree Martin)			
739.	48066	<i>Petroica boodang</i> (Scarlet Robin)			
740.	24659	<i>Petroica goodenovii</i> (Red-capped Robin)			
741.	20368	<i>Petrophile axillaris</i>			
742.	2299	<i>Petrophile linearis</i> (Pixie Mops)			
743.	19825	<i>Petrorhagia dubia</i>	Y		
744.	25697	<i>Phalacrocorax carbo</i> (Great Cormorant)			
745.	25698	<i>Phalacrocorax melanoleucos</i> (Little Pied Cormorant)			
746.	24667	<i>Phalacrocorax sulcirostris</i> (Little Black Cormorant)			
747.	25699	<i>Phalacrocorax varius</i> (Pied Cormorant)			
748.	24668	<i>Phalacrocorax varius</i> subsp. <i>hypoleucos</i> (Pied Cormorant)			
749.	551	<i>Phalaris minor</i> (Lesser Canary Grass)	Y		
750.	552	<i>Phalaris paradoxa</i> (Paradoxa Grass)	Y		
751.	24409	<i>Phaps chalcoptera</i> (Common Bronzewing)			
752.	18529	<i>Phllothea spicata</i> (Pepper and Salt)			
753.		<i>Phlebia subceracea</i>			
754.	1478	<i>Phlebocarya ciliata</i>			
755.	6734	<i>Phyla nodiflora</i> var. <i>nodiflora</i>	Y		
756.	48071	<i>Phylidonyris niger</i> (White-cheeked Honeyeater)			
757.	24596	<i>Phylidonyris novaehollandiae</i> (New Holland Honeyeater)			
758.	16177	<i>Phyllangium paradoxum</i>			
759.	4675	<i>Phyllanthus calycinus</i> (False Boronia)			
760.	4	<i>Phylloglossum drummondii</i> (Pigmy Clubmoss)			
761.		<i>Phyllopteryx taeniolatus</i>			
762.	6983	<i>Physalis peruviana</i> (Cape Gooseberry)	Y		
763.		<i>Phytophthora cinnamomi</i>			
764.	14370	<i>Picris angustifolia</i> subsp. <i>angustifolia</i>			
765.	5252	<i>Pimelea lanata</i>			
766.	5254	<i>Pimelea leucantha</i>			
767.	5261	<i>Pimelea rosea</i> (Rose Banjine)			
768.	18117	<i>Pimelea rosea</i> subsp. <i>rosea</i>			
769.	87	<i>Pinus pinaster</i> (Pinaster Pine)	Y		
770.	42281	<i>Pithocarpa cordata</i>			
771.	7303	<i>Plantago lanceolata</i> (Ribwort Plantain)	Y		
772.	24841	<i>Platalea flavipes</i> (Yellow-billed Spoonbill)			
773.	24842	<i>Platalea regia</i> (Royal Spoonbill)			
774.	25720	<i>Platyercus icterotis</i> (Western Rosella)			
775.	24747	<i>Platyercus spurius</i> (Red-capped Parrot)			
776.	25721	<i>Platyercus zonarius</i> (Australian Ringneck, Ring-necked Parrot)			
777.	24750	<i>Platyercus zonarius</i> subsp. <i>semitorquatus</i> (Twenty-eight Parrot)			
778.	27149	<i>Platysiphonia mutabilis</i>			
779.	38823	<i>Pleuroflammula praestans</i>			
780.		<i>Pluteus atromarginatus</i>			
781.	573	<i>Poa drummondiana</i> (Knotted Poa)			
782.	577	<i>Poa poliformis</i> (Coastal Poa)			
783.	578	<i>Poa porphyroclados</i>			
784.	25704	<i>Podiceps cristatus</i> (Great Crested Grebe)			
785.	8175	<i>Podolepis gracilis</i> (Slender Podolepis)			
786.	8182	<i>Podothea angustifolia</i> (Sticky Longheads)			
787.	8183	<i>Podothea chrysanthra</i> (Yellow Podothea)			
788.	8184	<i>Podothea gnaphalioides</i> (Golden Long-heads)			
789.		<i>Podothea</i> sp.			
790.	25510	<i>Pogona minor</i> (Dwarf Bearded Dragon)			
791.	24907	<i>Pogona minor</i> subsp. <i>minor</i> (Dwarf Bearded Dragon)			
792.	24681	<i>Poliocephalus poliocephalus</i> (Hoary-headed Grebe)			
793.	27162	<i>Pollexfenia pedicellata</i>			
794.	582	<i>Polypogon monspeliensis</i> (Annual Beardgrass)	Y		
795.	25722	<i>Polytelis anthopeplus</i> (Regent Parrot)			
796.		<i>Pomatopus saltatrix</i>			
797.	4691	<i>Poranthera microphylla</i> (Small Poranthera)			

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798.	25731	<i>Porphyrio porphyrio</i> (Purple Swamphen)			
799.	24767	<i>Porphyrio porphyrio</i> subsp. <i>bellus</i> (Purple Swamphen)			
800.	24769	<i>Porzana fluminea</i> (Australian Spotted Crane)			
801.	25732	<i>Porzana pusilla</i> (Baillon's Crane)			
802.	24771	<i>Porzana tabuensis</i> (Spotless Crane)			
803.	111	<i>Potamogeton ochreatus</i> (Blunt Pondweed)			
804.	1668	<i>Prasophyllum brownii</i>			
805.	1670	<i>Prasophyllum drummondii</i> (Swamp Leek Orchid)			
806.	1672	<i>Prasophyllum fimbria</i> (Fringed Leek Orchid)			
807.	8189	<i>Pseudognaphalium luteoalbum</i> (Jersey Cudweed)			
808.	25511	<i>Pseudonaja affinis</i> (Dugite)			
809.	25259	<i>Pseudonaja affinis</i> subsp. <i>affinis</i> (Dugite)			
810.	27195	<i>Pterocladia lucida</i>			
811.	27196	<i>Pterocladia rectangularis</i>			
812.	24702	<i>Pterodroma brevirostris</i> (Kerguelen Petrel)			
813.	25710	<i>Pterodroma macroptera</i> (Great-winged Petrel)			
814.		<i>Pterostylis</i> aff. <i>nana</i>			
815.	1686	<i>Pterostylis barbata</i> (Bird Orchid)			
816.	17267	<i>Pterostylis brevisepala</i>			
817.	12217	<i>Pterostylis sanguinea</i>			
818.		<i>Pterygotrigla polyommata</i>			
819.	2718	<i>Ptilotus drummondii</i> (Narrowleaf Mulla Mulla)			
820.	2751	<i>Ptilotus polystachyus</i> (Prince of Wales Feather)			
821.	2759	<i>Ptilotus sericostachyus</i>			
822.	15856	<i>Ptilotus sericostachyus</i> subsp. <i>sericostachyus</i>			
823.	24711	<i>Puffinus assimilis</i> subsp. <i>assimilis</i> (Little Shearwater)			
824.		<i>Purpureicephalus spurius</i>			
825.	30867	<i>Pycnonotus jocosus</i> subsp. <i>jocosus</i> (Red-whiskered Bulbul)	Y		Y
826.	8195	<i>Quinetia urvillei</i>			
827.		<i>Rachycentron canadum</i>			
828.	2935	<i>Ranunculus pumilio</i> (Smallflower Buttercup)			
829.	2938	<i>Ranunculus trilobus</i> (Buttercup)	Y		
830.	3061	<i>Raphanus raphanistrum</i> (Wild Radish)	Y		
831.	24245	<i>Rattus rattus</i> (Black Rat)	Y		
832.		<i>Raveniella peckorum</i>			
833.	24776	<i>Recurvirostra novaehollandiae</i> (Red-necked Avocet)			
834.	38832	<i>Resupinatus cinerascens</i>			
835.	19183	<i>Retama raetam</i>	Y		
836.	11341	<i>Rhagodia baccata</i> subsp. <i>baccata</i>			
837.	11930	<i>Rhagodia baccata</i> subsp. <i>dioica</i> (Sea Berry Saltbush)			
838.	4822	<i>Rhamnus alaternus</i> (Buckthorn)	Y		
839.	48096	<i>Rhipidura albiscapa</i> (Grey Fantail)			
840.	25614	<i>Rhipidura leucophrys</i> (Willie Wagtail)			
841.	24454	<i>Rhipidura leucophrys</i> subsp. <i>leucophrys</i> (Willie Wagtail)			
842.	13300	<i>Rhodanthe citrina</i>			
843.		<i>Rhycherus gloveri</i>			
844.		<i>Rhynchoatus djiddensis</i>			
845.		<i>Rickenella fibula</i>			
846.	1556	<i>Romulea rosea</i> (Guildford Grass)	Y		
847.	3066	<i>Rorippa nasturtium-aquaticum</i> (Watercress)	Y		
848.	2429	<i>Rumex acetosella</i> (Sorrel)	Y		
849.	2433	<i>Rumex crispus</i> (Curled Dock)	Y		
850.	2440	<i>Rumex pulcher</i> (Fiddle Dock)	Y		
851.	116	<i>Ruppia polycarpa</i>			
852.	40426	<i>Rytidosperma occidentale</i>			
853.	6483	<i>Samolus junceus</i>			
854.	6484	<i>Samolus repens</i> (Creeping Brookweed)			
855.	14107	<i>Samolus repens</i> var. <i>paucifolius</i>			
856.	2593	<i>Sarcocornia quinqueflora</i> (Beaded Samphire)			
857.	14281	<i>Sarcocornia quinqueflora</i> subsp. <i>quinqueflora</i> (Bearded Glasswort)			
858.	27239	<i>Sargassum fallax</i>			
859.	27253	<i>Sargassum peronii</i>			
860.	27264	<i>Scabieria agardhii</i>			
861.	7368	<i>Scabiosa atropurpurea</i> (Purple Pincushion)	Y		
862.	7595	<i>Scaevola anchusifolia</i>			
863.	7603	<i>Scaevola canescens</i> (Grey Scaevola)			
864.	7606	<i>Scaevola crassifolia</i> (Thick-leaved Fan-flower)			
865.	7614	<i>Scaevola globulifera</i>			
866.	7626	<i>Scaevola nitida</i> (Shining Fanflower)			
867.	13182	<i>Scaevola repens</i> var. <i>repens</i>			

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868.	13152	<i>Scaevola thesioides</i> subsp. <i>thesioides</i>			
869.	11027	<i>Schinus terebinthifolius</i>	Y		
870.	973	<i>Schoenus asperocarpus</i> (Poison Sedge)			
871.	978	<i>Schoenus brevisetis</i>			
872.	982	<i>Schoenus clandestinus</i>			
873.	984	<i>Schoenus curvifolius</i>			
874.	986	<i>Schoenus efoliatus</i>			
875.	992	<i>Schoenus grandiflorus</i> (Large Flowered Bogrush)			
876.	1004	<i>Schoenus nitens</i> (Shiny Bog-rush)			
877.	1006	<i>Schoenus odontocarpus</i>			
878.	1018	<i>Schoenus subfascicularis</i>			
879.	1023	<i>Schoenus tenellus</i>			
880.	6033	<i>Scholtzia involucreta</i> (Spiked Scholtzia)			
881.	603	<i>Secale cereale</i> (Rye)	Y		
882.	6	<i>Selaginella gracillima</i> (Tiny Clubmoss)			
883.	32433	<i>Sematophyllum homomallum</i>			
884.	25878	<i>Senecio condylus</i>			
885.	20161	<i>Senecio pinnatifolius</i>			
886.	8218	<i>Senecio ramosissimus</i> (Auricled Groundsel)			
887.	8220	<i>Senecio vulgaris</i> (Common Groundsel)	Y		
888.	25534	<i>Sericornis frontalis</i> (White-browed Scrubwren)			
889.		<i>Seriola hippos</i>			
890.	2909	<i>Silene gallica</i> (French Catchfly)	Y		
891.		<i>Sillago</i> sp.			
892.	8224	<i>Siloxerus filifolius</i>			
893.	8225	<i>Siloxerus humifusus</i> (Procumbent Siloxerus)			
894.	25266	<i>Simoselaps bertholdi</i> (Jan's Banded Snake)			
895.		<i>Siphonognathus argyrophanes</i>			
896.		<i>Siphonognathus radiatus</i>			
897.	42785	<i>Sirophysalis trinodis</i>			
898.	3072	<i>Sisymbrium orientale</i> (Indian Hedge Mustard)	Y		
899.	30948	<i>Smicromis brevirostris</i> (Weebill)			
900.	7022	<i>Solanum nigrum</i> (Black Berry Nightshade)	Y		
901.	7037	<i>Solanum symonii</i>			
902.	8230	<i>Sonchus asper</i> (Rough Sowthistle)	Y		
903.	9367	<i>Sonchus hydrophilus</i> (Native Sowthistle)			
904.	8231	<i>Sonchus oleraceus</i> (Common Sowthistle)	Y		
905.	1312	<i>Sowerbaea laxiflora</i> (Purple Tassels)			
906.	2912	<i>Spergula arvensis</i> (Corn Spurry)	Y		
907.	624	<i>Spinifex hirsutus</i> (Hairy Spinifex)			
908.	625	<i>Spinifex longifolius</i> (Beach Spinifex)			
909.	8710	<i>Sporobolus africanus</i> (Parramatta Grass)	Y		
910.	635	<i>Sporobolus virginicus</i> (Marine Couch)			
911.	4828	<i>Spyridium globulosum</i> (Basket Bush)			
912.		<i>Squatina australis</i>			
913.	9069	<i>Stackhousia huegelii</i>			
914.	4733	<i>Stackhousia monogyna</i>			
915.	2918	<i>Stellaria media</i> (Chickweed)	Y		
916.	20397	<i>Stellaria pallida</i>	Y		
917.	48113	<i>Stenella coerulescens</i> (Striped Dolphin)			
918.	24522	<i>Sterna bergii</i> (Crested Tern)			
919.	25643	<i>Sterna hybrida</i> (Whiskered Tern)			
920.		<i>Stigmatopora argus</i>			
921.	24554	<i>Stipiturus malachurus</i> subsp. <i>westemensis</i> (Southern Emu-wren)			
922.	2316	<i>Stirlingia latifolia</i> (Blueboy)			
923.	25597	<i>Strepera versicolor</i> (Grey Currawong)			
924.	25589	<i>Streptopelia chinensis</i> (Spotted Turtle-Dove)	Y		
925.	25590	<i>Streptopelia senegalensis</i> (Laughing Turtle-Dove)	Y		
926.	25518	<i>Strophurus spinigerus</i>			
927.	7693	<i>Stylidium brunonianum</i> (Pink Fountain Triggerplant)			
928.	7696	<i>Stylidium calcaratum</i> (Book Triggerplant)			
929.	7712	<i>Stylidium despectum</i> (Dwarf Triggerplant)			
930.	7717	<i>Stylidium divaricatum</i> (Daddy-long-legs)			
931.	25829	<i>Stylidium neurophyllum</i> (Coastal Plain Triggerplant)			
932.	7774	<i>Stylidium piliferum</i> (Common Butterfly Triggerplant)			
933.	33106	<i>Stylidium recurvum</i>			
934.	7785	<i>Stylidium repens</i> (Matted Triggerplant)			
935.	7790	<i>Stylidium roseolatum</i> (Pink-wing Triggerplant)			
936.	7798	<i>Stylidium schoenoides</i> (Cow Kicks)			
937.	7806	<i>Stylidium utricularioides</i> (Pink Fan Triggerplant)			

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938.	2639 <i>Suaeda australis</i> (Seablite)			
939.	<i>Sutrorectus tentaculatus</i>			
940.	2326 <i>Synaphea polymorpha</i> (Albany Synaphea, Pinda)			
941.	2329 <i>Synaphea spinulosa</i>			
942.	25705 <i>Tachybaptus novaehollandiae</i> (Australasian Grebe, Black-throated Grebe)			
943.	24682 <i>Tachybaptus novaehollandiae</i> subsp. <i>novaehollandiae</i> (Australasian Grebe, Black-throated Grebe)			
944.	24331 <i>Tadorna tadornoides</i> (Australian Shelduck, Mountain Duck)			
945.	15741 <i>Tamarix aphylla</i> (Athel Tree)	Y		
946.	20135 <i>Taxandria linearifolia</i>			
947.	4256 <i>Templetonia retusa</i> (Cockies Tongues)			
948.	<i>Tetraglathia demissa</i>			
949.	2820 <i>Tetragonia decumbens</i> (Sea Spinach)	Y		
950.	<i>Tetralycosa oraria</i>			
951.	<i>Tetrapturus angustirostris</i>			
952.	1036 <i>Tetradlea octandra</i>			
953.	<i>Thalassia bergii</i>			
954.	1701 <i>Thelymitra antennifera</i> (Vanilla Orchid)			
955.	10856 <i>Thelymitra benthamiana</i> (Leopard Orchid)			
956.	1705 <i>Thelymitra crinita</i> (Blue Lady Orchid)			
957.	1708 <i>Thelymitra fusculetea</i> (Chestnut Sun Orchid)			
958.	20730 <i>Thelymitra paludosa</i>			
959.	<i>Thelymitra</i> sp.			
960.	5077 <i>Thomasia cognata</i>			
961.	2644 <i>Threlkeldia diffusa</i> (Coast Bonefruit)			
962.	24845 <i>Threskiornis spinicollis</i> (Straw-necked Ibis)			
963.	<i>Thysanophrys cirronasus</i>			
964.	1318 <i>Thysanotus arbuscula</i>			
965.	1319 <i>Thysanotus arenarius</i>			
966.	1338 <i>Thysanotus manglesianus</i> (Fringed Lily)			
967.	1339 <i>Thysanotus multiflorus</i> (Many-flowered Fringe Lily)			
968.	1343 <i>Thysanotus patersonii</i>			
969.	1351 <i>Thysanotus sparteus</i>			
970.	1357 <i>Thysanotus thyrsoides</i>			
971.	25203 <i>Tiliqua occipitalis</i> (Western Bluetongue)			
972.	25519 <i>Tiliqua rugosa</i>			
973.	25207 <i>Tiliqua rugosa</i> subsp. <i>rugosa</i>			
974.	25549 <i>Todiramphus sanctus</i> (Sacred Kingfisher)			
975.	32445 <i>Tortula muralis</i>			
976.	1368 <i>Trachyandra divaricata</i>	Y		
977.	6266 <i>Trachymene coerulea</i> (Blue Lace Flower)			
978.	19041 <i>Trachymene coerulea</i> subsp. <i>coerulea</i>			
979.	6280 <i>Trachymene pilosa</i> (Native Parsnip)			
980.	1481 <i>Tribonanthes australis</i>			
981.	4383 <i>Tribulus terrestris</i> (Caltrop)	Y		
982.	39097 <i>Trichia decipiens</i>			
983.	25723 <i>Trichoglossus haematodus</i> (Rainbow Lorikeet)			
984.	25521 <i>Trichosurus vulpecula</i> (Common Brushtail Possum)			
985.	24158 <i>Trichosurus vulpecula</i> subsp. <i>vulpecula</i> (Common Brushtail Possum)			
986.	1361 <i>Tricoryne elatior</i> (Yellow Autumn Lily)			
987.	1363 <i>Tricoryne tenella</i>			
988.	4292 <i>Trifolium campestre</i> (Hop Clover)	Y		
989.	4295 <i>Trifolium dubium</i> (Suckling Clover)	Y		
990.	4297 <i>Trifolium glomeratum</i> (Cluster Clover)	Y		
991.	4313 <i>Trifolium subterraneum</i> (Subterranean Clover)	Y		
992.	147 <i>Triglochin mucronata</i>			
993.	151 <i>Triglochin striata</i>			
994.	152 <i>Triglochin trichophora</i>			
995.	<i>Trygonorrhina fasciata</i>			
996.	11665 <i>Trymalium ledifolium</i> var. <i>ledifolium</i>			
997.	<i>Tuoba pallida</i>			
998.	27345 <i>Turbinaria gracilis</i>			
999.	48147 <i>Turnix varius</i> (Painted Button-quail)			
1000.	30954 <i>Tursiops aduncus</i> (Indo-Pacific Bottlenose Dolphin)			
1001.	24069 <i>Tursiops truncatus</i> (Bottlenose Dolphin)			
1002.	27347 <i>Tylotus obtusatus</i>			
1003.	99 <i>Typha orientalis</i> (Bulrush, Cumbungi)			
1004.	<i>Urodacus novaehollandiae</i>			
1005.	8255 <i>Ursinia anthemoides</i> (Ursinia)	Y		
1006.	38388 <i>Ursinia anthemoides</i> subsp. <i>anthemoides</i>	Y		

Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
1007.	24386 <i>Vanellus tricolor</i> (Banded Lapwing)			
1008.	25218 <i>Varanus gouldii</i> (Bungarra or Sand Monitor)			
1009.	25225 <i>Varanus rosenbergi</i> (Heath Monitor)			
1010.	25227 <i>Varanus tristis</i> subsp. <i>tristis</i> (Racehorse Monitor)			
1011.	8257 <i>Vellereophyton dealbatum</i> (White Cudweed)	Y		
1012.	7107 <i>Verbascum virgatum</i> (Twiggy Mullein)	Y		
1013.	15725 <i>Verbesina encelioides</i>	Y		
1014.	24206 <i>Vespadelus regulus</i> (Southern Forest Bat)			
1015.	4325 <i>Viminaria juncea</i> (Swishbush, Koweda)			
1016.	24040 <i>Vulpes vulpes</i> (Red Fox)	Y		
1017.	722 <i>Vulpia bromoides</i> (Squirrel Tail Fescue)	Y		
1018.	11137 <i>Vulpia fasciculata</i>	Y		
1019.	724 <i>Vulpia myuros</i> (Rat's Tail Fescue)	Y		
1020.	12052 <i>Vulpia myuros</i> forma <i>megallura</i>	Y		
1021.	33101 <i>Vulpia myuros</i> forma <i>myuros</i>	Y		
1022.	7389 <i>Wahlenbergia preissii</i>			
1023.	6939 <i>Westringia dampieri</i>			
1024.	6658 <i>Wilsonia backhousei</i> (Narrow-leaf <i>Wilsonia</i>)			
1025.	27369 <i>Wrangelia velutina</i>			
1026.	1398 <i>Wurmbea monantha</i>			
1027.	1256 <i>Xanthorrhoea preissii</i> (Grass tree, Palga)			
1028.	6289 <i>Xanthosia huegelii</i>			
1029.	2331 <i>Xylomelum occidentale</i> (Woody Pear, Djandin)			
1030.	1049 <i>Zantedeschia aethiopica</i> (Arum Lily)	Y		
1031.	25765 <i>Zosterops lateralis</i> (Grey-breasted White-eye, Silvereye)			
1032.	36218 <i>Zygodon menziesii</i>			

Conservation Codes

T - Rare or likely to become extinct
X - Presumed extinct
IA - Protected under international agreement
S - Other specially protected fauna
1 - Priority 1
2 - Priority 2
3 - Priority 3
4 - Priority 4
5 - Priority 5

¹ For NatureMap's purposes, species flagged as endemic are those whose records are wholly contained within the search area. Note that only those records complying with the search criterion are included in the calculation. For example, if you limit records to those from a specific datasource, only records from that datasource are used to determine if a species is restricted to the query area.

PUBLIC SCHEDULE OF SUBMISSIONS	
Name	Comment
1.	<p>I strongly object to this being built. I would like to know why another is proposed what are the statistics supporting the need for more housing here whether lifestyle or other? What are the statistics for people wanting to come and live in Baldivis?</p> <p>The area is already well over developed. There are already 3 lifestyle villages with empty properties on them.</p> <p>There are not people lining up to come to Baldivis, and there are loads of properties up for sale or rent generally. You can't even leave the area because house prices have dropped so much in the last 6 years which is at least in part due to the over expansion of the area and number of vacant properties</p> <p>Baldivis has become a sea of rooves and lost so much of it's natural bushland, this has to stop. We have issues with crimes and hoon driving, expanding the area further only makes the situation worse. We only have one smaller hospital locally which hasn't changed in size despite Baldivis's population having expanded by 50% between 2011 and 2016 according to sources. Baldivis has more properties for sale and rent than either Mandurah or Cottesloe (reference Reiwa and Domain.</p> <p>On top of this the shopping centre is poor, the rents are too high and as a result there are only the same old rubbish stores, there are few independent stores or quality stores. I go to Mandurah Forum for decent big stores and use as many smaller independents (2 of which are located in Mandurah) as I can.</p> <p>There are no big cinemas just Ace and United neither of which have anything like Event or Hoyts cinemas. Both of these of course being in Rockingham, plus there is no swimming pool, yet Baldivis is set to become bigger than Rockingham.</p> <p>I would rather there was no further development in Baldivis in terms of property or retail. Improve what is already in Baldivis in terms of retail and don't build any more properties.</p>
2.	<p>Transport & Footpath infrastructure should be suggested. A bus stop will aid this community to and from the Warnbro train station and access to Baldivis Shopping centre, including our location. I also suggest a footpath from Stringybark way to the Vernon Arms area, would encourage all residents to walk or bike ride. This (mandurah rd) is very busy and will encourage fitness of all neighbours including the lifestyle village.</p>
3.	<p>We refer to the Urbanista Town Planning document where the construction company argues that this proposal is a tourist or caravan park. As the planning company points out further in the document this is an "aged community lifestyle" village which implies that unlike caravan parks with facilities for long term residential use, the use of these units will be predominantly for aged residents. Making this a lifestyle village or retirement community not a caravan park.</p> <p>We also note there is going to be a commercial precinct located within the lifestyle village with two story buildings which is inconsistent with the rural setting in which it is proposed to be located. According to the caravan Parks and Camping Grounds Regulations 1997 (W.A.) permitted buildings in caravan parks, including a manager's house, shop, restaurant and ablution facilities. Many of the commercial tenancies fall outside the scope of shop and restaurant.</p>

PUBLIC SCHEDULE OF SUBMISSIONS		
Name	Address	Comment
No.3 – cont...		<p>Urbanista Town Planning document page 10 setbacks. We object to the company reducing the City of Rockingham Local Planning Policy 3.1.1 Rural Land Strategy stipulations for setbacks. Reducing setbacks to lot boundaries from 10m to 3.4m will significantly impact adjoining properties and the rural landscape. We disagree that "the lesser setback is not anticipated to result in a perception of adverse building bulk when viewed from the adjoining properties". Given the units will be in very close proximity to each other the adverse building bulk will be visible from adjoining properties.</p> <p>We also disagree with the companies assessment that "the lesser setback does not result in any new merit-based decision relating to visual privacy or visual intrusion", having a green space and retaining trees would provide greater visual privacy and make the development more compatible with the surrounding environment.</p> <p>As per planning bulletin 49: Caravan Parks as pointed out by the planning company "The policy also acknowledges that development of caravan parks must take into consideration site or locational selection matters including mix of tourist and permanent accommodation, visual impact and amenity, topography, drainage, soils and vegetation, utility services, pedestrian and vehicular access and environment, setting and land capability" reducing the setbacks would be detrimental to the visual impact, environment and setting.</p> <p>We also note that other lifestyle villages in the area have been able to comply with the City of Rockingham Local Planning Policy 3.1.1 Rural Land Strategy in regards to setbacks and do not see a reason for this application to be any different.</p> <p>Referring to page 13 Planning Bulletin 49: Caravan Parks which stipulates that 'caravan parks which are principally designed for permanent residents should be assessed in the same way as conventional residential development. They should be located in areas with access to employment, shops, schools, public transport, and community and recreation facilities.' And the companies own words "a bus route linking with essential commercial, social and community services is considered essential to the site if beyond walking distances to these facilities" there is no bus route linking this site to commercial precincts and none of the listed shopping precincts listed in the plan are within close proximity or walking distance.</p> <p>Page 14 Planning Bulletin 83: Planning for Tourism The company states that "The Local Planning Strategy detailed in section 5.2 above, clearly outlines the importance of the park through identifying it as a major tourist node", as this development is not designed for tourists but long term aged residents it can hardly be considered important as a major tourist node.</p> <p>On page 16 the plan points out this is for short stay accommodation and then goes on to say this is providing alternative accommodation in a lifestyle village setting. The planning seems to be unsure if this is indeed a caravan park or a long term aged residential facility and this creates uncertainty as to what type of facility is being built.</p>

PUBLIC SCHEDULE OF SUBMISSIONS	
Name	Comment
No.3 – cont...	<p>As there is only two access points to the property located 100m apart it would be considered a hazard for bushfire purposes, if the fire comes from the entry the aged residents would have no escape route.</p> <p>As the planner has pointed out throughout their planning document this facility is intended as long term residential living for aged people. Nowhere in the planning report does the impact of an influx of aged residents (potentially 136 residents) on the local services and community. The increase in need for doctors, ambulance call outs, hospital visits and other associated health services could potentially impact the wider community in longer wait times and less availability of services.</p> <p>The increased traffic on Mandurah road will become a hazard. The roundabout on Mandurah Road and Safety Bay Road is already a significantly busy intersection and as all services and residents will need to use this roundabout to access either Baldivis or Rockingham precincts the potential for accidents and decreased traffic fluidity through this intersection creates a hazard.</p> <p>The environmental impact of this development is significant, removing rural areas and increasing traffic next to the Rockingham Lakes reserve thereby impinging on native fauna and flora.</p> <p>The increased burden on ground water supplies as the facility uses this valuable resource to water their communal and passive activity areas could prove detrimental to existing properties that depend on this resource for their portable water and detrimental to the environment and water table in general.</p> <p>As there are several other lifestyle villages already in the vicinity there is no need for another business of this sort within the community.</p>
4.	<p>Please find attached a group "submission response" from all residents of Outridge Rd, Baldivis in response to your letter dated the 23rd January, 2019, regarding the proposed Lifestyle Village on lots 2 and 13 Mandurah Rd, Baldivis.</p> <p>Please note that the residents at 17 Outridge Rd (Catheryn and Kevin Johnstone) have signed the submission but did not have the green response form available for attachment to this submission.</p> <p>I have also attached a document that was written in 2007 by the Department of Environmental Protection regarding the significance of the Outridge Wetlands which highlights our concerns of high density living and non-conforming use of this area in Baldivis.</p> <p>I thank you in advance for your efforts in reviewing our submissions and look forward to an outcome favourable to the local community.</p> <p><u>Petition Letter</u></p> <p>The proposal is of course well written by consultants "Urbanista Town Planning" and covers all the usual requirements, eg environmental and bushfire assessments etc.</p> <p style="text-align: right;">cont...</p>

PUBLIC SCHEDULE OF SUBMISSIONS	
Name	Comment

No.4 – cont...	<p>When addressing the Metropolitan Regional Scheme, the State Planning Policy 2.5 and the City of Rockingham Town Planning Scheme No2, we would have to say the planning consultants have drawn a very “long bow” in their assessment of what these schemes mean and the original intent.</p> <p>Without going completely into all the original intent of these schemes, it basically calls for the land that is being considered to be promoted for rural land use, eg primary production, environmental protection and cultural pursuits. This is also the objectives of your Town Planning Scheme No.2. We struggle to see that the proposed village and commercial outlets fall anywhere near these original intents.</p> <p>The consultants lean very heavily into what constitutes a caravan park as this appears as the only use that could creep into the existing schemes and even that is stretching the imagination. We cannot see anything in the zoning of the existing schemes that would allow this proposal to go ahead.</p> <p>The proposal also is asking for a relaxation of setbacks from all boundaries from what is now allowed and that again will not comply with the original intent. Two accesses to Mandurah Rd are proposed in close proximity to each other and we know a traffic management assessment has been done but of course these are always proposed in the client's favour and really mean nothing. Additional commercial crossovers onto Mandurah Rd will only cause traffic problems.</p> <p>We are all long term residents of the Baldivis area and have watched all the developments happen in the area and we have no issues at all with these, but one of us had a meeting with council about 3 years ago and the "Baldivis Wedge" was explained as follows: the wedge is the land between Fifty Rd, Mandurah Rd, Eighty Rd and 68 Rd and this wedge of land is always to be left for rural use. Subdivision could be made of the land according to its location. I may be incorrect about the land use sizes, but we were told at the time that, in essence, that referred to larger blocks, about 5 - 7000 m2 on the west side of the ridge on Mandurah Rd and coming down the east side. Further down the east side blocks could come down to about 3000 m2 subject to the proximity of wet lands and other factors.</p> <p>These blocks were to be a single dwelling block with all the usual setbacks, building envelopes and other considerations. If this Village goes ahead you will basically be allowing 68 single dwellings to be established on an area of 4.04 hectares, which is definitely outside the original intent of the schemes. Area setbacks will be totally compromised and the rural feeling of the Baldivis Wedge will be lost forever. We know this development doesn't impact on some of us directly and impacts on some directly, but we want this little piece of rural land to remain an oasis in a very large suburban area, a place where people can invest in a lifestyle that allows for the intent of the original schemes to be met.</p>
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PUBLIC SCHEDULE OF SUBMISSIONS	
Name	Comment

No.4 – cont...	<p>People use the term "the thin edge of the wedge" quite freely, but as we all know if this proposal is allowed, it breaks down the barrier a little bit and the next developer then uses the precedent as a lever to get the next non-conforming development through and before to long it gets completely out of council's control as developers are more than willing to take council to task in the courts and if precedents have been set, there is basically no going back.</p> <p>We do question why any developer would buy land in the first place that is not zoned correctly for what they have in mind and then want to take council to task to get approvals that are non-conforming and outside any original intent for that land. We believe this is just an arrogant approach to development when developers believe they can work outside what would be considered normal practice.</p> <p>On another note and I know this has no impact on the development but we think we need to consider the social impact of this development. The proposal is for the location alongside an existing tavern and for four commercial outlets on this property, one being for fast food and really do we want fast food in a rural environment? There are more than enough issues with alcohol and fast food in the Australian community and do we really want to be part of increasing the problems that these bring?</p> <p>SUMMARY</p> <p>In summary, we would just like to make the following points</p> <ol style="list-style-type: none"> 1) The land in question under the Metropolitan Regional Scheme 2.5 and the Rockingham Town Planning Scheme No.2 was to be retained for rural use. This proposal is well outside of the original intent, is non-conforming and will only dilute the surrounding area of its uniqueness. 2) The consultant's views that the land may be used as a caravan park and by default would include a retirement village is pretty fanciful even to a person with non-planning experience. 3) The current intent of the existing scheme would be lost with 68 dwellings, commercial outlets and multiple access to Mandurah Rd on this 4.04 HA piece of land. 4) The Baldivis Wedge land was always to be used as single dwelling properties only, with all the usual setbacks, building envelopes and land sizes to meet the environmental considerations of the White Lakes and the Outridge Wetlands. From our understanding a lot of environmental assessment and other factors went into the original decisions of the future of the Baldivis Wedge which would now be lost. 5) The thin edge of the wedge will be inserted into the Baldivis Wedge land if this proposal goes ahead. A precedent will be made allowing other non-conforming developments to be proposed and then approved on the basis that other non-conforming approvals been already been given and that would completely ruin the rural aspect for which the Baldivis Wedge was designed. 6) Why would any council consider this when the proposal falls so far out of line with all the original intents of existing schemes and would truly ruin such a unique section of the Rockingham area?
PUBLIC SCHEDULE OF SUBMISSIONS	
Name	Comment
No.4 – cont...	7) The Baldivis Wedge is a very unique part of Rockingham that should always allow people to have a rural setting in a

	<p>very fast growing, suburban area of the southern corridor. In years to come, people should be able to stand back and say that council had the foresight to see the true potential of this area with the Outridge Wetlands, The Children's Forest and The White Lakes making up an environmentally sustainable area that can be enjoyed by all without all the commercial development that will inevitably follow if this is approved.</p>
5.	<p>No issue with the submission, however this development further supports our request to have foot paths/cycle paths & bus routes along Mandurah Rd. Walking along Mandurah Rd at present is very dangerous and the population with all the development occurring supports this investment.</p>
6.	<p>What a fantastic proposal. More than just a handful of people would have access to this beautiful area. Many more young families should have the prospect of investing & living on a reasonably sized block. More sub-division of this under utilized area is required with other infrastructure, shopping, transport, freeway etc., it's time to take advantage of all of this without adding to more urban sprawl. In another relevant subject, I find it hard to believe that properties in our area still have no access to scheme water or deep sewer. As some of these services are already very close, what about looking after all rate payers and supply the services we need.</p> <p>Another major problem with these large rural(?) properties, is the real risk of fire. The dense fuel loads in these areas is of great concern to local residents. Once again, to reduce this ever present fire risk, please consider some necessary development. Come on Rockingham Shire, share the area!</p>
7.	<p>By this submission we add to the submission that we signed as part of the Outridge Rd Residents' Submission, namely that we strongly oppose the proposal due to it being unsuitable and that it contravenes the zoning of the Baldivis Rural Wedge.</p> <p>Since the proposed lifestyle village border our property, we are submitting following point:</p> <p>In the seriously unfortunate light of the non-conforming proposal being passed, we require the following to protect the rural amenity of our land and the wildlife in the area:</p>

PUBLIC SCHEDULE OF SUBMISSIONS	
Name	Comment
No.7 – cont...	<ol style="list-style-type: none"> 1) A reduction to 34 chalets with a restriction of 12 parking bays. 2) An 1800mm high limestone wall to be built along the perimeter of the development in order to maintain the safety and well-being of the family of kangaroos that have lived on our block for years and which move throughout this whole area. The 1800 limestone wall will prevent the kangaroos from entering any village and prevent them from coming to any future harm. We will NOT tolerate any removal of wildlife from the rural Baldivis Wedge. Furthermore, a wall of this description will protect our rural amenity, regarding noise and the visual amenity of our property, as a large part of our western perimeter borders the land in question. 3) Retain ALL the tuarts, which are protected in this area. 4) The planting of native on the development as habitat for local birds and other wildlife.

	<p>5) Protect all wildlife that lives on these two blocks. There may be bandicoots living there as some have lived on our property for years and roam in our garden, while there is certainly prolific birdlife in the area.</p> <p>In share, as your can see from our requirements and concerns that such a development, in our opinion is at odds with the rural zoning of the area and is non-conforming. We support the Rockingham Council in their opposition to the development and the retaining of the land as rural for the Baldivis Wedge.</p>
8.	<p>We the residents of 10 Stringybark way Baldivis strongly appose the new proposed 'Lifestyle Village' at lots 2 and 13 on Mandurah Rd in Baldivis for the following reasons.</p> <p>Reduction of native fauna and flora. There is a high risk of reducing the amount of Black Cockatoos in the area (Endangered) and other native fauna and flora in the area with the proposed 68 site lifestyle village. Kangaroos will also face uncertainty if the proposed development occurs very similar to the Paramount Estate in Baldivis where 100 western grey kangaroos were set to be 'tranquilised and euthanised' in order for that development to commence.</p> <p>Loss of amenity. My property at 10 Stringybark way Baldivis is a north facing block to which iam concerned that I will go from a rural outlook to one that resembles high density suburbia. Its fair to say I would not have bought this 'Special rural' zoned block of land if a proposed 68 Chalet development was approved within 150m of my front gate.</p> <p>Environmental concerns. The area in question has 100 year old Tuart trees along with many other native trees that will need to be mostly removed for the 68 chalets to be built. As there is another lifestyle village close by (68 rd) I have witnessed this type of environmental impact to which can only be described a rural bushland converted to concrete jungle. I personally have designed my house and other dwellings with the utmost respect for native trees and council regulations. I personally have planted over 400 native trees, shrubs and plants at great expense to ensure my property stays 'rural'.</p>

PUBLIC SCHEDULE OF SUBMISSIONS	
Name	Comment
No.8 – cont...	<p>Increase in Noise and Traffic. It is fair to say that if the 68 chalet lifestyle village was approved there would be a substantial increase in vehicle traffic resulting in noise and safety concerns. The question should be asked if our local road infrastructure is equipped to handle this excessive influx of cars, caravans, boats and or trailers.</p>
9.	<p>We, the residents of 8 Stringybark Way strongly oppose the Proposed Lifestyle Village at Lots 2 and 13 Mandurah Road Baldivis for the reasons as outlined below:</p> <ul style="list-style-type: none"> • Environmental Concerns - the proposed addition of 68 chalets will negatively impact on this stretch of natural bushland, which heavily features centuries old tuart and native banksia. The current residents of Stringybark Way have all respected the environment and worked hard at retaining the trees as per the regulations set by the estate and council. Observing fire-safe regulations. Having seen the other local lifestyle villages in the area - the destruction of the environment will be extensive to make way for these small

	<p>lots. From the plans provided on the Rockingham Council website, it's evident that over 66% of the trees will be removed. The remaining trees may not be compliant with the 20m clearway boundary as per the bushfire safety regulations.</p> <p>The proposed development will lead to the further destruction of the few remaining trees left within the planning unit 4A.</p> <ul style="list-style-type: none"> • Loss of Amenity - For the information/plans on the Council website, our block has a northerly aspect and we are very concerned that we will go from a natural bushland view to a scene of 'high density suburbia'. Essentially, the proposed development represents a significant increase in the urbanisation of a designated rural area and would definitely result in a material loss of amenity for existing ratepayers. Further, it would be reasonable to suggest that existing residents (like us) would not have bought their large rural blocks, with the knowledge that they would be abutting such a large (and invasive) chalet development. <p>Aside from existing residents, Lake Walyungup nature reserve, has become a favoured and well know location for music videos, photo shoots, and most recently a feature movie. The location is sought after because of the lack of background suburban "noise". This is achieved by the uniqueness of this stretch of rurally maintained properties and natural bushland, therefore we believe it should be maintained at its current level of development.</p> <p>In a local newspaper the Sound Telegraph, Paul Papalia is quoted as saying "There's been a number of feature movies being shot right across the State and every little bit of awareness of just how different, and in many ways beautiful, Western Australia is, every bit of that going out there to the world helps," he said. He is looking at areas of beauty to attract tourism.</p> <p>City of Rockingham Mayor Barry Sammels said Rockingham was filled with an abundance of environmental assets that gave production crews the opportunity to shoot in an area "rich with wildlife, breathtaking coastline and thrilling eco-adventures".</p>
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PUBLIC SCHEDULE OF SUBMISSIONS		
Name	Address	Comment

No.9 – cont...	<p>This area has become an area enjoyed by local residents - many who currently live in small lot houses, with little room for nature which appears to be the 'tiny block' trend of Baldivis. These residents require some much needed nature and space. Hikers and visitors from further afield also utilise the natural environment corridor within the Planning Unit. It is an area of significant importance to the City of Rockingham, State Government and the community and residents from surrounding suburbs should be active in ensuring its preservation.</p> <p>The proposed development will increase the urban footprint to an unnecessary and unsustainable level within Planning unit 4A.</p> <ul style="list-style-type: none"> • Disturbance to the native fauna and flora - There is considerable risk of disturbing remaining and potential black cockatoo roosting sites as well as other native flora and fauna with the proposed additional 68 chalets and accompanying communal clubhouse. For example, we have recently seen the impact on our resident kangaroo population as demonstrated by another large-scale development in another area of Baldivis - which has encroached on rural habitat. <p>The proposed development will lead to the unnecessary disturbance of natural habitats for native fauna and flora that exists within Planning unit 4A.</p> <ul style="list-style-type: none"> • Increase in traffic (volume, noise and safety concerns) - As a by- product of the 68-lot development, it is reasonable to assume that there will be a significant increase in vehicular traffic volume and accompanying noise. Both of which are key impacts that would need to be addressed by significant investment in the current road network and infrastructure. Regardless, we as existing residents would be impacted negatively, now and into the future, by such a large and permanent influx of village residents, their personal vehicles, and other associated maintenance and service vehicles. Should each resident have one car (with the visitor 24 car-park fully utilised), we can expect an increase of +92 vehicles (plus associated maintenance and service vehicles) per day using a road network that is ill-equipped to address such a load. Consequently, there could be potential safety concerns that may arise as 'unintended impacts' should such a development be approved. The Communal Club house would also pose a noise issue. For example, we understand that the Lifestyle Village on Mandurah Road hosts live concerts, which disturb the quiet nature of the area and will cause unnecessary noise pollution. <p>The proposed development will lead to significant increase in associated vehicular traffic (For example, if we assume 2 trips per day with 100% visitor car utilisation and full resident occupancy - an increase of 67,160 trips per annum will be added to the current traffic load).</p> <p>It will also increase the level of noise pollution that is unreasonable and inconsistent with the current quiet nature of the environment within the planning unit.</p>
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PUBLIC SCHEDULE OF SUBMISSIONS	
Name	Comment

No.9 – cont...	<ul style="list-style-type: none"> Change of Zoning that is inconsistent with the historical and future promise of this land - This stretch of land has always been gazetted as Large Semi Rural properties. In this regard, the majority of homeowners along the Mandurah Road and within our estate have opted to buy into this lifestyle at great expense to enjoy the natural bushland and quiet surrounds. There has been a concerted effort to retain and build natural wildlife corridors abutting Mandurah Road to create continuity surrounding the Nature Reserve of Lake Walyungup. This forms part of the Rockingham Lakes Regional Parkland - a network of fragile and high value nature reserves. The efforts to retain these corridors extends beyond the land owners along Mandurah Road and can be evidenced in the removal of homes that once existed along the western stretch of Mandurah Road and in recent years, the mass plantings to bring the area back into the Nature Reserve. The inclusion of more of these Lifestyle villages along this stretch of road is in complete opposition to what has been achieved in reclaiming the reserves. This development may be at the detriment of the adjacent Lake Walyungup, which leads to concern over whether the appropriate environmental impact studies have been carried out? From a community perspective, some existing residents have come from small suburban blocks and have been sold with the expectation and assurance that the area along Mandurah Road would remain as large semi-rural blocks of 1 ha as per Planning Unit 4 of the Rural Land Strategy. We do not, nor would expect to find ourselves back in a situation of unsustainable 'high density living' in a area of natural beauty. <div> <p>The proposed development clearly contravenes the special rural/special residential designation to encourage residential developments that enhance the landscape and natural resource attributes of the unit. Such a large 68 unit development would be an 'eyesore' on the area's planning characteristics and would not be keeping in the spirit or intent of Planning Unit 4.</p> <p>Such a development would signal other potential developments in the unit, which would further degrade the landscape and resource protection areas of the unit</p> </div> <ul style="list-style-type: none"> Over-development of Baldivis - It is typical of the trend in Baldivis to develop low cost high density housing at the expense of the natural bushland attraction and safety of Baldivis. This has caused significant devaluation of many areas in Baldivis. Over the last several years, land/house values have fallen from a median of ~\$525,000 to ~\$430,000 representing a significant devaluation of properties in the Baldivis area. This is primarily due to an oversupply and a lack of demand for housing in Baldivis and the surrounding area. <div> <p>The proposed development (and subsequent release of small high-density lots) will further exacerbate the decline in housing values within the Baldivis area.</p> </div> <ul style="list-style-type: none"> Degradation of Area - Having been a long term resident of Baldivis for 40+ years I have seen the degradation of this suburb where crime has become a real problem.
PUBLIC SCHEDULE OF SUBMISSIONS	
Name	Comment

No.9 – cont...	<p>The landscape of Baldvis has been destroyed from what was once a quiet country town to high density overcrowding suburbia.</p> <p>For those residents who love Baldvis but have paid a high price to build in what is some of the last remaining country style blocks along Mandurah Road - to now have the threat of a high density development on our doorstep will lower the value of our investments significantly, ruin the ambience and rural quality of the area and impact negatively on this beautiful stretch of Baldvis.</p> <p>This begs the question as to why the rules have been 'relaxed' when existing developments within the immediate vicinity have been limited to 1 ha lots? What has changed? It should be noted that:</p> <ul style="list-style-type: none"> i) The original gazetting was in place for a reason, which included a Visual Landscape Evaluation (VLE). This was in place to protect and conserve landscape values and vistas enjoyed by the residents of Rockingham as outlined in Planning Policy No. 3.1.1 of the Rural Land Strategy. ii) It is an objective of the strategy to maintain valued landscapes that contribute to the sense of place of the City of Rockingham. It is vital that major road arteries and traffic corridors such as Mandurah Road retain a rural outlook as this is considered a vital character of the area ie maintain an open landscape character, as a means to giving form and definition to the build up area avoiding urban sprawl and providing accessible countryside close to the city. <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p>We contend that the proposed development is not consistent with conserving landscape values. It is a high density low value development which is not suited to this area. The area has significant environmental value with the black cockatoo, kangaroos and other native flora and fauna and sits directly opposite a natural wetland.</p> </div> <p>We do not think the development proposal is valid or appropriate for this area and raises more questions associated with the unnecessary departure from the status quo planning for the Town Planning Unit 4.</p> <ul style="list-style-type: none"> • Unightly: The existing Lifestyle Village on 68 Road, Baldvis is unsightly with a caravan stockyard as one of its roadside features (refer to appendix A - Fig 2), as well as an unsightly privacy screen which the village has utilised as an advertisement banner (Fig 4 & 5). This stretches the full length of the verge and surrounds. Not something neighbouring residents would enjoy as their view. The mix is entirely wrong, and this should not be allowed. It contravenes every consideration of the Rural Land Strategy and should this development be allowed to go ahead will open up the possibility for other similar urbanisation of a rural gazetted stretch of land. • A minimum lot size of 1 ha is recommended in the Rural Land Strategy. West of the ridgeline between Mandurah Road and Eighty Road is to maintain a rural view from Mandurah Road and protect the landscape value of the region. <p>Interestingly, east of the ridgeline there is a recommendation to keep the minimum lot size of 5,000m².</p>
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Name	Comment

No.9 – cont...

This is to ensure that the range of density will provide a required transition into the high-density housing situation east of Eighty Road.

The Rural Land Strategy is a very thorough document, which clearly defines and explains the reasoning behind the planning and therefore should be referred to and respected by any future development considerations.

As affected residents we:

- Expect to be notified when the upcoming JDAP meeting is so that we can attend. As such please consider this submission as our request to be invited to this meeting; and
- Request a copy of the Responsible Authority Report.
- View the Environmental Impact Study

Appendix A

Lifestyle Village, 68 Road, BALDIVIS 6171



Fig 1: Unsightly sea containers for storage



Fig 2: Caravan storage area Roadside



Fig 3: Privacy screen used as advertisement

PUBLIC SCHEDULE OF SUBMISSIONS

Name

Comment

No.9 – cont...



Fig 4: Roadside advertising and unsightly banner



Fig 5: Typical views from adjacent properties

10.

As owners of 28 Stringybark Way Baldvis we do not support the proposed Lifestyle Village. We feel that there are already many lifestyle villages in the area, and they are not alongside residential areas for good reason. Further more we have the following objections and concerns;

UNSIGHTLY/NEGATIVE IMPACT ON LIFESTYLE

The main attraction of the lot we live on is its size and natural outlook. A high density development placed right on our doorstep is not what was promised or expected when in buying into this area. The ambience of the area will be negatively impacted by building a development of small crowded lots which is the antithesis of the feel and lifestyle that we as current residents have payed a lot of money to attain. The character of the area would be drastically altered.

We were of the understanding that this land was gazetted to be semi-rural properties only. The proposed development does not fit into this zoning criteria whatsoever. We believe the development will degrade the landscape and find it is inconsistent with the zoning that was intended. When buying our lot we were not expecting to have to look out upon an unsightly crowded lifestyle development. Furthermore this then decreases our land/house value as we can not retain the semi-rural feel and outlook that is a part of the lifestyle promised in this area.

INCREASE IN TRAFFIC and NOISE

It is fair to assume that this development would result in an increase in traffic and noise. Existing road infrastructure would need to be addressed owing to the increase in traffic volume that would result with this development. We do not believe the current infrastructure would be adequate to deal with the great increase of traffic that will result.

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Name

Comment

No.10 – cont...	<p>The increase in noise and traffic will again negatively impact our current quiet and peaceful lifestyle that we have worked hard to establish.</p> <p>DESTRUCTION OF HABITAT AND NATIVE FAUNA AND FLORA</p> <p>The destruction of the environment will be quite extensive in order to make way for so many small lots and houses. Clearly most of the trees will be removed. The area is unique, it has very old tuart trees and banksias. This will result in loss of habitat for a variety of birdlife that lives in the area including black cockatoos that are already endangered. With so much of Baldivis being developed and so much land being cleared, do we need further high density development that will result in such a large loss of habitat and flora and fauna.</p>
11.	<p>My property at 31 Stringybark Way adjoins the southern boundary of the proposed development where I am an owner/occupier with my family.</p> <p>We object to the development proceeding in its current form as;</p> <ul style="list-style-type: none"> >The development appears inconsistent with the Rural Land Strategy (Planning Policy 3.1.1) >The development application is lacking in detail, inconsistent and poorly designed > It will be detrimental to the nature of the Special Rural lifestyle we sought by building our family Home in Stringybark way and to that of our neighbours. <p>The following 6 pages further outline our objection. Thank you for the opportunity to comment.</p> <p>1. Zoning/ Planned use. (Planning report - Urbanista Town Planning)</p> <p><u>1.1. Planned Use</u></p> <p>The Planned use of the development is not clearly stated. The application wording varies between "short stay" tourism accommodation, camping ground, caravan park and a lifestyle Village with (implications) intimations of over 55's residence. There is potentially a vast difference in target markets and in the impact on neighbouring properties in each instance.</p> <p>We note other Local Lifestyle Villages have a much larger number of units</p> <ul style="list-style-type: none"> • Vibe Baldivis - 250 units • Tuart Lakes - 200+ units • Affinity Village - 250 units+ <p>This suggests there is an economy of scale required for these developments which this development doesn't seem to satisfy. There is no business case provided by which the viability of the proposed development can be assessed. For instance, if the proposal is for rental accommodation {and clearly some or all of it is) this would significantly deter many retirees. Under the Centrelink rules the value of a rental residence cannot be deducted from their assessable assets with a resultant adverse impact on their pension entitlements.</p>

PUBLIC SCHEDULE OF SUBMISSIONS	
Name	Comment
No.11 – cont...	Given there is some risk that the proposed development is potentially unviable we would ask the OAP to be extremely

	<p>mindful that if approved there is likely to be follow-up development applications to significantly increase the number and density of dwellings to the further detriment of the existing special rural family homes immediately to the south and east of the proposal.</p> <p>Our concern is</p> <ul style="list-style-type: none"> • The intent is not to develop a Lifestyle Village - but a camping ground/ caravan park/ short stay rental accommodation • Should the proposal in future need to be expanded across the existing house/ shed area to provide a viable business case this will impact more significantly on my family residence at 31 Stringybark Way • The intent is to achieve approval then have an alternate party produce a radically different plan having already received 11 approval" - the 11 thin end of the wedge" on the basis that this is needed to make the business viable. • Such a rental development will attract itinerant personnel resulting in reduced commitment to standards of surround upkeep and therefore applying additional cost pressures on the business model viability. <p><u>1.2 Planning Policy</u></p> <p>Doesn't meet the objectives of section 8 Planning policy 3.1.1. Rural Land Use Strategy.</p> <p><i>"Specifically, the Strategy provides guidelines to ensure that Special Rural/Special Residential development is:</i></p> <ul style="list-style-type: none"> - <i>managed to minimise impacts on rural land uses;</i> - <i>protects and enhances the rural landscape and environmental values;</i> - <i>recognises the opportunities for environmental repair."</i> <p>The development fails to address to latter two points.</p> <p>The Urbanista Visual Landscape report refers to the City of Rockingham visually disastrous Sixty Eight Road "Lifestyle ????" development (<i>"which have had an undue negative impact on that local area"</i>) and then attempts to justify any negative impact of the proposal under consideration as "not quite as bad".</p> <p>We encourage the Metropolitan Southwest DAP not to permit past planning mistakes to be used as a "consideration" yardstick by which future development proposals are deemed to be "more or less acceptable".</p> <p>The development in our view doesn't meet the objectives of Planning unit 4 of Planning policy 3.1.1.</p> <p>"This Unit comprises the western margins of the Spearwood Dune System, east of Mandurah Road The primary objective for this Planning Unit is to encourage special rural/special residential development which recognises and enhances the landscape and natural resource attributes of the unit and provides a rural context to proposed urban development to the east."</p> <p>The proposed development is high density housing and does nothing to "recognise and enhance the landscape", particularly for the family residences to the south next to or overlooking the proposed development from elevated positions.</p>
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PUBLIC SCHEDULE OF SUBMISSIONS	
Name	Comment
No.11 – cont...	<u>1.3 Planning Report - Rural Planning policy 2.5</u>

	<p>The Planning report considers that the proposal is consistent with the Rural Planning Policy, however we dispute Lifestyle village satisfies the tourist references in the policy</p> <ul style="list-style-type: none"> • Microbrewery - it is not - we have one -Vernon Arms • Bed and Breakfast - it is not - typically cater for small groups 4- 10 • Holiday house/ chalet - it is not • Art gallery - it is not <p>Life style village= high density housing estate not a Tourist facility</p> <p>The Planning report indicates the development will have little or no impact on neighbouring rural lands. It is difficult to evaluate the veracity of this statement without clarification of the specific planned use.</p> <p><u>1.4 Planning Report - Setbacks</u></p> <p>The Planning report indicates that the Setbacks between the development and the southern boundary is outside of the guideline. [8.4M v 10M]. We insist that the policy requirements are implemented.</p> <p>Furthermore, we note that other Lifestyle villages (Tuart Lakes, Baldivis Vibe) have visual screens to neighbouring properties. Should this development go ahead we require that our visual amenity and that of other neighbours [future] on the southern boundary is screened to a height of 2 m. [physical barrier & green]</p> <p><u>1.5 Planning Report - Commercial tenancies Commercial tenancies subject to future approval?</u></p> <p>The entire application seems to suffer from "indecent haste". Here we are asked to comment on only part of a proposal, omitting a material component of something considered integral to the whole. This only serves to heighten our concerns that the application is really the thin end of a much larger wedge.</p> <p><u>1.6 Planning - Other Concerns</u></p> <p>The 67 chalets on 40,000m2 acres, (1 residence per 600m2 (R16.0) vs 1 residence per 10,000 m2 (R1.0) - a very significant change in housing density across a single boundary line - supports a "hard barrier" as installed by Main Roads along parts of the Freeway system.</p> <p>The planning policy implies that there should be buffer areas and areas of transitional treatment of housing density which this development does not address along the proposed R16.0 (or R32 in the proposed development area) urban /rural (R1.0) interface.</p> <p>The existing house and shed to the southern boundary are indicated as remaining. Should this application somehow be approved we require some form of formal assurance that this will not be amended further otherwise the building density of the entire site could approach R30.</p> <p><u>2. Chalet design / Noise / Acoustic Report</u></p> <p>The Acoustic report makes a number of assumptions on the type, design and nature of the chalet accommodation in the assessment of noise. This assessment is very much dependant on the "planned use" of above. Lower quality accommodation, or caravan type sites would have a very different outcome.</p>
PUBLIC SCHEDULE OF SUBMISSIONS	
Name	Comment

No.11 – cont...	<p>Similarly, the frequency, duration and intensity of "outdoor" events would be different. The report details the best case rather than providing any certainty.</p> <p>Noise report/ Visual amenity report deals with 31 Stringybark as the nearest neighbour however the adjacent lots to our East will likely be closer to this development. We are not the worst case unless development is extended into the area currently defined by the existing House & shed.</p> <p><u>The waste water treatment plant.</u></p> <p>The Acoustic Report refers to a singular wastewater treatment plant which is not shown on any plans. Only multiple biocycle tank locations are shown. There is no detail of intended discharge effluent quality or quantity nor is there any detail of how or where this effluent will be dispersed.</p> <p>We cannot find in any of the documentation available with the proposal of any reference to or consideration of the impacts of site effluent being returned back into the aquifer.</p> <p>On the basis of the Bushfire Emergency Plan (Occupants) page 6, there will be up to 175 persons on the proposed site. Using the standard of 200 litres per person per day capacity requirement then this equates to some 35,000 litres of effluent per day being introduced into the superficial aquifer from which ground water is extracted at nearby properties.</p> <p>Likewise, there appears to be no assessment of such a large volume of nutrient rich discharge reaching Walungup Lake and the seasonal wetlands along its eastern margin adjacent the proposed development.</p> <p>This in our view is a major omission from the application.</p> <p>3. Traffic/ Vehicles</p> <p>We note an error in the traffic report stating Old Mandurah road speed limit at 70 km/hr, rather than 80 km/hr. We believe this has implications in terms of the intersection design.</p> <p>We note that the design indicates two short access drives perpendicular to Old Mandurah road.</p> <p>The change in level from the development site to the road will result in a very steep driveway, giving an inadequate level area to wait for turning. For more senior drivers (over 55's) or Tourists (unfamiliar) this is essential. We would note that most existing access driveways are designed on an angle up the slope from an adequate exit/ entry platform area which is also a planning policy requirement. This will have an implication on the earthworks, offset of infrastructure from the roadway and the retention of large trees and is a flaw in the design.</p> <p>There are no slip lanes shown in the development and no widening shown for vehicles turning right into the development. For the increased quantity of traffic and for the larger service vehicles this is essential. The slip lane for Stringybark way addresses no more than the 67 residences proposed for the development.</p> <p>We note the reference to "no public Transport accessibility" along old Mandurah road and feel that a development of this type catering to the over 55's should have provision for this.</p> <p>Old Mandurah road has no bicycle paths similar to that along Safety Bay road that might be useful for pedestrians /cyclists/ motorised carts. This casts doubt of the suitability of location for a development of this type.</p>
PUBLIC SCHEDULE OF SUBMISSIONS	
Name	Comment
No.11 – cont...	4. Visual amenity (Urbanista Visual Landscape Assessment)

	<p>The visual amenity report focus is primarily on the Mandurah Road street view (viewshed) and either overlooks or omits the impact on adjacent residences to the south and to the east. A Google search of Lifestyle Village - Tuart Lakes - shows green screening along lot boundary of that development has been provided.</p> <p>The proposal fails to provide any barrier, green or otherwise, between the existing R1.0 rural lifestyle homes and the proposed high density "short stay/ caravan/ camping/ lifestyle" proposal.</p> <p>5.Items not addressed elsewhere</p> <p><u>Earthworks/Site works</u></p> <p>The cross-section AA of development plans indicate some significant earthworks which is not discussed in the proposal. The cross section drawing shows the road being above a number of chalets requiring significant areas of excavation and retaining walls being required. We question how this is consistent with objective of keeping large trees where any disturbance of the root system can adversely impact tree health and stability.</p> <p>Earthworks of this type will likely provide noise and dust issues during construction and establishment period.</p> <p><u>Provision of services</u></p> <p>Gas - There is currently no reticulated gas currently at our property. And we assume this is the case for the adjacent lots. - implication bottled gas - additional deliveries/ traffic movements</p> <p>Communications (NBN) - There is no comments around NBN coverage or rather lack of it. Access to landline connections have been limited in this area.</p> <p>Potable /non-potable Water - Does enough capacity existing to service 67 additional residences and the green open space?</p> <p><u>Wildlife</u></p> <p>We can confirm that Black Cockatoos frequent the area and support the conditions requiring nesting habitat trees to be retained. Our concern is that the existing design does not adequately allow for this.</p> <p>We can confirm that Kangaroos also frequent the subject lots and from observed kangaroo foot prints and frequented pads, live along the ridge. We note the public reaction to the displacement of a kangaroo population for a subdivision along Baldivis Road earlier this year. This does not seem to have been considered in the proposal.</p> <p><u>Summary</u></p> <p>The development fails to meet the objectives of the Planning Policy (3.1.1) There are many aspects that are unclear in the submission, not limited to</p> <ul style="list-style-type: none"> • Significant inconsistencies in the stated planned use - over SS's lifestyle village? short stay (rental)? tourism?, caravan park? or camping? • The design of chalets - to what standard? • Business viability of proposed development? • Any development approval made on the basis of the submitted documentation could best be described as "carte blanche" with no way of knowing where it is all going to end up.
PUBLIC SCHEDULE OF SUBMISSIONS	
Name	Comment
No.11 – cont...	We believe the issues we have raised brings into doubt the suitability of the location for a development of this type;

	<ul style="list-style-type: none"> • Radical change in residential density • Failure to consider the visual amenity to the subdivision along Stringybark way • Difficulty in developing site and maintain the environment values • Issues with access - Traffic/ public transport/ foot path - cycle way along Mandurah Road and Sixty-Eight Road/ accessibility • Lack of services <p>We formally object to the proposal.</p>
12.	<p>Rowe Group acts on behalf of the landowner of Lot 71 (No. 1441) Mandurah Road, Baldivis ('Lot 71'). We write in relation to a proposed lifestyle village development at Lots 18 (No. 1447) and 19 (No. 1457) Mandurah Road, Baldivis ('the subject site'). Lot 71 is located immediately to the north of the subject site.</p> <p>We have been instructed by the landowner of Lot 71 (our 'Client') to review the development application material available on the City of Rockingham ('the City') website and provide our comments on the proposal. As part of preparing this submission, we have reviewed the following material:</p> <ul style="list-style-type: none"> - Planning Report prepared by Urbanista dated 20 December 2018; - Development Plans prepared by Braude Architects dated 19 October 2018; - Acoustic Report prepared by Sealhurst Acoustic Design and Engineering dated 6 December 2018; - Bushfire Management Plan prepared by Bushfire Prone Planning dated 12 April 2018; - Bushfire Emergency Plan prepared by Bushfire Prone Planning dated 3 August 2018; - Environmental Impact Assessment prepared by Terratree dated 11 September 2017; - Transport Statement prepared by KCTT dated September 2018; - Visual Landscape Statement prepared by Urbanista dated 8 January 2019; and - Waste Management Plan prepared by Coastal Waste Bins dated 12 November 2018. <p>On review of this material, we have identified a number of concerns and these are detailed in this submission. It is for these reasons that we are of the view that the proposed development should not be approved by the City. Comments on the proposed development will be made on behalf of our Client.</p> <p>Proposed Development</p> <p>From our review of the Development Application material, we understand that the Application seeks approval for a lifestyle village for over 55 year old persons. The Application characterises the proposal as permanent residential accommodation, and "alternative accommodation for the aged". It also characterises the land use as a "tourism" use, however details as to how the proposal may serve a tourism role are not provided.</p>

PUBLIC SCHEDULE OF SUBMISSIONS	
Name	Comment
No.12 – cont...	The proposal includes the construction of 67 chalets, a communal clubhouse and five (5) commercial tenancies. We understand that the commercial tenancies do not form part of

	<p>the current Application and these commercial tenancies are not shown on the plans. Each chalet includes one (1) car parking bay, in addition to a total of 24 visitor car parking bays to the north of the proposed clubhouse building.</p> <p>Subject Site</p> <p>The subject site is comprised of two rural lots with a total area of 40,467m². The subject site is zoned 'Rural' under the Metropolitan Region Scheme ('MRS') and the City's Local Planning Scheme No. 2 ('LPS 2'). It is located within the City's Rural Land Strategy ('Strategy') Planning Unit 4, and Precinct 4A.</p> <p>The adjacent property to the north, being Lot 71, is comprised of a tavern and brewery. This is a well- established entertainment venue, with the brewery receiving Development Approval from the City in 2015. A Works Approval was issued in 2015 from the Department of Water and Environmental Regulation ('DWER') for the current brewing operation. The area of the Lot 71 adjacent to the shared boundary (i.e. the northern boundary of the subject site) is utilised as the kitchen access area, service areas, parking, and the location of the waste water treatment plant, associated with the brewery. The boundary includes light natural vegetation and a small mesh and picket fence.</p> <p>The subject site is otherwise surrounded by rural-style single residential land use on large, one- to two-hectare lots. The subject site abuts Mandurah Road, which is an 'Other Regional Road', adjacent to which is a system of lakes, wetlands and bushland classed as a Bush Forever site.</p> <p>The Strategy's Planning Unit 4 is comprised of a variety of rural based land uses such as scattered broad hectare grazing and market gardens, more intensive land uses such as a poultry farm and piggery, and parks and recreation reserves. The Strategy also identifies the Planning Unit 4 as a transition area between the inland urban corridor and the coastal urban corridor, noting that it contains an extensive chain of wetlands and provides an essential landscape and rural context.</p> <p>Reasons to Refuse</p> <p>From review of the Application we are of the view that the City should not support the proposed development. Rather, the Application should be refused for the following reasons:</p> <p><u>Land is not appropriate at the Subject Site</u></p> <p><i>Definition of Caravan Park</i></p> <p>The Applicant states that the proposal falls under the land use classification of a 'Caravan Park', as they argue that the proposal can be considered a 'Park Home Park' which falls under the category of a 'Caravan Park'. We do not believe that the chalets proposed on site can be considered 'Park Homes', and subsequently 'Caravan Park' in this instance.</p> <p>The City's LPS 2 defines a 'Caravan Park' as:</p> <p><i>having the same meaning as in the Caravan Parks and Camping Grounds Act 1995.</i></p>
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PUBLIC SCHEDULE OF SUBMISSIONS	
Name	Comment
No.12 – cont...	Subsection 5(1) of the <i>Caravan Parks and Camping Grounds Act 1995</i> ('the CPCG Act') defines a 'Caravan Park' as:

	<p><i>an area of land on which caravans, or caravans and camps, are situated for habitation.</i></p> <p>The CPCG Act further defines a 'Caravan' as:</p> <p><i>a vehicle that is fitted or designed for habitation, and unless the contrary intention appears, includes an annexe.</i></p> <p>The Applicant claims that the proposed chalets can be considered 'Park Homes', which are defined in the CPCG Act as:</p> <p><i>a vehicle of a prescribed class or description that is fitted or designed for habitation.</i></p> <p>Additionally, Subregulation 4(1) of the <i>Caravan Parks and Camping Grounds Regulations 1997</i> ('the CPCG Regulations') clarifies the following with regard to the meaning of a 'Park Home':</p> <p><i>A caravan in respect of which a vehicle licence is not required under the Road Traffic (Vehicles) Act 2012 Section 4, because it could not be drawn by another vehicle on a road due to its size, is a vehicle of a prescribed class or description for the purposes of the definition of "park home" in section 5(1) of the Act.</i></p> <p>This indicates that a 'Park Homes' is a subcategory of a 'Caravan', and therefore that a proposal comprised of 'Park Home' can be considered a 'Caravan Park'. This is the reasoning used by the Applicant in this instance.</p> <p>In order to meet the definition of a 'Park Home' or 'Caravan' however, the object must be a vehicle. The CPCG Act defines the term 'vehicle' as:</p> <p><i>a means of conveyance (other than a train, vessel or aircraft) capable of being propelled or drawn on wheels.</i></p> <p>The proposed chalet designs do not meet the definition of a vehicle in any way. The chalets appear to be fixed accommodation, which do not incorporate wheels or other means of conveyance. We are therefore of the view that the chalets cannot be considered 'Park Homes' or 'Caravans', and therefore that the proposal cannot be considered a 'Park Home Park' or 'Caravan Park' uses under LPS 2.</p> <p>Moreover, a recent SAT decision further clarified the definition of a 'Park Home' in relation to an application for a 'Park Home Park' licence for the purposes of 'Aged Persons Dwellings' use (Henville and City of Armadale [2018] WASAT 108). In addition, the Decision of Henville and City of Armadale notes that the noun 'conveyance', as used in the definition of a 'vehicle', is defined by the Macquarie and Oxford English Dictionaries, respectively, as:</p> <p><i>a means of conveyance" and "a means of transport from place to place.</i></p> <p>It therefore follows, according to the Decision of Henville and City of Armadale, that a 'Park Home' must be a <u>means</u> of transport, not simply an object which is moveable. It was therefore determined that the Applicant's proposed form of habitation was not a vehicle because it was not a <u>means</u> of transport, but instead merely a habitable structure that can withstand movement from one location to another.</p>
PUBLIC SCHEDULE OF SUBMISSIONS	
Name	Comment
No.12 – cont...	<p>As such, the form of habitation could not be considered a 'Park Home', and the proposal therefore not a 'Park Home Park'.</p> <p>This reasoning can be equally applied to the proposed development at the subject site, further indicating that the</p>

	<p>proposed chalets do not meet the definition of a 'Caravan' or 'Park Home', and therefore that the proposal is not a 'Caravan Park' use under LPS 2.</p> <p>As the proposed land use is not consistent with the 'Caravan Park' land use definition, the City must consider the proposed development against other suitable land uses defined in LPS 2. In this instance, we are of the view that there are two (2) likely options available. These are:</p> <ol style="list-style-type: none"> 1. 'Grouped Dwellings'; or 2. Use Not Listed – Retirement Village. <p>These are further explained below.</p> <p><i>Grouped Dwellings</i></p> <p>As we do not believe the proposal can be considered a 'Caravan Park', it could instead be classified as 'Grouped Dwellings' for the purpose of accommodating 'Aged Person'. A 'Grouped Dwelling' is defined in State Planning Policy 3.1 Residential Design Codes ('R-Codes') as:</p> <p><i>A dwelling that is one of a group of two or more dwellings on the same lot such that no dwelling is placed wholly or partly vertically above another, except where special conditions of landscape or topography dictate otherwise, and includes a dwelling on a survey strata with common property.</i></p> <p>The R-Codes also define 'Aged Person' as:</p> <p>A person who is aged 55 years or over.</p> <p>The proposal could be considered to satisfy this definition, given that 67 single-storey chalets are proposed over two lots. In addition, the Applicant, in the Planning Report on a number of occasions, has used the term 'Grouped Dwelling' to describe the proposed chalets. However, the 'Grouped Dwellings' land use is classified as an 'X' use under the provisions of LPS 2. Therefore, should this interpretation be applied, the proposal should be refused on the basis that the proposed use is incapable of receiving approval at the subject site under the provisions of LPS 2.</p> <p><i>Use Not Listed – Retirement Village</i></p> <p>Alternatively, the proposal could be considered a 'Lifestyle Village' or 'Retirement Village', and therefore a 'Use Not Listed' in accordance with Clause 3.2.4 of LPS 2. Clause 3.2.4 of LPS 2 states the following with regard to unlisted uses:</p> <p><i>If the use of land for a particular purpose is not specifically mentioned in the Zoning Table and cannot reasonably be determined as falling within the interpretation of one of the Use Classes, the Local Government may:-</i></p> <ol style="list-style-type: none"> a) <i>Determine that the use is consistent with the objectives and purpose of the particular zone and is therefore permitted;</i> b) <i>Determine that the proposed use may be consistent with the objectives and purposes of the particular zone and thereafter follow the advertising procedures of Clause 64 of the deemed provisions in considering an application for development approval; or</i>
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PUBLIC SCHEDULE OF SUBMISSIONS	
Name	Comment
No.12 – cont...	<p>c) <i>Determine that the use is not consistent with the objectives and purposes of the particular zone and is therefore not permitted.</i></p> <p>If the above land use interpretation is applied, we believe the proposal should be refused, as it is not consistent with the</p>

	<p>objectives and purposes of the 'Rural' Zone under LPS 2. The objective of the 'Rural' Zone, as outlined in Clause 4.11.1 of LPS 2, is as follows (underlined for Author's emphasis):</p> <p><i><u>The objective of the Rural Zone is to preserve land for farming and foster semi-rural development which is sympathetic to the particular characteristics of the area in which it is located, having due regard to the objectives and principles outlined in the Rural Land Strategy and supported by any other Plan or Policy that the Local Government may adopt from time to time as a guide to future development within the Zone.</u></i></p> <p>Given the high level of residential development proposed, and its incongruence with the existing development in the area, we are of the opinion that the proposal cannot be considered semi-rural development, and is not sympathetic to the characteristics of the locality. Further, the proposal does not meet the objectives and principles outlined in the Strategy as required in the 'Rural' Zone objective (as outlined below).</p> <p>As stated above, the subject site is located within the Strategy's Planning Unit 4. The objective of this unit is as follows:</p> <p><i><u>The primary objective for this Planning Unit is to encourage special rural/special residential development which recognises and enhances the landscape and natural resource attributes of the unit and provide a natural viewshed to Mandurah Road and a rural context to proposed urban development to the east.</u></i></p> <p>As outlined in the Strategy, Planning Unit 4 is comprised of a variety of rural based land uses, such as scattered broad hectare grazing and market gardens, more intensive land uses such as a piggery and poultry farm, and many park and recreation reserves. The proposal will stand in contrast to these land uses, as well as to the adjoining tavern and brewery, and surrounding single dwellings on one- to two-hectare lots.</p> <p>The comparatively high level of development will be visible from Mandurah Road, thereby detracting from the natural landscape of the area. This is exacerbated by the proposed significantly reduced setback to Mandurah Road (explained later in this submission). The proposal may be considered more appropriate on the east side of the Planning Unit 4, closer to existing urban development. In its current location however, it negatively impacts the surrounding rural context. We are therefore of the view that the proposal does not meet the objective of Planning Unit 4 of the Strategy.</p> <p>Within Planning Unit 4, the subject site is located in Precinct 4A. Precinct 4A serves as an interface between the urban land to the east, and the wetlands to the west. As such, the Strategy states that lot sizes should be determined by the need to protect the natural bushland and other landscape values whilst minimising the impact on wetland areas.</p> <p>The Strategy identifies two main sections of Precinct 4A: the area east of the ridgeline, located in proximity to urban areas; and west of the ridgeline, characterised by semi-rural development and visible from Mandurah Road.</p>
PUBLIC SCHEDULE OF SUBMISSIONS	
Name	Comment
No.12 – cont...	<p>The Strategy recommends that lots west of the ridgeline have a minimum size of one hectare, in order to maintain the rural viewshed from Mandurah Road and to protect the landscape value of the region. For lots east of the ridgeline, the Strategy recommends a minimum size of 5,000m², to provide an interface between the larger lots to the west and the urban development to the east.</p>

	<p>The subject site is located west of the ridgeline, adjacent to Mandurah Road. Whilst the proposal is located over two lots, for the purpose of assessing the intensity of the proposed residential development, each chalet can be considered a separate lot. With this interpretation, the density of the proposed development is over sixteen times greater than that recommended in this location. It is also over eight times greater than that recommended on the east side of the ridgeline.</p> <p>The increased intensity of development will result in traffic and noise impacts uncharacteristic of the area, in addition to the impact on the natural landscape. For these reasons, we are of the view that the proposal does not meet the objectives and principles of the Rural Land Strategy.</p> <p>Given the above, the proposal does not meet the objective of the 'Rural' Zone, and should therefore be refused by the City.</p> <p><i>Department of Planning and Western Australian Planning Commission Comments</i></p> <p>In addition to the above, there is a history of comments made by the former Department of Planning ('DoP') and the Western Australian Planning Commission ('WAPC') indicating that 'Lifestyle Villages' and 'Park Home Parks' are not compatible with the 'Rural' Zone.</p> <p>In December 2008, the WAPC withheld consent for a rezoning under the City of Wanneroo District Planning Scheme No. 2, of land zoned 'Rural' under the MRS, for the purposes of a 'Lifestyle Village'. The WAPC stated that the application (WAPC Ref: 853-2-30-19P65):</p> <p><i>comprises development which is not consistent with the 'Rural' zoning of the land in the Metropolitan Region Scheme.</i></p> <p>Further, in August 2009 the WAPC Statutory Planning Committee resolved the following relating to the same rezoning proposal:</p> <p><i>Support the use of 'Urban' land for the purpose of park home sites due to their density, infrastructure/servicing requirements and necessity for accessibility to community and medical services and support the zoning of these sites as 'Special Use' to provide greater certainty, simplicity and consistency to the land zoning for park home sites, ensuring that the site is only used for a park home site unless a rezoning is initiated.</i></p> <p>Finally, in November 2013 the then-Minister for Planning, Culture and the Arts, also considered the following in relation to the same proposal:</p> <p><i>the proposed amendment is to provide for a residential development which is inconsistent with the general intentions of the Rural zoning of the land in the Metropolitan Region Scheme.</i></p> <p>The Department and WAPC have also indicated that such development should be well serviced and located in proximity to urban infrastructure.</p>
PUBLIC SCHEDULE OF SUBMISSIONS	
Name	Comment
No.12 – cont...	<p>This includes the availability of sewer and community infrastructure, such as shops, schools, community facilities, etc. We are of the view that the proposal fails this test as there is no available sewer in the area or nearby shops and other community facilities accessible to the occupants of the proposed development.</p> <p>In August 2011, the then-Director General of the Department, wrote the following in relation to the same proposal:</p>

	<p><i>The Department is not opposed to the principle of locating such development on rural land which is contiguous with well serviced urban areas and which is not likely to prejudice planning of future urban areas.</i></p> <p>Further, Planning Bulletin 49/2014 states that caravan parks comprising a long-stay component, which is defined as occupancy by the same person for any period of time greater than three months, should be located where there is access to urban facilities and amenities.</p> <p>We note that the subject site is not located in proximity to a local centre, and that the nearest bus stop is located 2.5km, or a 30-minute walk, from the subject site. In addition, there is no available sewer infrastructure within proximity of the subject site. We do not consider that it is satisfactorily serviced for the intensity of residential development proposed.</p> <p>Given the above, we believe that the proposal is incompatible with the 'Rural' Zone under the MRS and LPS 2 and should be refused.</p> <p>Activity Centre</p> <p>The proposal includes the provision of five (5) commercial tenancies, and states that these would be occupied by land uses including:</p> <ul style="list-style-type: none"> - Convenience store; - Take-away food outlet; - Medical consulting rooms; - Pharmacy; and - Hairdressing and beauty. <p>Whilst we understand that the commercial tenancies do not form part of the subject application, we do believe it is necessary to consider the impact of these land uses at the present time.</p> <p>The Application states that these tenancies are 'incidental' uses and therefore do not require planning approval. There is no indication within the application however, that the tenancies will only serve the residents of the development or designed to service the wider community. Based on the information contained in the Applicant's Transport Impact Statement, we are lead to believe that the proposed commercial tenancies will be able to be used by the wider community, not just the occupants of the development.</p> <p>If this is the case, we are of the view that the proposed land uses are not incidental and that the proposal is for all intents and purposes, creating an activity centre in an unplanned location. The proposed commercial land uses, in conjunction with residential development and recreation areas are all characteristic of an activity centre.</p>
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PUBLIC SCHEDULE OF SUBMISSIONS	
Name	Comment
No.12 – cont...	<p>This would create additional impacts with regard to traffic, noise, and the environment, and would be a further detriment to the existing rural landscape.</p> <p>The City has a Local Commercial Strategy which identifies intended activity centre locations, including district centres, neighbourhood centres, local centres and freeway service centres. The subject site, nor any site in proximity, is not identified as the location of a planned activity centre under the City's Local Commercial Strategy. Further, each of the</p>

	<p>proposed commercial land uses are classified as 'X' uses within the 'Rural' Zone, and therefore cannot be approved at the subject site.</p> <p>It is apparent that the subject site is not identified as or suited to the proposed commercial land uses, and as such they should not be approved.</p> <p>Setbacks</p> <p>The City's Local Planning Policy No. 3.1.1 – Rural Land Strategy ('LPP 3.1.1') states the following setback requirements apply to development at the subject site:</p> <ul style="list-style-type: none"> - 40m to Mandurah Road; and - 10m to other lot boundaries. <p>The proposed development incorporates the following setbacks:</p> <ul style="list-style-type: none"> - 4.8m to Mandurah Road in lieu of 40m required by LPP 3.1.1; - 3.4m to the northern lot boundary in lieu of the 10m required by LPP 3.1.1; - 8.4m to the southern lot boundary in lieu of the 10m required by LPP 3.1.1; and - 11.2m to the eastern lot boundary in lieu of the 10m required by LPP 3.1.1. <p>We note that the setback to the eastern boundary is consistent with the provisions of LPP 3.1.1.</p> <p>The proposed setbacks to Mandurah Road and the northern lot boundary will have a detriment to the development on Lot 71 and the predominant streetscape and character of Mandurah Road and the surrounding rural area. As a result, we are of the view that the proposed setbacks to Mandurah Road and the northern lot boundary cannot be supported for the following reasons:</p> <ul style="list-style-type: none"> - The properties on Mandurah Road, to the north and south of the subject site generally incorporate a setback of approximately 40m, consistent with the provisions of LPP 3.1.1. Therefore, the proposed 4.8m setback to Mandurah Road will be out of character with the predominant setback of buildings to Mandurah Road in the vicinity of the proposed development; - The proposed reduced street setback to Mandurah Road is reflective of development that is located in an urban area. As the subject site is zoned 'Rural' under the MRS and LPS 2, the proposed reduced street setback is not considered appropriate and should not be supported; and - The proposed setback to the northern lot boundary of the subject site (the boundary adjoining Lot 71) represents a significant variation to the prescribed 10m.
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PUBLIC SCHEDULE OF SUBMISSIONS		
Name	Address	Comment
		<p>In particular, the proposed 3.4m setback is to the portion of Lot 71 which is occupied by the loading and service area of the existing brewing and tavern operation. This includes a waste water treatment plant for the existing operations. The location of the proposed dwellings along the northern lot boundary of the subject site could cause land use conflict between the occupants of the proposed development and the existing and approved development on Lot 71. The proposed setbacks to the northern boundary should not be supported.</p>

		<p>On the basis of the above, the proposed development should not be supported.</p> <p><u>Noise</u></p> <p>Lot 71 is occupied by a brewery or 'Beverage Manufacturing – Alcoholic' use (Category 24) as described in Schedule 1 of the Environmental Protection Regulations 1987 ('the Environmental Regulations'). This is a land use that may generate land use conflicts with existing sensitive land uses. The types of impacts caused by this land use were considered as part of the Works Approval Application when the existing development at Lot 71 was considered and approved by both the City and the Department of Water and Environmental Regulation ('DWER'). The Environmental Protection Authority's ('EPA') Guidance for the Assessment of Environmental Factors – Separation Distances between Industrial and Sensitive Land Uses No. 3 ('the Separation Guidelines') was specifically developed to provide advice on the use of generic separation distances (buffers) between industrial and sensitive land uses to avoid conflicts between incompatible land uses. A number of emissions are generated by industrial, commercial and rural activities and infrastructure. These include noise and air emissions (gases, dust and odours). The levels of emissions may at times exceed amenity levels considered acceptable in residential areas and at other sensitive land uses.</p> <p>Generally, but not always, impacts on the environment decrease with increasing distance from the source of the emission. The determination of the buffer area is necessary in many situations to avoid or minimise the potential for land use conflict. While not replacing the need for best practice approaches to emission management, the use of buffers is a useful tool in achieving an acceptable environmental outcome. The Separation Guidelines focus on protecting sensitive land uses from unacceptable impacts on amenity that may result from industrial activities, emissions and infrastructure. The Separation Guidelines specifically classifies "residential developments" as a 'sensitive land use'. The proposed development would therefore be considered a 'sensitive land use' under the Separation Guidelines.</p> <p>The separation distances in the Separation Guidelines are intended to be used as a tool, supplemented by other appropriate techniques, to assist in the assessment of new individual sensitive land uses or estates, in the vicinity of existing / proposed industry and infrastructure. The separation distances are also intended to provide assistance to strategic planning studies and processes.</p>
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PUBLIC SCHEDULE OF SUBMISSIONS		
Name	Address	Comment
No.12 – cont...		<p>Proponents and responsible authorities are encouraged by the EPA to consider their proposals and schemes in light of the guidance given. A proponent or responsible authority wishing to deviate from the advice in the Separation Guidelines would be expected to put a well-researched, robust and clear justification arguing the need for that deviation.</p> <p>It is noted that the Separation Guidelines provides general guidance in the absence of site-specific technical studies, and buffer distances can be reduced if the findings of technical studies can demonstrate that amenity impacts are not significant.</p>

		<p>Where the separation between the industrial and sensitive land uses is greater than the generic distance, there will not usually be a need to carry out site-specific technical analyses to determine the likely area of amenity impacts due to emissions from the industry. Where the separation distance is less than the generic distance, a scientific study based on site and industry-specific information must be presented to demonstrate that a lesser distance will not result in unacceptable impacts. If the distance from the industrial land use to the sensitive land use is less than the recommended separation distance, and it cannot be demonstrated that unacceptable environmental impacts are likely to be avoided, then other options should generally be pursued.</p> <p>As previously mentioned, Lot 71 is occupied by a 'Beverage Manufacturing – Alcoholic', described as a premise where alcoholic beverages are manufactured – brewery, distillery or winery. The buffer distance recommended for this industry is 200m to 500m, depending on size and type of product.</p> <p>The Applicant's Planning Report does not discuss or assess amenity impacts from the existing brewing operation at Lot 71. There is also no reference to the Separation Guidelines in any of the application materials.</p> <p>There is a waste water treatment plant at the south east corner of Lot 71, approximately 10m north of the closest residence proposed by the Application. This is well within the 200m to 500m generic separation distance recommended in the Separation Guidelines. A site-specific technical analysis would provide the most appropriate guide to the separation distance that should be maintained between the proposed sensitive land uses and the existing brewing operation at Lot 71, to avoid or minimise land use conflicts. If a technical analysis is carried out, it should report on the nature and level of the possible emissions from the brewery operation, the site context, predicted impacts, acceptable criteria, and proposed mitigation. We recommend that the City request the Applicant to undertake a noise assessment to address these issues and any revised material (including the noise assessment) should be readvertised for community consultation prior to the City making a determination.</p> <p>The proposed development, being permanent residential in nature, will exacerbate the potential for land use conflict given the proximity and number of dwellings proposed. We are of the view that there is an inevitable perception of land use conflict even if the conflict is not real.</p>
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PUBLIC SCHEDULE OF SUBMISSIONS		
Name	Address	Comment
No.12 – cont...		<p>Our Client is concerned that if they maintain the existing use and development of Lot 71 in its current form or enhances the existing use, then the likelihood of any future plans would be prejudiced by the proposed development within the buffer area of the existing use.</p> <p>In addition, the existing tavern operation at Lot 71 holds a restricted tavern licence. As a result, there are regular and frequent live music events held generally every Friday and Saturday evenings and Sunday afternoons. The proposed development, being a highly urbanised and intensive development, will likely lead to complaints from occupants of the dwellings nearest to Lot 71. We are of the view that complaints</p>

		<p>of this nature (i.e. complaints relating to an existing operation adjacent to a new urbanised and intensive residential development in a rural area) would be inappropriate.</p> <p>Should the City be of the mind to support the proposed development, it is requested that the City impose a condition on any development approval which requires a Section 70A Notification to be registered on the Certificate of Title for the subject site which advises the future prospective occupants of the proposed development that they will be located inside of a buffer area of an existing 'Beverage Manufacturing – Alcoholic' use and therefore may be susceptible to dust, noise, odour and gas emissions from the operation.</p> <p><u>Traffic</u></p> <p>The Transport Impact Statement prepared by KCTT dated September 2018 describes the proposed development as generating approximately 332 additional vehicle trips on the surrounding road network. This anticipated number of vehicle trips includes trips generated by a clubhouse (approximately 4,000m2 GFA) and shops (approximately 385m2 NLA). In addition, we understand that the Applicant has applied a 50% reciprocity rate to the clubhouse and the shops components as it is claimed that most of the visitors will be from the proposed development.</p> <p>Firstly, the proposed development does include the construction of a clubhouse, however it is only approximately 150m2 (as shown on the development plans). Secondly, the shops component does not form part of this Application or any other Application that is under consideration by the City at the time of writing this submission (to our knowledge). Therefore, we are of the view that the trip generation contained in the Transport Impact Statement does not adequately reflect the traffic situation following the completion of the proposed development and cannot be relied upon by the City in making a determination on the Application with sufficient confidence.</p> <p>Furthermore, the Transport Impact Statement suggests that the future proposed shops component will be available for use by others who do not occupy the proposed development. The Planning Report prepared by Urbanista dated 20 December 2018 states that this shops component could include the following uses:</p> <ul style="list-style-type: none"> - Convenience store; - Take-away food outlet; - Medical consulting rooms; - Pharmacy; and - Hairdressing and beauty.
PUBLIC SCHEDULE OF SUBMISSIONS		
Name	Address	Comment
No.12 – cont...		<p>The provision of these types of land uses, which are available for others who do not occupy the proposed development, will create an unplanned activity centre at the subject site. As previously explained, this will create an unplanned activity centre which is inappropriate and out of character with the 'Rural' Zone.</p> <p>These types of land uses will generate additional traffic to and from the subject site which we are of the view has not been contemplated by this Application.</p> <p>Given Mandurah Road is reserved 'Other Regional Road' under the Metropolitan Region Scheme ('MRS') and its importance within the surrounding road network, we are of the view that the Application must be referred to the Department of Planning,</p>

		<p>Lands and Heritage ('DPLH') and Main Roads WA ('MRWA') in accordance with Instrument of Delegation (DEL 2017/02) to appropriately review the traffic generated by the proposed development</p> <p><u>Parking</u></p> <p>The Applicant advises in the Planning Report the following in relation to car parking:</p> <p><i>In accordance with the Caravan Parks and Camping Grounds Regulations, 1 car bay per 20 sites is required to be provided, with a minimum of 4 bays. The proposed lifestyle village/park home will have 67 chalets and therefore only requires 3.35 bays. Notwithstanding this, each chalet will be provided with parking for one vehicle as outlined in the plans located in Attachment 4. In addition to the one car bay per chalet, the proposal also includes 21 car bays located adjacent to the shops and club house and within the Mandurah Road street setback area.</i></p> <p>On review of the development plans, it appears that there are 24 car parking bays to the north of the proposed clubhouse. This is inconsistent with the advice contained in the Planning Report (refer above). Therefore, we request clarification as to how many car parking bays will be provided by this development.</p> <p>We are of the view that the proposed development does not provide sufficient on-site parking facilities. Whilst each unit is provided with a single car parking bay, it is likely that some occupants will have more than one (1) vehicle. The following table provides a summary of the parking requirements outlined in the Transport Impact Statement:</p> <table><tr><th>LAND USE</th><th>REQUIREMENT</th><th>YIELD/FLOORS/SPACE</th><th>TOTAL PARKING</th></tr><tr><td>Lifestyle Village</td><td>1 per dwelling</td><td>67 units</td><td>67.0</td></tr><tr><td>Clubhouse</td><td>1 bay per 4 persons accommodated</td><td>120 people</td><td>30.0</td></tr><tr><td>Shops</td><td>6 bays per 100m² NLA</td><td>220m²</td><td>13.2</td></tr><tr><td>Total</td><td>-</td><td>-</td><td>110.2</td></tr></table> <p>The proposed development incorporates a total of 91 car parking bays, resulting a shortfall of approximately 19.2 (20) bays.</p> <p>We are of the view that the proposed shortfall is significant given there is a lack of alternative modes of transport available in the area (such as public transport and bicycles). As a result, the proposed development is likely to rely solely on the use of private cars.</p>	LAND USE	REQUIREMENT	YIELD/FLOORS/SPACE	TOTAL PARKING	Lifestyle Village	1 per dwelling	67 units	67.0	Clubhouse	1 bay per 4 persons accommodated	120 people	30.0	Shops	6 bays per 100m ² NLA	220m ²	13.2	Total	-	-	110.2
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Total	-	-	110.2																			

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Name	Address	Comment
No.12 – cont...		<p>On review of the development plans, there is no adequate space available at the subject site to facilitate the construction of additional car parking bays that would be required to assist in reducing this shortfall. Unless additional car parking facilities are proposed, we are of the view that the City should refuse the Application.</p> <p><u>Waste Management</u></p> <p>There are no available sewer connections in vicinity of the subject site. Furthermore, the Application does not contain any information as to how sewerage waste will be managed or treated on-site in the absence of available sewer infrastructure. Based on our Client's experience in development at Lot 71, the City has historically required information from the Applicant which details as to how sewerage will be managed and treated</p>

		<p>on-site. As this Application does not contain any details relating to sewerage management and treatment.</p> <p>The proposed development has the potential to generate a significant amount of sewerage waste. This will potentially have implications on groundwater and the location of the buildings at the subject site in order to facilitate leach drains and sewerage systems.</p> <p>Therefore, we are of the view that the City should not determine this Application until such a time that the Applicant has provided information on sewerage management and treatment.</p> <p><u>Bushfire Management</u></p> <p>The Bushfire Management Plan prepared by Bushfire Prone Planning dated 12 April 2018 describes the proposed development as an “over 55s Lifestyle Village”. The proposed land use is considered a Category 1 use, which is a land use and associated infrastructure that are designed to accommodate groups of people with reduced physical or mental ability. As a result, the proposed land use is a vulnerable land use under State Planning Policy No. 3.7 – Planning in Bushfire Prone Areas (‘SPP 3.7’).</p> <p>Given the proposal is a vulnerable land use under SPP 3.7, the application is required to provide a Bushfire Emergency Evacuation Plan. We acknowledge that the Applicant has submitted such a document titled Bushfire Emergency Plan prepared by Bushfire Prone Planning dated 3 August 2018.</p> <p>From our experience, the City has required the provision of more than one (1) evacuation route from a development site.</p> <p>We request that the City, the Department of Planning, Lands and Heritage (‘DPLH’) and Department of Fire and Emergency Services (‘DFES’) undertake a comprehensive review of the proposed development, in particular the Bushfire Management Plan and the Bushfire Emergency Plan prior to making a determination on this Application.</p> <p>In relation to evacuation routes identified in the Bushfire Emergency Plan, we understand that the Applicant has identified three (3) options:</p> <ul style="list-style-type: none"> - Destination east – Baldivis Township – on Mandurah Road travel south along Mandurah Road to Sixty Eight Road, then travel east along Sixty Eight Road to Baldivis Road, and north along Baldivis Road to Baldivis Township;
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PUBLIC SCHEDULE OF SUBMISSIONS		
Name	Address	Comment
No.12 – cont...		<ul style="list-style-type: none"> - Destination north – Rockingham Township – on Mandurah Road travel north along Mandurah Road to Safety Bay Road, then travel west along Safety Bay Road to Read Street, and north along Read Street to Patterson Road, then travel west along Patterson Road to Rockingham Township.; and - Destination south – Secret Harbour Township – on Mandurah travel south along Mandurah Road to Stakehill Road, then west along Stakehill Road to Ennis Avenue, then south along Ennis Avenue to Anstey Road and west along Anstey Road to Secret Harbour Township. <p>We are of the view that the identified options are rely too heavily on access and egress to Mandurah Road in the event of a bushfire. All evacuation options rely on the use of Mandurah Road.</p>

		<p>We are of the view that an appropriate alternative evacuation should be considered to allow the occupants of the subject site to be evacuated from the east across the adjoining lots in case on a bushfire event to the west of the site. This could be secured by way of easements and agreements with the adjoining landowners.</p> <p>As previously advised, this approach is consistent with our recent experience with the City. Therefore, the City should not support the proposed development until such a time that a viable evacuation option becomes available which allows the occupants of the subject site to be safely evacuated to the east.</p> <p>Summary</p> <p>On the basis of the above, we are of the view that the City of Rockingham ('the City') should refuse the proposed development of a lifestyle village at Lots 18 (No. 1447) and 19 (No. 1457) Mandurah Road, Baldivis ('the subject site') for the following reasons:</p> <ul style="list-style-type: none"> - The proposed land use is not consistent with the 'Caravan Park' land use definition contained in the City's Local Planning Scheme No. 2 ('LPS 2'); - The proposed land use could be consistent with the definition of 'Grouped Dwelling' under State Planning Policy No. 3.1 – Residential Design Codes ('R-Codes'), which is an 'X' use within the 'Rural' Zone and therefore not capable of approval at the subject site; - Alternatively, the proposed land use could be considered a 'Use Not Listed – Retirement Village' under Clause 3.2.4 of LPS 2. However, the proposed land use is not consistent with the objectives and purposes of the 'Rural' Zone under LPS 2 and therefore not capable of approval at the subject site; - Historically, the Department of Planning, Lands and Heritage ('DPLH') and Western Australian Planning Commission ('WAPC') has advised that a lifestyle village or retirement village use is not appropriate within the 'Rural' Zone under the Metropolitan Region Scheme. As the subject site is zoned 'Rural' under the MRS, the proposal should not be supported;
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PUBLIC SCHEDULE OF SUBMISSIONS		
Name	Address	Comment
No.12 – cont...		<ul style="list-style-type: none"> - The proposed commercial land uses are not incidental to the proposed lifestyle village and the proposal is for all intents and purposes, creating an activity centre in an unplanned location. This is inconsistent with the City's Local Commercial Strategy; - The subject site, nor any site in proximity, is not identified as the location of a planned activity centre under the City's Local Commercial Strategy; - Each of the proposed commercial land uses are classified as 'X' uses within the 'Rural' Zone under LPS 2, and therefore cannot be approved at the subject site; - The proposed setbacks to Mandurah Road and the northern lot boundary will have a detriment to the development on Lot 71 and the predominant streetscape and character of Mandurah Road and the surrounding rural area;

		<ul style="list-style-type: none"> - The proposal includes the construction of a sensitive land use within the existing buffer area of an operating 'Beverage Manufacturing – Alcoholic' use, without any site-specific environmental investigations; - The trip generation contained in the Transport Impact Statement does not adequately reflect the traffic situation following the completion of the proposed development and cannot be relied upon by the City in making a determination on the Application with sufficient confidence; - The Transport Impact Statement suggests that the future proposed shops component will be available for use by others who do not occupy the proposed development. These types of land uses will generate additional traffic to and from the subject site which we are of the view has not been contemplated by this Application; - The proposed development incorporates a parking shortfall of approximately 20 parking bays. Insufficient justification for such a shortfall has been provided by the Applicant in the Transport Impact Statement; - The proposed car parking shortfall is significant given there is a lack of alternative modes of transport available in the area (such as public transport and bicycles); - The proposed development has the potential to generate a significant amount of sewerage waste. This will potentially have implications on groundwater and the location of the buildings at the subject site in order to facilitate leach drains and sewerage systems. Therefore, we are of the view that the City should not determine this Application until such a time that the Applicant has provided information on sewerage management and treatment; and - Insufficient evacuation routes, in the event of bushfire, have been proposed by the development. <p>We and our Client would be more than happy to meet with the City's Officers to discuss the proposed development and our concerns in greater detail at a meeting at the City's Offices, that they be required.</p> <p>Should you require any further information or clarification in relation to this matter, please contact the undersigned on 9221 1991.</p>
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SERVICING AUTHORITIES SCHEDULE OF SUBMISSIONS		
Name	Address	Comment
1. Mr Brett Dunn Department of Water	PO Box 332 MANDURAH WA 6210	<p>Thank you for referring the proposed application received 23 January 2019. The Department of Water and Environmental Regulation (DWER) has reviewed the proposal and wishes to provide the following comments.</p> <p>On-site wastewater disposal</p> <p>In accordance with the Draft Government Sewerage Policy (State of Western Australia, 2016), the subject land is located within a sewage sensitive area. As this land is not connected to the reticulated sewerage infrastructure, future development of the proposed lot must adhere to the Policy.</p> <p>However, the information contained within the application is limited and does not demonstrate how the proposed development will comply with the Policy. Further information is required to prove the site's ability to use on-site wastewater treatment and disposal.</p> <p>As such, the proposal in its current form does not align with the objectives of the Policy.</p> <p>Part V License</p> <p>In addition to the above, the proposed development may have regulatory responsibilities under Part V of the Environmental Protection Act 1986 (EP Act).</p> <p>The EP Act requires a works approval to be obtained before constructing a prescribed premises and makes it an offence to cause an emission or discharge, unless a licence is held for the premises. During the works approval assessment stage, the Department assesses emissions and discharges associated with the prescribed activities.</p> <p>The Department notes that the proposed development may require a licence or registration according to Schedule 1 of the Environmental Protection Regulations 1987 Category 54 (sewage facility premises) with a production or design capacity of 100 cubic metres or more per day or Category 85 (sewage facility premises) with a production or design capacity of more than 20 but less than 100 cubic metres per day.</p> <p>Should the applicant require further information the Department can be contacted at info@dwer.wa.gov.au or 6364 7000, and applicants with queries relating to works approvals and licences will be directed to the relevant officers. Further information on licensing is available at http://www.der.wa.gov.au/our-work/licences-and-works-approvals.</p> <p>Groundwater</p> <p>The subject lot and proposed development area is located within the Stakehill groundwater area (Outridge sub area) which is proclaimed under the Rights in Water and Irrigation Act 1914. Any groundwater abstraction would be subject to licencing by the DWER. The issuing of a groundwater licence is not guaranteed but if issued will contain a number of conditions that are binding upon the licensee. An existing licence on Lot 13 expired in 2018 and there is a limited amount of groundwater available within this sub area. Please contact the licensing business support unit on 1800 508 885 for further advice.</p> <p>Native Vegetation</p> <p>Under section 51C of the Environmental Protection Act 1986 (EP Act), clearing of native vegetation is an offence unless</p>

		undertaken under the authority of a clearing permit, or the clearing is subject to an exemption.
SERVICING AUTHORITIES SCHEDULE OF SUBMISSIONS		
Name	Address	Comment
No.1 – cont...		Exemptions for clearing that is a requirement of a written law, or authorised under certain statutory processes, are contained in Schedule 6 of the EP Act. Exemptions for low impact routine land management practices are contained in the Environmental Protection (Clearing of Native Vegetation) Regulations 2004 (Regulations). Where required, DWER will provide input at subsequent stages of planning in reference to the Department's regulatory responsibilities under Part V of the EP Act. Guidelines and fact sheets on the regulation of native vegetation clearing can be found on DWER's website at https://www.der.wa.gov.au/our-work/clearing-permits . If you have any queries relating to the above matter, please contact Jane Sturgess at DWER's Mandurah office on 9550 4228.
2. Mr Jim Dodds Department of Health	PO Box 8172 PERTH BUSINESS CENTRE WA 6849	<p>Thank you for your letter of 23 January 2019 requesting comments from the Department of Health (DOH) on the above proposal.</p> <p>The DOH provides the following comment:</p> <p>1. Water Supply and Wastewater Disposal</p> <p>The development is required to connect to scheme water and reticulated sewerage (if available) as required by the Government Sewerage Policy- Perth Metropolitan Region. For non-scheme water connected areas, the development is to have access to a sufficient supply of potable water that is of the quality specified under the Australian Drinking Water Quality Guidelines 2004.</p> <p>The necessary requirements may be referenced and downloaded from: http://ww2.health.wa.gov.au/Articles/A_E/Drinking-water-quality-management http://ww2.health.wa.gov.au/Articles/A_E/Drinking-water-guidelines-and-standards</p> <p>On-Site Wastewater Disposal</p> <p>Suitable provision for an adequate onsite effluent disposal area is to be accommodated in any planning approval. For on-site wastewater disposal systems to be approved, a winter 'site-and-soil evaluation' (SSE) in accordance with Australian Standard 1547 (AS/NZS 1547) is required. Any on-site waste water treatment process is to be in accordance with DOH publications which may be referenced and downloaded from: http://ww2.health.wa.gov.au/Articles/N_R/Recycled-water http://ww2.health.wa.gov.au/Articles/U_ZNWater-legislations-and-guidelines</p> <p>2. Food Act Requirements</p> <p>All food related areas (clubhouse kitchen, etc.) to comply with the provisions of the Food Act 2008 and related code, regulations and guidelines. Details available for download from: http://ww2.health.wa.gov.au/Articles/F_I/Food-regulation-in-WA</p> <p>3. Health (Miscellaneous Provisions) Act Requirements</p> <p>All public access areas (clubroom, library, etc.) are to comply with the provisions of the Health (Miscellaneous Provisions) Act 1911, related regulations and guidelines and in particular Part VI - Public Buildings.</p>

		Should you have queries or require further information please contact Vic Andrich on 9388 4999 or ehinfo@health.wa.gov.au												
SERVICING AUTHORITIES SCHEDULE OF SUBMISSIONS														
Name	Address	Comment												
3. Mr Ron de Blank Department of Fire & Emergency Services Rural Fire Division	PO Box P1174 PERTH WA 6844	<p>I refer to your email dated 23 January 2019 regarding the submission of a Bushfire Management Plan (BMP) (Version 1.1), prepared by Bushfire Prone Planning and dated 13 August 2018, for the above development application. The BMP is accompanied by a Bushfire Emergency Plan, prepared by Bushfire Prone Planning (Version 1.1), dated 3 August 2018. The BMP is also accompanied by a report titled 'Planning Report Revision 2 – No. 1447–1547 Mandurah Road Baldivis' dated 20 December 2018 for the above development application.</p> <p>It should be noted that this advice relates only to State Planning Policy 3.7 Planning in Bushfire Prone Areas (SPP 3.7) and the Guidelines for Planning in Bushfire Prone Areas (Guidelines). It is the responsibility of the proponent to ensure that the proposal complies with all other relevant planning policies and building regulations where necessary. This advice does not exempt the applicant/proponent from obtaining necessary approvals that may apply to the proposal including planning, building, health or any other approvals required by a relevant authority under other written laws.</p> <p>Assessment</p> <p>1. Policy Measure 6.5 a) Preparation of BAL contour map</p> <table border="1"> <thead> <tr> <th>Issue</th><th>Assessment</th><th>Action</th></tr> </thead> <tbody> <tr> <td>Vegetation classification</td><td> <p>Vegetation exclusions.</p> <p>DFES accepts the exclusion of non-vegetated areas including roads, footpaths and buildings. However, no evidence of an enforceable mechanism to support the exclusions applied to Vegetation area 11, to the north of Lot 2 (managed as "low threat" in perpetuity) is provided.</p> <p>Alternatively, the vegetation classification should be revised to apply the worst case scenario as per AS 3959.</p> </td><td>Modification required.</td></tr> <tr> <td>BAL Contour Map</td><td> <p>BAL ratings / inputs</p> <p>The indicative BAL ratings cannot be validated. The inputs (i.e. actual separation distances) need to be included in the BMP to demonstrate the methodology applied to determine the BAL outputs within the Contour Map. This would generally be provided in a table.</p> </td><td>Modification required.</td></tr> <tr> <td>BAL assessment</td><td> <p>APZ – insufficient information</p> <p>Page 29 of the BMP identifies management of Mandurah Road verge is required. The verge is not located within the boundaries of the site. An APZ should at a minimum be of sufficient size to ensure the potential radiation heat impact of a fire does not exceed BAL-29. An APZ should also be contained solely within the boundaries of the lot in which a building is situated, except in circumstances where the neighbouring lots will be managed in a low fuel state on an ongoing basis. It is unclear what enforceable mechanism exists to ensure the area will be maintained in a 'low-threat' state as per AS3959, in perpetuity.</p> <p>If unsubstantiated, the vegetation classification should be revised to apply the worst-case scenario as per AS 3959.</p> <p>In addition, the APZ's are not spatially represented in the BMP.</p> </td><td>Modification required.</td></tr> </tbody> </table>	Issue	Assessment	Action	Vegetation classification	<p>Vegetation exclusions.</p> <p>DFES accepts the exclusion of non-vegetated areas including roads, footpaths and buildings. However, no evidence of an enforceable mechanism to support the exclusions applied to Vegetation area 11, to the north of Lot 2 (managed as "low threat" in perpetuity) is provided.</p> <p>Alternatively, the vegetation classification should be revised to apply the worst case scenario as per AS 3959.</p>	Modification required.	BAL Contour Map	<p>BAL ratings / inputs</p> <p>The indicative BAL ratings cannot be validated. The inputs (i.e. actual separation distances) need to be included in the BMP to demonstrate the methodology applied to determine the BAL outputs within the Contour Map. This would generally be provided in a table.</p>	Modification required.	BAL assessment	<p>APZ – insufficient information</p> <p>Page 29 of the BMP identifies management of Mandurah Road verge is required. The verge is not located within the boundaries of the site. An APZ should at a minimum be of sufficient size to ensure the potential radiation heat impact of a fire does not exceed BAL-29. An APZ should also be contained solely within the boundaries of the lot in which a building is situated, except in circumstances where the neighbouring lots will be managed in a low fuel state on an ongoing basis. It is unclear what enforceable mechanism exists to ensure the area will be maintained in a 'low-threat' state as per AS3959, in perpetuity.</p> <p>If unsubstantiated, the vegetation classification should be revised to apply the worst-case scenario as per AS 3959.</p> <p>In addition, the APZ's are not spatially represented in the BMP.</p>	Modification required.
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SERVICING AUTHORITIES SCHEDULE OF SUBMISSIONS																	
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No.3 – cont...		<p>2. Policy Measure 6.5 c) Compliance with the Bushfire Protection Criteria</p> <table border="1"> <thead> <tr> <th>Element</th><th>Assessment</th><th>Action</th></tr> </thead> <tbody> <tr> <td>Location and Siting & Design</td><td> A1.1 –not demonstrated The BAL ratings cannot be validated, as the vegetation classification inputs require clarification/modification as per the above table. </td><td>Modification/clarification required.</td></tr> <tr> <td>Vehicular Access</td><td> A3.5 – comment Private driveways should comply with all the requirements of A 3.5 (Table 6, column 3) of the Guidelines. While the BMP states that the internal driveway will meet the Guidelines, DFES notes that the site contains steep gradients. The decision maker is to ensure that the gradient requirements of Table 6 are met. </td><td>Comment. Decision maker to ensure compliance with this element can be achieved.</td></tr> </tbody> </table> <p>3. Policy Measure 6.6.1 Vulnerable land uses</p> <table border="1"> <thead> <tr> <th>Issue</th><th>Assessment</th><th>Action</th></tr> </thead> <tbody> <tr> <td>Bushfire Emergency Evacuation Plan (EEP)</td><td> It is noted that a "Bushfire Response and Evacuation Plan" has been prepared for the purposes of addressing the policy requirements. The following issues were noted in our assessment: <ul style="list-style-type: none"> The EEP describes a "Nominated Emergency Assembly Location" and a "Nominated Bushfire Place of Last Resort". However there is no detail to specify if the building will be fit-for-purpose. </td><td>Comment.</td></tr> </tbody> </table> <p><u>Recommendation – not supported modifications required</u></p> <p>It is critical that the bushfire management measures within the BMP are refined, to ensure they are accurate and can be implemented to reduce the vulnerability of the development to bushfire. The proposed development is not supported for the following reasons:</p> <ol style="list-style-type: none"> The development design has not demonstrated compliance to Element 1: Location and Element 2: Siting and Design. <p>As this planning decision is to be made by a Joint Development Assessment Panel please forward notification of the decision to DFES for our records.</p> <p>If you require further information, please contact Craig Scott on telephone number 6551 4032.</p>	Element	Assessment	Action	Location and Siting & Design	A1.1 –not demonstrated The BAL ratings cannot be validated, as the vegetation classification inputs require clarification/modification as per the above table.	Modification/clarification required.	Vehicular Access	A3.5 – comment Private driveways should comply with all the requirements of A 3.5 (Table 6, column 3) of the Guidelines. While the BMP states that the internal driveway will meet the Guidelines, DFES notes that the site contains steep gradients. The decision maker is to ensure that the gradient requirements of Table 6 are met.	Comment. Decision maker to ensure compliance with this element can be achieved.	Issue	Assessment	Action	Bushfire Emergency Evacuation Plan (EEP)	It is noted that a "Bushfire Response and Evacuation Plan" has been prepared for the purposes of addressing the policy requirements. The following issues were noted in our assessment: <ul style="list-style-type: none"> The EEP describes a "Nominated Emergency Assembly Location" and a "Nominated Bushfire Place of Last Resort". However there is no detail to specify if the building will be fit-for-purpose. 	Comment.
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4. Mr Simon Luscombe Department of Planning, Lands and Heritage	Locked Bag 2506 PERTH WA 6001	<p>Further to your email dated 24 January 2019, the following comments are provided by the Infrastructure Planning and Policy (IPP) Directorate. This proposal seeks approval for a lifestyle village/park home comprising 67 chalets.</p> <p>Land Requirements</p> <p>The site abuts Mandurah Road, the subject section of which is classified as an Other Regional Road (ORR) within the Metropolitan Region Scheme (MRS), also reserved as Category 2 per Plan Number SP694/4. The site is not affected by the ORR reservation for Mandurah Road per Land Requirement Plan No. 1.5008.</p> <p>Transport Impact Statement</p> <p>The above report, prepared by KCTT dated September 2018, states that Mandurah Road accommodates 7,386 vehicles per day (approximately 50% of capacity for a single carriageway road). The site when fully developed, is anticipated to generate 332 vehicles per day with 29 vehicles in the PM peak hour period, when reciprocity calculations are applied. The proposal meets Austroads' requirements for safe intersection sight distance (sight lines) of 181 metres in both directions.</p>															

SERVICING AUTHORITIES SCHEDULE OF SUBMISSIONS		
Name	Address	Comment
		<p>Recommendation</p> <p>IPP has no objection to the proposal on regional transport planning grounds subject to the following recommendations:</p> <ul style="list-style-type: none"> Two new crossovers are proposed to service the development. This is contrary to Policy D.C. 5.1 WAPC Vehicular Access which seeks to minimise the number of new crossovers onto regional roads and rationalise existing access arrangements. Therefore a single access point should service the site and any redundant crossovers should be decommissioned; Clarification is required regarding the turning treatment for the access point servicing the development, given that traffic volumes to the site will increase e.g. basic treatment or auxiliary lane may be required. Refer to Austroads warrants for turning lanes (p. 97 of Volume 4 Guide to Road Design, Intersections and Crossings 2017); Due regard should be given to WAPC Policy SPP 5.4 Road and Rail Transport Noise and Freight Considerations in Land Use Planning which seeks to minimise the adverse impact of transport noise on proposed developments. Main Roads WA traffic counts show the subject section of Mandurah Road as accommodating approximately 7,386 vehicle movements per day. Table A.1 Estimated outdoor noise level for road and rail screening assessments, shows that for rural roads accommodating greater than 5,000 vehicles per day, a distance of 100 metres from the edge of the carriageway results in a noise impact of approximately 57 decibels. As such, the proponent should demonstrate that the development will meet noise targets set out in Table 1 of WAPC SPP 5.4; P14 of the Transport Impact Statement states that internal roads within the development will comprise Access Streets D with a 6 metre wide cross section. Liveable Neighbourhoods shows Access Streets D with a cross section of 14.2 metres. 6 metres meets Liveable Neighbourhoods' standards for laneways which allows sufficient width for vehicles to pass safely, while also allowing room for pedestrians or recreational cyclists; With respect to trip generation, RTA's most recent surveys for housing for seniors shows a slightly higher trip rate than that reflected within KCTT's Transport Impact Statement. For the clubhouse/shops component of the development, trip generation calculations from the adopted trip rate would generate a higher number of vehicular trips than that presented on p12 (36.4 trips per 100m² of GFA for a 4000m² clubhouse = 1456 trips per day, rather than 102 trips reduced to 51). <div style="display: flex; justify-content: space-around; align-items: flex-end;">   </div> <p>Land Requirement Plan No: 15008</p>



Form 1 – Responsible Authority Report (Regulation 12)

Property Location:	Lots 2 and 13 Mandurah Road, Baldivis
Development Description:	Lifestyle Village/Park Homes
DAP Name:	Metro South-West JDAP
Applicant:	Urbanista Town Planning
Owner:	Mirauda Constructions
Value of Development:	\$6.5 million
WAPC Reference:	28-50208-1
Responsible Authority:	Western Australian Planning Commission
Authorising Officer:	Executive Director, Land Use Planning
DAP File No:	DAP/18/01451
Report Due Date:	3 May 2019
Application Received Date:	5 July 2018
Application Process Days:	99 days
Attachment(s):	1. Development Plans 2. MRS Zoning 3a-b. Aerial Views 4. Schedule of Submissions 5. South Metropolitan Peel Sub-Regional Planning Framework

Officer Recommendation:

That the Metro South-West JDAP resolves to refuse DAP Application reference DAP/18/01451 and accompanying plans:

- Site Plan, Drawing No SK1 Rev A, dated 16.03.2018;
- Ground Floor Plan, Drawing No SK2 Rev 01.01, dated 16.03.2018;
- Unit Floor Plan and Elevations, Drawing No SK3 Rev 01.01, dated 16.03.2018;
- Club House Floor Plan and Elevations, Drawing No SK4 Rev 01.01, dated 16.03.2018;
- Site Plan Tank Locations, Drawing No SK5, dated 16.03.2018;
- Recreational Area Site Plan, Drawing No SK6, dated 16.03.2018;
- Site Sections, Drawing No SK7, dated 16.03.2018;
- Perspectives, Drawing No SK8, dated 16.03.2018;
- Survey Plan, Drawing No SK9, dated 16.03.2018

received by the Department of Planning, Lands and Heritage on 23 January 2019 for the following reasons:

1. The land is zoned 'Rural' in the Metropolitan Region Scheme and 'Rural' in the City of Rockingham Town Planning Scheme No.2 and the proposal conflicts with the purpose and objectives of this zoning.
2. The proposed Lifestyle Village/Park Home Estate development, which is essentially a residential development, is not consistent with the *South*

Metropolitan Peel Sub-Regional Planning Framework which classifies the subject land as Rural Residential.

3. The proposed Lifestyle Village/Park Home Estate development is not consistent with *City of Rockingham Planning Policy 3.1.1 - Rural Land Strategy* which identifies the site for potential Special Rural development to a minimum lot size of one hectare.
4. The proposed Lifestyle Village/Park Home Estate, which is essentially a residential development, is not consistent with *State Planning Policy 2.5 – Rural Planning* and *Development Control Policy 3.4 – Subdivision of Rural Land* as the subject land is not identified for residential development in either the *South Metropolitan Peel Sub-regional Planning Framework* or a local planning strategy which has been endorsed by the Western Australian Planning Commission.
5. Insufficient information has been provided to support a reduced setback to the neighbouring tavern/brewery from that recommended in *Environmental Protection Authority Guidance Statement 3 - Separation Distances Between Industrial and Sensitive Land Uses*.
6. An approved Bushfire Management Plan has not been provided to ensure the proposal complies with Element 1: Location and Element 2: Siting and Design of *State Planning Policy 3.7 – Planning in Bushfire Prone areas*.
7. Insufficient information has been provided to demonstrate the proposal complies with Section 6.2 of the *Draft Government Sewerage Policy (2016)*.

Details: outline of development application

Zoning	MRS:	Rural, Abuts Other Regional Road
	TPS:	Rural
Use Class:		
Strategy Policy:		SPP 2.5 – Rural Planning
Development Scheme:		City of Rockingham Town Planning Scheme No.2
Lot Size:		4.0467ha
Existing Land Use:		Single House

A Development Assessment Panel application has been received seeking development approval for a Lifestyle Village on Lots 2 and 13 (Nos 1447 and 1457) Mandurah Road, Baldivis. The application consists of the following:

- Development of a 'Lifestyle Village' which includes the construction of 68 chalets, a feature 'screen' wall, private access roads, a communal clubhouse and associated open spaces;
- The proposed chalets are made up of 22 one bedroom chalets and 46 two bedroom chalets, with each chalet including a kitchen, dining and living area, one bathroom and laundry as well as an additional study room, store area and alfresco area;

- Each chalet will also be provided with a carport providing parking for one vehicle as well as 24 visitor parking bays, forward of the chalets; and
- The existing houses and associated structures are proposed to be retained (*Attachment 1- Development Plans*).

The following reports accompany the development application:

- Acoustics Report;
- Planning Report;
- Transport Statement;
- Environmental Impact Assessment;
- Bushfire Management Plan and Emergency Plan; and
- Waste Management Plan.

The original development proposal included a series of five commercial tenancies adjacent to the visitor car bays. Amended plans were subsequently provided which removed reference to commercial tenancies from the application, however, reference to the commercial tenancies were not removed in relevant reports.

The subject land is zoned Rural under the Metropolitan Region Scheme (MRS) and abuts an Other Regional Road reservation for Mandurah Road. The site is zoned Rural under City of Rockingham Town Planning Scheme No.2 (TPS 2). (*Attachment 2 – MRS Zoning*)

Background:

The subject land has a total land area of 4.0467ha. It is well vegetated with more than 50 mature tuart trees and two mature jarrah trees. The topography of the site is steep with a fall of approximately 20m from east to west. There is an existing house and associated outbuildings on each lot.

The lots are located within the area known as the “Baldivis Rural Wedge” which has a rural amenity, typified by small scale rural and semi-rural land uses as plant nurseries and hobby farming and rural residential development.

The land is bounded to the west by Bush Forever Site 356 (Lake Walyungup) and Rural zoned land in all other directions. The nearest Urban zoned land is located 1.0km directly to the east (2.0km by road).

The Vernon Arms tavern and White Lakes Brewery are located directly to the north of the subject land. The Lake Walyungup wetland is highly visible from the adjoining roads.

The subject land is otherwise surrounded by rural-style residential land on one to two hectare lots. (*Attachments 3a and 3b - Aerial Views*)

It is noted that a Lifestyle Village is located at Lot 200 Sixty Eight Road in Baldivis, land which is also zoned Rural. The development proposal was not referred to the WAPC at the time of application (2007) as the development was consistent with the Rural zone in the local scheme i.e. a Caravan Park was a discretionary use in the

local scheme and at the time a Park Home Estate was considered to fall under the definition of a Caravan Park.

Legislation and Policy:

Legislation

- Planning and Development Act 2005 - Part 10: Subdivision and Development Control
- Metropolitan Region Scheme - Part IV: Development
- City of Rockingham Town Planning Scheme No.2
- Planning and Development (Development Assessment Panels) Regulations 2011

State Government Policies

- South Metropolitan Peel Sub-regional Planning Framework
- State Planning Policy 2.5 - Rural Planning
- State Planning Policy 3.7 - Planning in Bushfire Prone Areas
- Development Control Policy 3.4 - Subdivision of Rural Land
- EPA Guidance Statement 3 - Separation Distances Between Industrial and Sensitive Land Uses
- Draft Government Sewerage Policy (2016)

Local Policies

- City of Rockingham Planning Policy 3.1.1 - Rural Land Strategy

Consultation:

Public Consultation

Public consultation was undertaken by the City in accordance with TPS 2. The submissions received are shown in the City's Schedule of Submissions (*Attachment 4*).

Objections related to:

- the location of the development in a rural area;
- loss of rural amenity;
- negative environmental impacts;
- impacts on existing nearby development (tavern/brewery).

The City did not respond to these objections. Comments from the Department of Planning, Lands and Heritage (DPLH) in respect to these matters are set out in the Planning Assessment below.

Consultation with other Agencies

The Department of Water and Environmental Regulation stated the applicant has provided insufficient information to prove the site's suitability for on-site wastewater treatment and disposal.

The comments of the Department of Fire and Emergency Services are detailed below.

In regard to transport-related matters, the Infrastructure Planning and Policy branch of DPLH raises no major objection but recommends revision of trip generation figures and modifications to the access point off Mandurah Road.

Planning Assessment:

Planning Framework

SPP 2.5 - *Rural Planning* seeks to protect the State's rural land assets and to ensure broad compatibility between land uses. Among its objectives are to:

- *promote rural zones to support primary production, regional facilities, environmental protection and cultural pursuits; and*
- *support small scale tourism opportunities such as bed and breakfast, art gallery, micro-brewery and uses associated with primary production.*

Clause 6.3 of SPP 2.5 states land uses should only be permissible in rural zones where they are consistent with the objectives of SPP 2.5 and a local planning strategy.

DC 3.4 - *Subdivision of Rural Land* provides guidance in achieving the objectives of SPP 2.5 including to

- *avoid and minimise land use conflicts; and*
- *protect and sustainably manage environmental, landscape and water resource assets.*

In 2008, the WAPC refused proposed Amendment No.65 to City of Wanneroo District Planning Scheme No.2. This proposed the rezoning of land from Rural Resource to Private Clubs/Recreation so as to permit development of a Lifestyle Village. In refusing advertising the WAPC stated the application 'comprises development which is not consistent with the 'Rural' zoning of the land in the Metropolitan Region Scheme' and 'is premature in the absence of structure planning and strategic planning for the area'.

In 2009, the Statutory Planning Committee resolved the following with regard to the same proposal:

*"Support the use of **Urban land** (bold added) for the purpose of park home sites due to their density, infrastructure/servicing requirements and necessity for accessibility to community and medical services and support the zoning of these sites as 'special use' to provide greater certainty, simplicity and consistency to the land zoning for*

park home sites, ensuring that the site is only used for a park home site unless area zoning is initiated.”

The WAPC has consistently stated such development should be properly serviced and located in proximity to infrastructure such as reticulated sewerage, shops and public transport. The WAPC has generally not supported the siting of Lifestyle Villages and Park Home Parks within the Rural zone of the MRS.

DC 3.4 states that strata proposals that increase dwelling entitlements on rural land are considered rural living and will be assessed in accordance with clause 5.3 of SPP 2.5. In this respect, a Lifestyle Village may also be considered a residential strata proposal. Under SPP 2.5 the precinct:

- must be part of a settlement hierarchy established in an endorsed planning strategy;
- the land be adjacent to, adjoining or close to existing urban areas with access to services, facilities and amenities.

The site is located 1.0km from the nearest urban residential development (2.1km via road connection). The land has limited services: power and water are available but not reticulated sewerage. No public transport runs down Mandurah Road and the nearest bus stop is approximately 4km walking distance. The nearest retail facilities will be the yet-to-be constructed commercial centre in Parkland Heights, approximately 3km driving distance to the east.

The subject proposal is located in a rural wedge under *City of Rockingham Planning Policy 3.1.1 - Rural Land Strategy* (the Strategy) the site falls within Planning Unit 4 – Special Rural/Special Residential Landscape and Resource Protection Areas and is zoned Rural. The primary objective of this unit is:

‘to encourage special rural/special residential development which recognises and enhances the landscape and natural resource attributes of the unit and provide a natural viewshed to Mandurah Road and a rural context to proposed urban development to the east.

Rather than allowing for intensive development such as a Lifestyle Village, the Strategy states that Planning Unit 4 should serve as an interface between the urban land to the east and the wetlands to the west. Consequently, it recommends that lots west of the ridgeline in the precinct (as is the proposed development site) have a minimum area of 1ha. Those lots east of the ridgeline are to have a minimum area of 0.5ha as part of the gradation between the larger lots to the west and urban development to the east. At 17 dwellings/ha the proposed development would be at a much higher density than this, is markedly different from surrounding uses and would adversely affect the viewshed from Mandurah Road.

More recently, the WAPC has advertised and subsequently adopted the *South Metropolitan Peel Sub-regional Planning Framework, 2018* (the Framework) which includes most of the land between Mandurah Road and Eighty Road in the Rural Residential classification (*Attachment 5 - South Metropolitan Peel Sub-regional Planning Framework*). This classification reiterates the aim of preserving the character of the rural residential area that covers the ridgeline east of Lake Cooloongup.

It is recommended the proposal be refused as it does not comply with SPP 2.5 and DC 3.4 which require such developments to be part of an endorsed planning framework. It would also conflict with the intent of the City's *Rural Land Strategy* and the Framework.

Due to its proximity to Lake Walyungup, the site is considered a sewage sensitive area under the *Draft Government Sewerage Policy (2016)*. Under Section 6.2 of the policy the proponent is required to demonstrate there is sufficient capacity to treat and dispose of sewage and contain associated buffers on-site. Such information has not been provided.

As outlined in the City's Responsible Authority Report for this application, the proposed development is not considered to be permitted under City of Rockingham Town Planning Scheme No.2.

Amenity Issues

As stated above, the subject site is abutted to the north by a tavern/brewery. The business holds a restricted tavern licence and regular live music events may be held on Friday and Saturday evenings and Sunday afternoons. The noise assessment provided by the applicant does not take into consideration any event noise from the tavern. Should the proposed development proceed without appropriate measures (e.g. a suitable masonry wall), it will likely lead to noise complaints and pressure for the existing business to limit its operations.

Environmental Protection Authority Guidance Statement 3 - Separation Distances Between Industrial and Sensitive Land Uses (GS3) provides advice on buffer distances between industrial and sensitive uses such as residences. With regard to breweries it recommends a buffer distance of 200 to 500m depending on the size and type of product. A minimum 200m buffer would cover most of the development site. The applicant has not provided any acoustic or odour studies supporting a reduced setback to the tavern/brewery.

It is recommended the proposal be refused as insufficient information has been provided to support a reduced setback to pre-existing uses.

Bushfire Planning

The subject land is located within a bushfire prone area. In accordance with *State Planning Policy 3.7 - Planning in Bushfire Prone Areas* (SPP 3.7) the applicant has submitted a Bushfire Management Plan (BMP).

The Department of Fire and Emergency Services (DFES) has reviewed the BMP and advised it does not support the proposal. In particular DFES requires the following modifications to the BMP:

- Demonstrated compliance with Element 1: Location and Element 2: Siting and Design. More justification is required regarding surrounding vegetation and assessed threat levels.
- The BMP states the internal driveway will meet the Bushfire Planning Guidelines. However the site contains steep gradients (13% on the rear half

of the site) and DFES advises the access gradient requirements should be met.

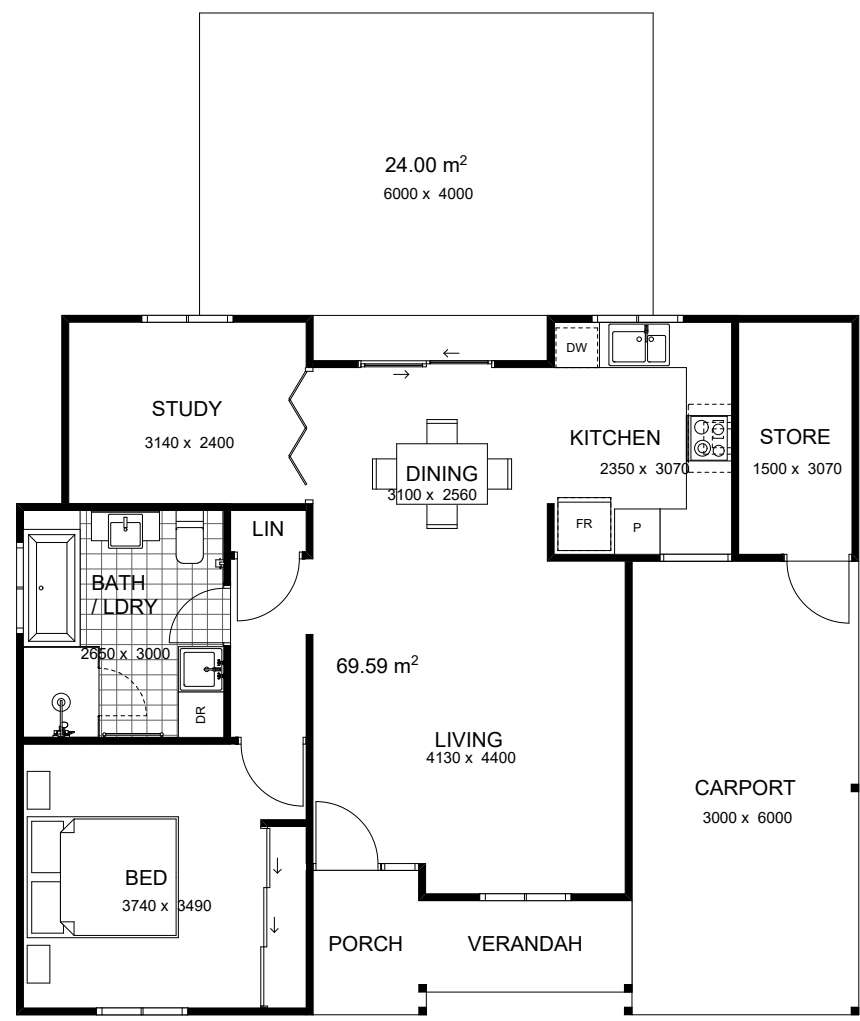
- The Emergency Evacuation Plan describes a Nominated Emergency Assembly Location and a Nominated Bushfire Place of Last Resort. However no detail is provided as to whether the building is fit for purpose.

It is recommended the proposal be refused as the applicant has not provided a BMP in accordance with SPP 3.7 and to the satisfaction of DFES.

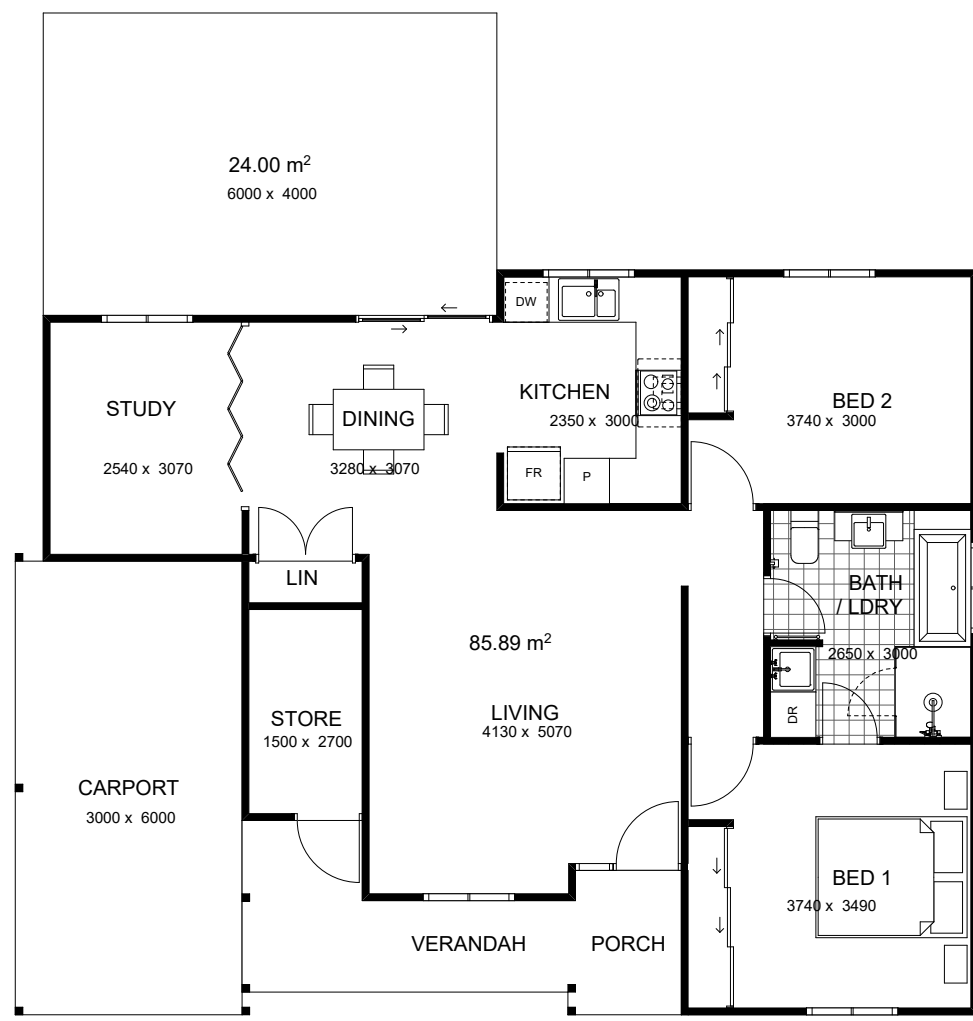
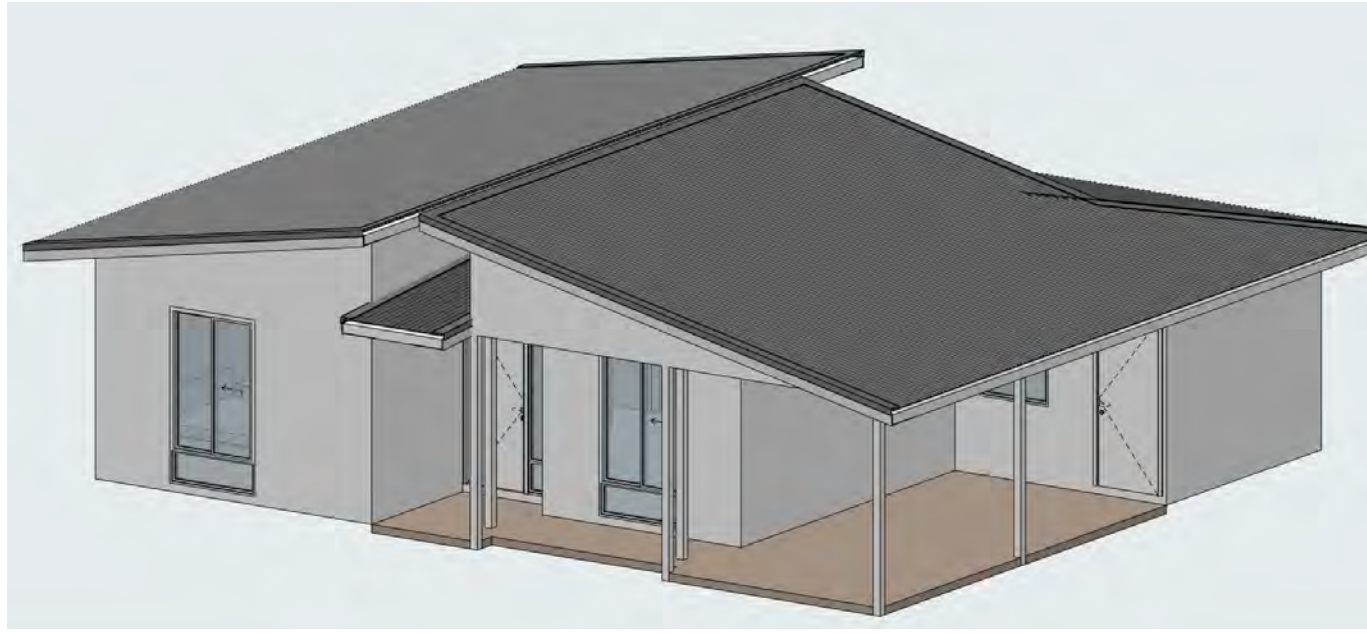
Recommendation:

It is recommended the application be refused as:

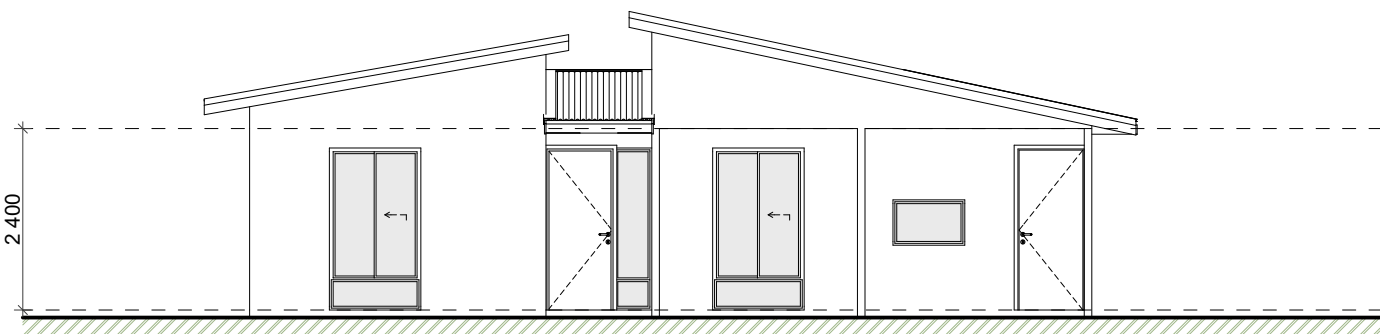
1. The land is zoned 'Rural' in the Metropolitan Region Scheme and 'Rural' in the City of Rockingham Town Planning Scheme No.2 and the proposal conflicts with the purpose and objectives of this zoning.
2. The proposed Lifestyle Village/Park Home Estate development, which is essentially a residential development, is not consistent with the *South Metropolitan Peel Sub-Regional Planning Framework* which classifies the subject land as Rural Residential.
3. The proposed Lifestyle Village/Park Home Estate development is not consistent with *City of Rockingham Planning Policy 3.1.1 - Rural Land Strategy* which identifies the site for potential Special Rural development to a minimum lot size of one hectare.
4. The proposed Lifestyle Village/Park Home Estate, which is essentially a residential development, is not consistent with *State Planning Policy 2.5 – Rural Planning and Development Control Policy 3.4 – Subdivision of Rural Land* as the subject land is not identified for residential development in either the *South Metropolitan Peel Sub-regional Planning Framework* or a local planning strategy which has been endorsed by the Western Australian Planning Commission.
5. Insufficient information has been provided to support a reduced setback to the neighbouring tavern/brewery from that recommended in *Environmental Protection Authority Guidance Statement 3 - Separation Distances Between Industrial and Sensitive Land Uses*.
6. An approved Bushfire Management Plan has not been provided to ensure the proposal complies with Element 1: Location and Element 2: Siting and Design of *State Planning Policy 3.7 – Planning in Bushfire Prone areas*.
7. Insufficient information has been provided to demonstrate the proposal complies with Section 6.2 of the *Draft Government Sewerage Policy (2016)*.



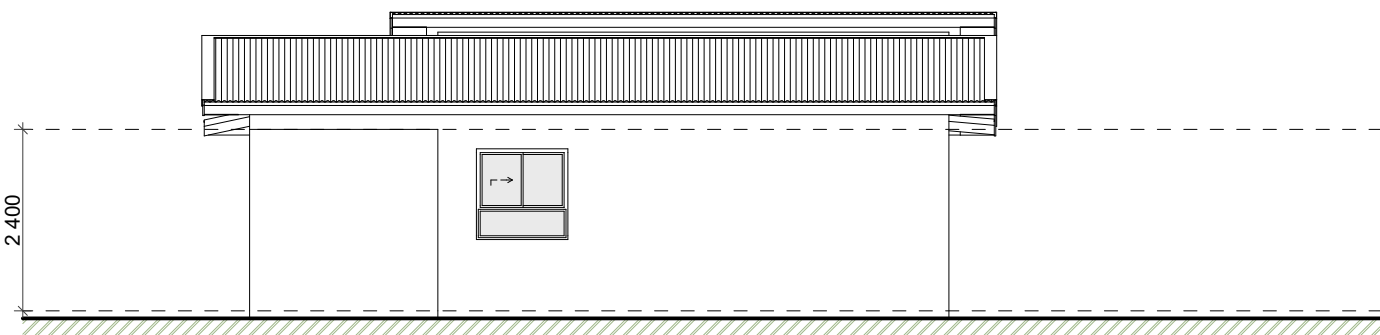
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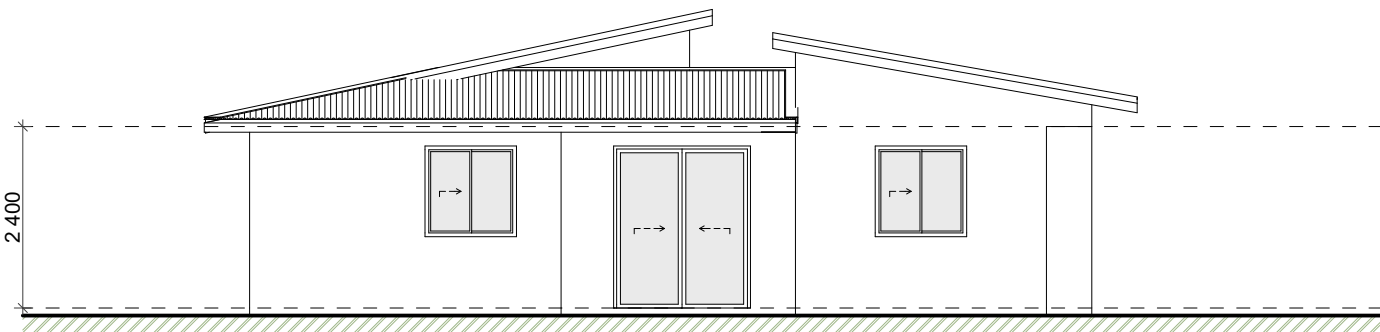
2 BED UNIT FLOOR PLAN
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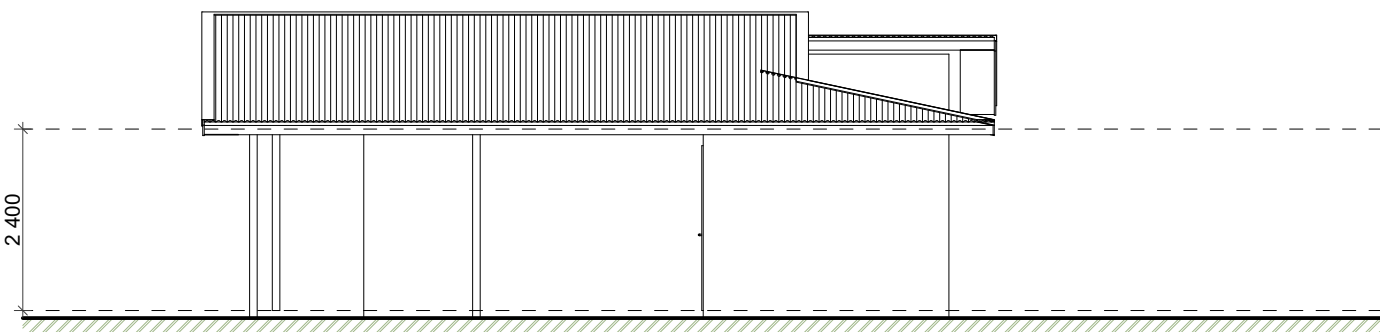
FRONT ELEVATION
SCALE 1:100



SIDE ELEVATION
SCALE 1:100



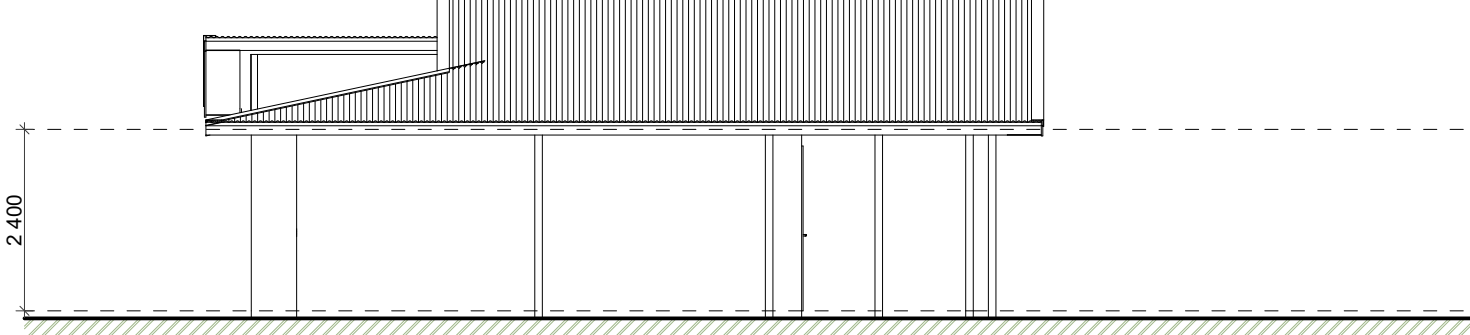
REAR ELEVATION
SCALE 1:100



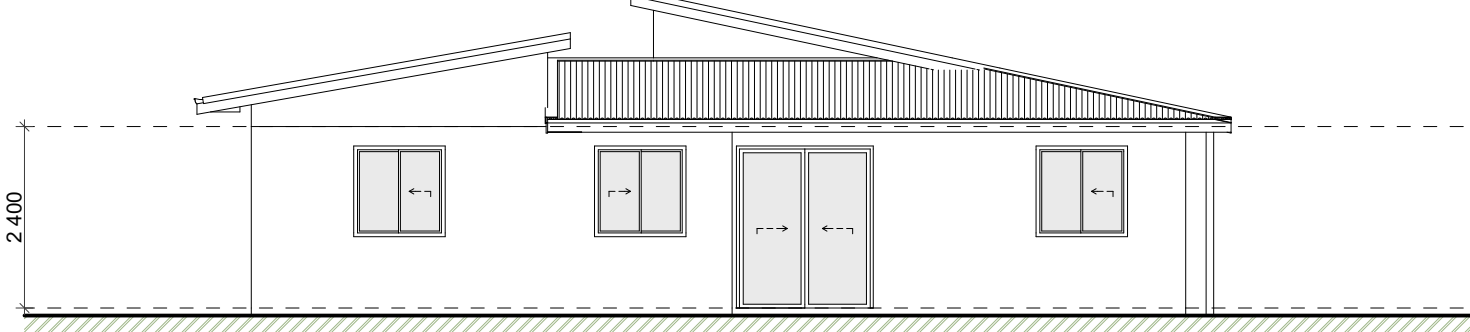
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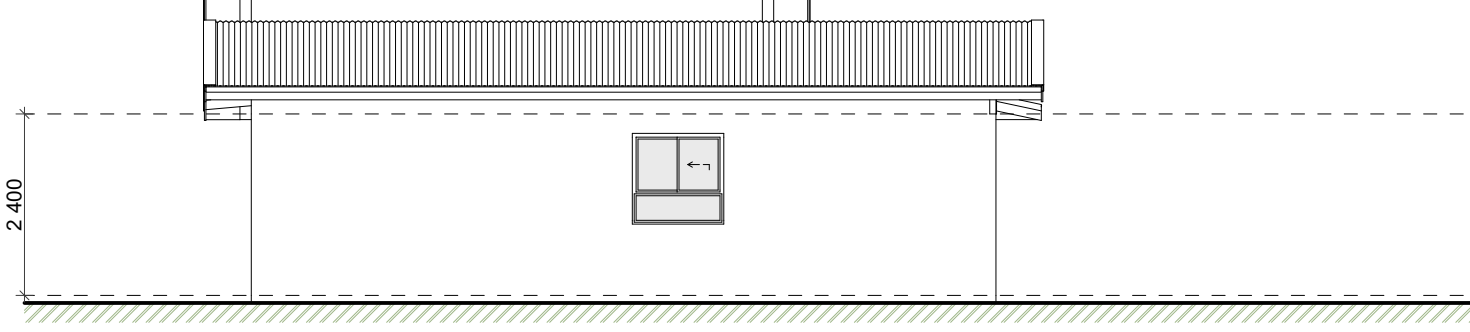
FRONT ELEVATION
SCALE 1:100



SIDE ELEVATION
SCALE 1:100



REAR ELEVATION
SCALE 1:100



SIDE ELEVATION
SCALE 1:100

SUNSET RETREAT

VERSION 6



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PROPOSED DEVELOPMENT
At Lots 13 & 2 Mandurah Rd BALDIVIS
For MIRAUDO CONSTRUCTION

TITLE
UNITS FLOOR PLAN & ELEVATIONS

SCALE 1:100 WORK 17-110 PLOT 19.10.2018

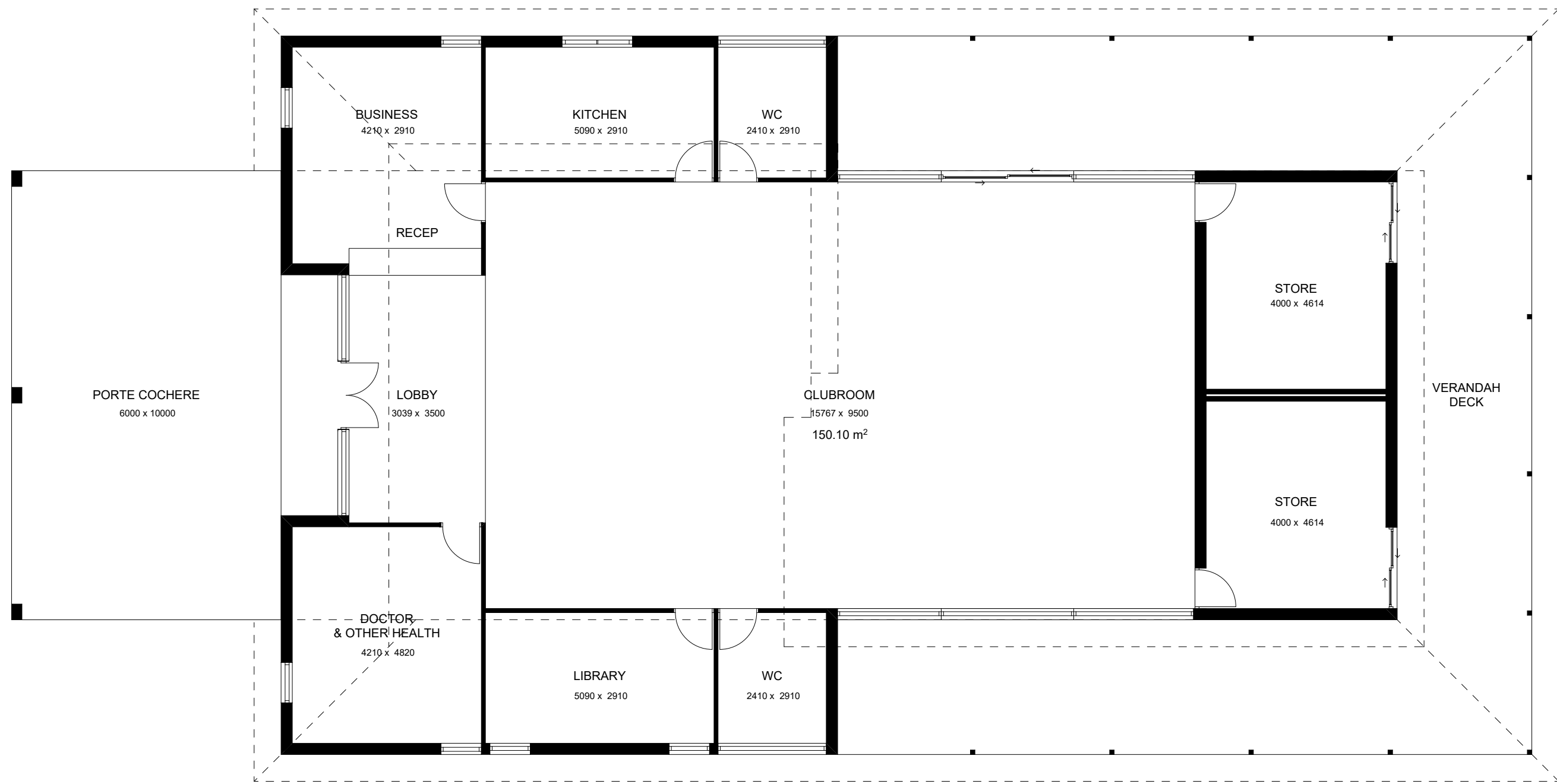
DATE 16.03.2018 FILE RET_022_zh.pln PAPER A1

AUTHOR eb DRAWINGS REF 01.01

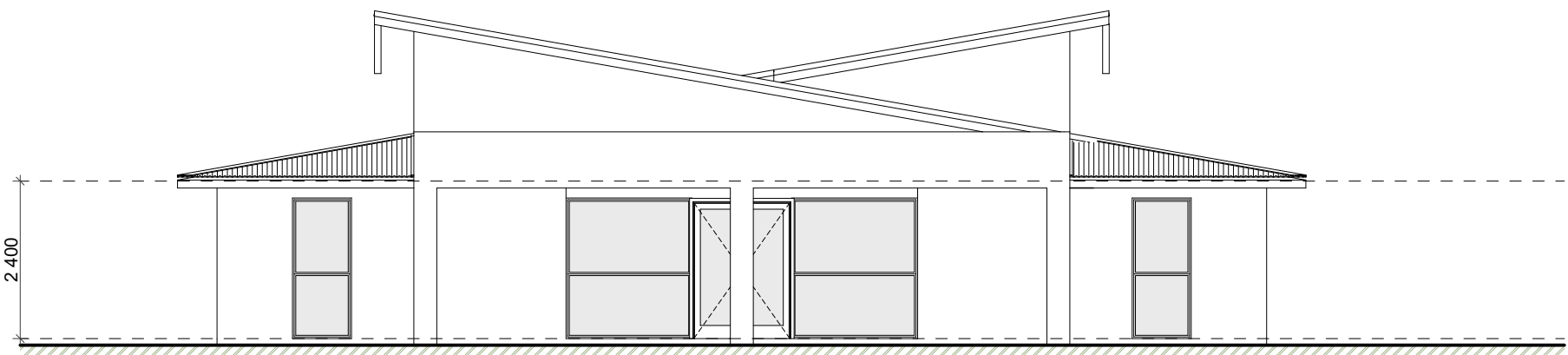
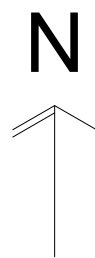
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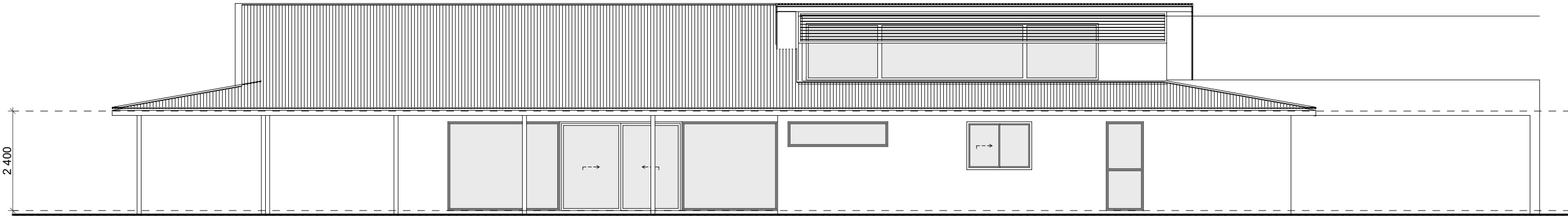
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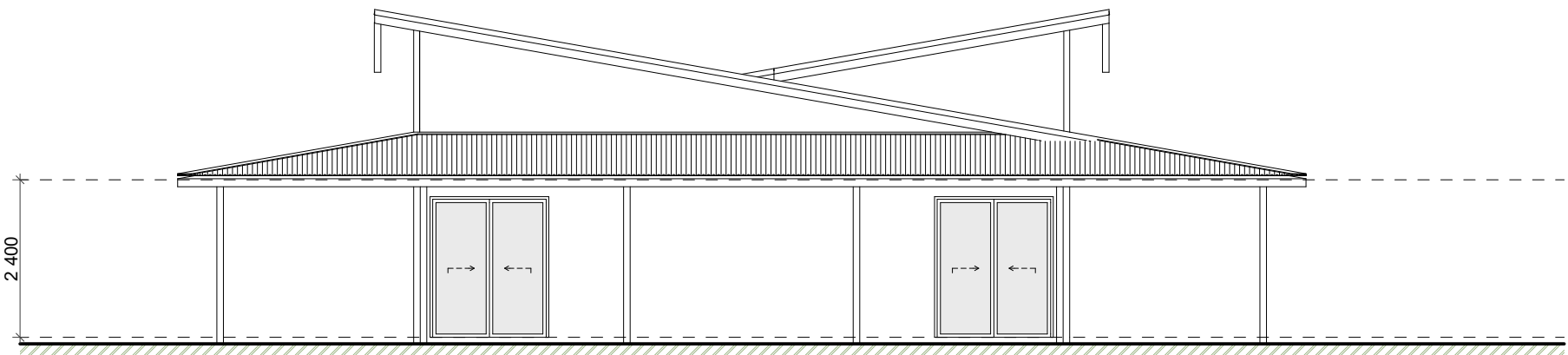
CLUB HOUSE FLOOR PLAN
SCALE 1:100



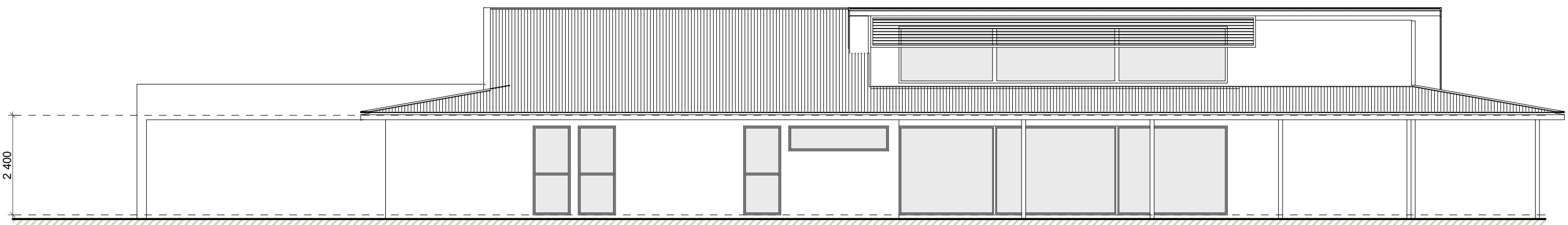
WEST ELEVATION
SCALE 1:100



NORTH ELEVATION
SCALE 1:100



EAST ELEVATION
SCALE 1:100



SOUTH ELEVATION
SCALE 1:100

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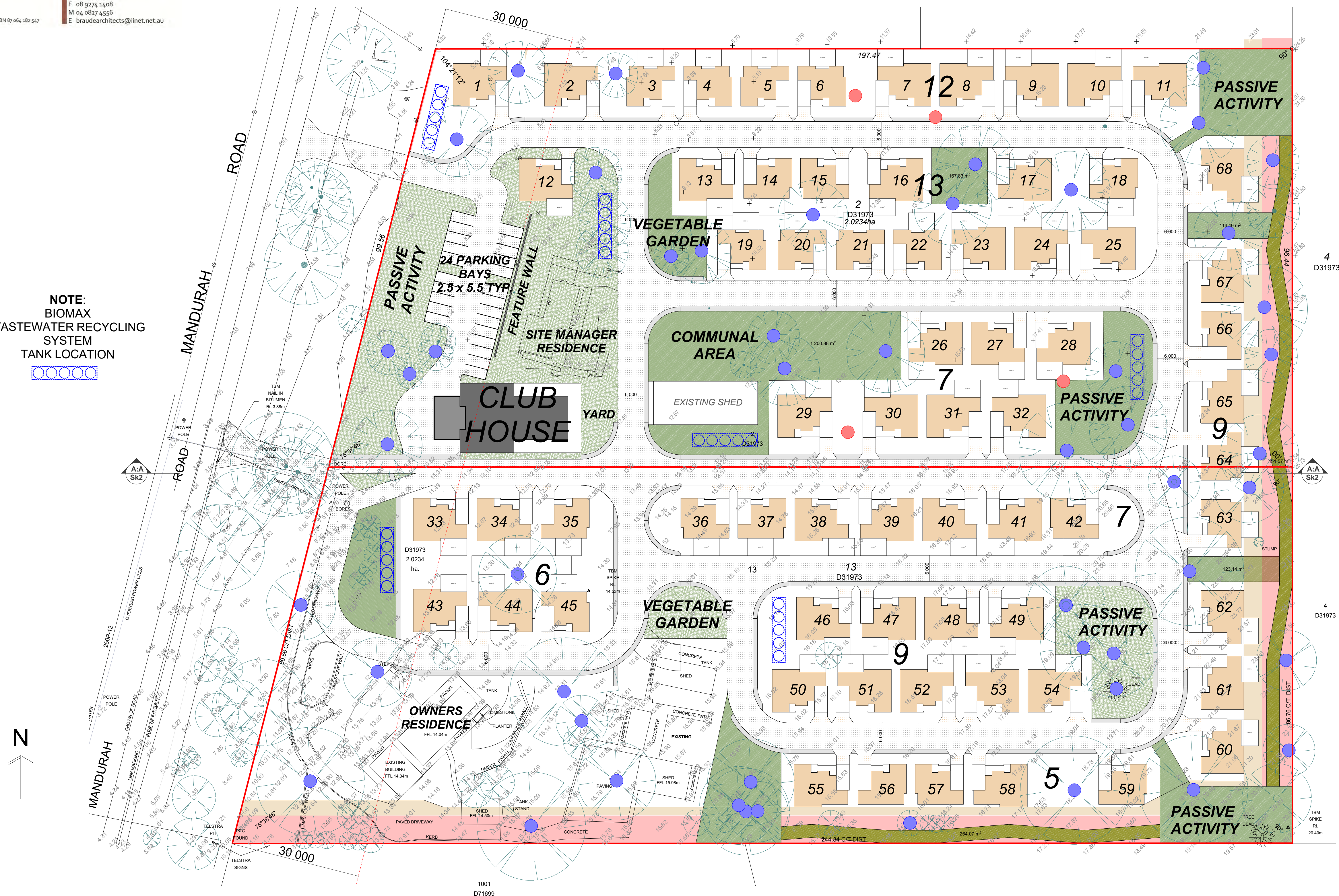
PROPOSED DEVELOPMENT
At Lots 13 & 2 Mandurah Rd BALDIVIS
For MIRAUDO CONSTRUCTION

VERSION 6

TITLE CLUB HOUSE FLOOR PLAN & ELEVATIONS			
SCALE 1:100	WORK 17-110	PLOT 19.10.2018	
DATE 16.03.2018	FILE RET_022_zh.pln	PAPER A1	
AUTHOR eb	DRAWING	REV 01.01	
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NOTE:
BIOMAX
WASTEWATER RECYCLING
SYSTEM
TANK LOCATION



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PROPOSED DEVELOPMENT
At Lots 13 & 2 Mandurah Rd BALDIVIS
For MIRAUDO CONSTRUCTION

VERSION 6

TITLE			
SITE PLAN TANK LOCATIONS			
SCALE	WORK	PILOT	
1:500	17-110	19-10.2018	
DATE	FILE	PAPER	
16.03.2018	RET_022_zh.pln	A1	
AUTHOR	DRAWING	REV	
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LOCATION	AREA
A	=168m²
B	=289m²
C	=1200m²
D	=539m²
E	=450m²
F	=452m²
G	=451m²
H	=595m²
I	=264m²
J	=432m²
K	=209m²
L	=590m²
M	=115m²
N	=123m²
O	=590m²
TOTAL:	6273m²

SUNSET RETREAT

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PROPOSED DEVELOPMENT
At Lots 13 & 2 Mandurah Rd BALDIVIS
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RECREATION AREA SITE PLAN			
TITLE	1:500	17-110	19.10.2018
SCALE	DATE	FILE	PAPER
1:500	16.03.2018	RET_022_zh.pln	A1
AUTHOR	eb	DRAWING	REV
zh			
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SK 6			

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SITE SECTION A:A
1:100 Sk1 & Sk2

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PROPOSED DEVELOPMENT
At Lots 13 & 2 Mandurah Rd BALDIVIS
For MIRAUDO CONSTRUCTION

TITLE			
SITE SECTION			
SCALE	1:500	WORK	17-110
DATE	16.03.2018	FILE	RET_022_zh.pln
AUTHOR	eb	DRAWING	SK 7
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